

P-0534  
June 4, 2021

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

**Re: Immediate Response Action Plan Modification No. 4 and  
Quarterly Status Report  
6 Town Hall Drive, Princeton  
RTN 2-21072**

Dear Mr. Maus:

On behalf of the Town of Princeton (the "Town"), Tighe & Bond has prepared this Quarterly Status Report in accordance with the Massachusetts Department of Environmental Protection (MassDEP) Immediate Response Action Plan Modification No. 3 Conditional Approval dated February 2, 2021. This quarterly status report is being submitted to provide supplemental information since the submittal of IRA Status No. 3 on March 10, 2021. A Site Plan is included in Appendix A, for reference.

### **Status of Private Well Sampling**

With the submittal of this Status Report, all potable wells within the Radius 1 through Radius 4A sampling areas have been sampled, with the exception of 27 and 31 Prospect Street, 18 Connor Lane and 38 Boylston Avenue, where we have not been able to contact their respective owners or access was not granted. 31 Prospect Street is a vacant property and has been condemned by the town. The most recent notification letters were sent to the owners of the other properties on April 29, 2021 by certified mail. The letter sent to the owner of 27 Prospect Street was returned as non-deliverable. The address used to send the letter was confirmed as the contact address maintained by the Town of Princeton. The letter for 18 Connor Lane was returned because the owner did not claim the certified mailing.

During an in-person interview on April 20, 2021, the owner of 38 Boylston Avenue indicated that they did not want their drinking water sampled because they have installed a treatment system to mitigate PFAS. On April 30, 2021, Tighe & Bond sent a letter to the owner to document the denial of our request and to again request access.

Copies of the letters sent to the property owners referenced above are included in Appendix B.

### **January 2021 Quarterly Private Well Sampling**

At the time that IRA Status Report No. 3 was submitted, approximately 40 percent of the January quarterly sampling data was received from the laboratory. The remaining 60 percent of the January 2021 quarterly sampling data are included in Table 1, in Appendix C.

Laboratory results indicate that PFAS6 concentrations were detected above the MCL at 16 Boylston Avenue, as well as at 39 and 42 Hubbardston Road. Samples collected at 42 Hubbardston Road in July 2020 had PFAS6 detected but the concentration was below the MCL. Samples collected at 16 Boylston Avenue previously had PFAS6 concentrations just below the MCL during the three previous sampling events, and 39 Hubbardston Road was in foreclosure during most of 2020 and was sampled for the first time during the January 2021 quarterly round.

POET system installation was completed at 42 Hubbardston Road on March 2, 2021. POET system installations at 39 Hubbardston Road and 16 Boylston Avenue were completed on March 12 and March 23, 2021, respectively.

Samples collected from the properties at 17 Boylston Avenue, 6 Connor Lane, 18 Prospect Street, and 26 Prospect Street had PFAS6 concentrations below the MCL in January 2021 but were previously non-detect for PFAS6. Due to the new detections at these locations bottled water is being provided by the Town. Based on the detection of PFAS6 at 6 Connor Lane, the sample radius was increased by 500 feet. The only property within 500 feet of 6 Connor Lane is 18 Connor Lane, which as mentioned above has been contacted to request access for sampling.

The laboratory reports for the January 2021 potable well sampling that were not received prior to submittal of IRA Status Report No. 3 are included in the individual notification letters in Appendix E of this status report. The laboratory data will also be provided to MassDEP electronically in a "zip" file, as requested in the February 2, 2020 Immediate Response Action Plan Modification No. 3 Conditional Approval.

### **April Quarterly Private Well Sampling**

Quarterly private well sampling of 94 potable wells was completed as part of the ongoing monitoring program between April 20 and May 6, 2021. Potable well samples were collected from the following locations, and all of these locations have been sampled at least once previously, with the exception of 7 Thompson Road, which was added to the sample radius after a detection of PFAS6 at 33 Allen Hill Road.

- 9, 12, 15, 19, 20, 32, 33 Allen Hill Road
- 7, 13, 16, 17, 21, 24, 30, 32, 40 Boylston Avenue
- 6 Connor Lane
- 4 Goodnow Road
- 11, 13, 14, 15, 21, 44 Gregory Hill Road
- 1, 5, 7, 15, 19, 23, 33, 35, 36, 39, 42, 43, 44, 46, 48, 52, 73, 81 Hubbardston Road
- 55, 57, 59, 70, 85, 105 Merriam Road
- 2, 6, 10, 14, 18, 19, 20, 21, 22, 29, 30, 33, 38, 52, 54, 58, 64 Mountain Road
- 5, 7, 11, 16, 17, 18, 21, 41 Prospect Street
- 2, 7, 8, 11, 12, 13, 15, 18, 23, 28, 29, 33, 37 Radford Road
- 7 Thompson Road
- 1, 10, 15, 16, 17, 20, 23 Worcester Road

All laboratory reports for the April 2021 potable well sampling have been received to date. Approximately 30 percent of the notification letters have been completed and sent to their respect property owners and are included in Appendix E of this status report. The remaining notification letters will be submitted with the next IRA Status report. The laboratory data will also be provided to MassDEP electronically in a "zip" file, as requested in the February 2, 2020 Immediate Response Action Plan Modification No. 3 Conditional Approval.

### **30 Boylston Avenue**

Based on the laboratory results from the April Quarterly Potable Well Sampling, one new PFAS6 detection was observed at 30 Boylston Ave (2.1 ng/L). The owner of this property was offered bottled water but stated that they did not wish to receive this service.

### **7 Prospect Street**

The PFAS6 concentration at 7 Prospect Street was reported at 21.9 ng/L on April 23, 2021, which is above the Method 1 GW-1 and MMCL of 20 ng/L. Based on this finding, the installation of a POET system is pending at this property.

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

POET systems are required for all locations with PFAS6 concentrations exceeding 20 ng/L. To date, 28 locations have been identified as requiring treatment. POET systems have been installed at 26 of these locations. Permitting for a treatment system at 14 Mountain Road is required due to its status as a public water supply (permit application is currently under review by MassDEP). As noted above, the recent detection of PFAS6 concentrations exceeding 20 ng/L was identified at 7 Prospect Street. The installation of a POET system at this locations is also pending.

### **14 Mountain Road**

The property at 14 Mountain Road is currently registered as a public water supply, which requires a permit for POET installation. Tighe & Bond has designed the system and has submitted the design and permit application for the Town on behalf of the Princeton Congregational Church. The permit application and design were submitted to MassDEP on April 29, 2021 and is currently under their review. The Town will continue to provide bottled water to the church and signage is maintained at all fixtures indicating that tap water is “not for potable use.”

### **POET Performance**

POET system monitoring to date of midfluent and effluent samples has not detected breakthrough of the primary carbon vessel at any of the 26 locations where POETs have been installed. Of the 26 locations with POETs, at least three rounds of monitoring results show no PFAS detections in the midfluent or effluent samples at the following 22 locations:

- 7 and 12 Boylston Street
- 15 Gregory Hill Road
- 1, 5, 15 and 43 Hubbardston Road
- 6, 18, 19, 20, 21, 22, 29, 30, 51, 54, 58 and 64 Mountain Road
- 5 Prospect Street
- 12 and 15 Radford Road

Three locations, 16 Boylston Avenue, and 39 and 42 Hubbardston Road, will continue to be sampled monthly until three consecutive monthly rounds of data demonstrate system efficacy. The POET system at 7 Prospect Street will also be sampled monthly for three months once installation is completed.

### **Town Hall Campus Well Quarterly Sampling**

WhiteWater 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.

WhiteWater provided PFAS results for Town Hall Well on May 11, 2021 for potable water samples collected on September 29, 2020, December 22, 2020, and February 17, 2021. PFAS6 concentrations on those dates were 299.5, 443.8, and 411.1 ng/L respectively. According to the laboratory report for the sample collected on September 29, 2021, the surrogate recoveries for several compounds were outside laboratory acceptance criteria; therefore, the sample was re-extracted. The PFAS result for the re-extracted sample was 307.1 ng/L and is considered as biased high. The Town Hall Well sampling data for the dates referenced above are included in Table 1, in Appendix C, and the associated laboratory reports obtained from White Water are included in Appendix D.

### **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. The Status Table B-1 in Appendix B 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 IRA Status Report No. 3 are included in Appendix D. The BWSC-123 Forms and laboratory reports for the potable well sampling are included with the individual letters.

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

### **Quarterly Stormwater Sampling**

In accordance with the IRA Plan Modification No. 3 Conditional Approval dated February 2, 2021, seasonal stormwater sampling was completed near 41 Prospect Street and 30 Mountain Road on April 22 and 29, 2021, respectively.

The sample at 41 Prospect was collected after a rainstorm from a natural drainage swale approximately 50 feet west of the residence located at 41 Prospect Street. No flow was observed at the runoff sample location near 30 Mountain Road on that date.

The 30 Mountain Road runoff sample was collected from water that was flowing off the 30 Mountain Road property and over the exposed bedrock face along Mountain Road during a heavy rain event on April 29, 2021. This is the same bedrock face where water flowing from a pipe was previously sampled in March 2020 (the pipe was sealed by the 30 Mountain Road property owner in April 2020).

Laboratory results for these runoff samples indicated that PFAS was not detected in the sample collected near 41 Prospect Street on April 22, 2021. PFAS6 concentrations in the runoff at the Mountain Road location were detected at 2,490.4 ng/L. These results are lower than the results obtained from the sample collected from the pipe flow in March 2020 sample. An Imminent Hazard evaluation performed on the March 2020 results showed no IH condition; therefore, we can conclude that the April 2021 results also do not meet the threshold for an IH condition. Laboratory results for the stormwater samples are included in Table 1, in Appendix C, and the associated laboratory reports are included in Appendix D.



### 30 Mountain Road Soil Sampling

On May 25, 2021, Tighe & Bond collected six soil samples around the former Princeton Inn building at 30 Mountain Road. Two composite soil samples were also collected from the earthen floor of the basement of the Inn. In addition, the owner of 30 Mountain Road was able to make the potable well formerly associated with the Inn operable to the extent that a sample could be collected for PFAS analysis (the pump seized immediately after the sample was collected). Laboratory results for the soil and water samples collected on May 25, 2021 are currently pending and will be included in the next IRA Status Report.

### Proposed IRA Plan Modification No. 4

With the POET monitoring and potable well sampling conducted to date, it is the opinion of Tighe & Bond that a reduction in potable well sampling and POET monitoring is appropriate for this site. This conclusion is based on our knowledge of sampling schedules at similar sites within the Commonwealth, as well as the following:

1. The horizontal extent of the disposal site has been defined to the north, east and west of the presumed release areas associated with the Town Campus and 30 Mountain Road, as shown in the attached Site Plan included in Appendix A. The southern limit of the disposal site appears to be in the vicinity of 6 Connor Lane, with only one potable well within 500 feet of that location, which is 18 Connor Lane. Efforts to collect a sample from 18 Connor Lane are ongoing.
2. All potable wells within the disposal site with PFAS6 concentrations above 20 ng/L have been addressed with the installation of POET systems, with the exception of 7 Prospect Street, the Town Campus Well and 14 Mountain Road. POET systems at these locations are pending installation and/or permitting. POET systems have proven to be effective with no breakthrough of the primary carbon vessel at any of the 22 POET systems where at least three rounds of data have been collected, the earliest of which was installed in January 2020.
3. All residents with potable wells that have PFAS6 concentrations below 20 ng/L but above laboratory detection limits are provided with bottled water by the town, except one owner who declined the offer of bottled water.
4. Based on the response actions completed to date, there is no Imminent Hazard condition associated with the release of PFAS at the disposal site.
5. A review of potable well data indicates that PFAS6 concentrations in potable well samples are relatively constant. There are only 3 locations where an increase in PFAS6 concentrations have been observed over time, 7 Prospect Street and 40 Boylston Avenue, and 85 Merriam Road. The most recent PFAS result at 7 Prospect Street was 21.9 ng/L on April 23, 2021. Based on this concentration a POET system is pending installation at this location. PFAS6 concentrations collected during the April sampling round at 40 Boylston Street and 85 Merriam Road were 14.9 and 11.1 ng/L respectively, which are below the Method 1 GW-1 standard and MMCL for PFAS6.

In consideration of the above conclusions we are requesting MassDEP's approval for the following revised sampling schedule:

- All potable well locations with PFAS6 concentrations below 20 ng/L will be sampled on a semi-annual basis (April and October). This will include those locations where at least one potable well sample has been collected and PFAS6 was not detected above laboratory detection limits. There are currently 70 locations that meet this criterion.

- There are currently eight potable well locations that have had PFAS6 concentrations detected above 100 ng/L during at least one sampling event. All of these locations have POET systems installed to mitigate PFAS and breakthrough of the primary carbon vessel has not been detected in the midfluent samples collected to date from all eight locations. Therefore, we propose that these eight POET locations be sampled on a semi-annual basis until breakthrough is observed on the primary carbon vessel, which, based on the influent concentrations and volumetric flow through the system, will allow us to develop performance curves for the GAC treatment and determine approximate carbon vessel lifespans, which will allow us to propose an informed monitoring schedule.
- There are currently 18 potable well locations that have PFAS6 concentrations between 20 ng/L and 100 ng/L. All 18 of these locations also have POET systems installed to mitigate PFAS and breakthrough of the primary vessel has not been detected in the midfluent samples collected to date from all 18 locations. Due to the lower PFAS concentrations at these locations, and the expected longer lifespan of the carbon, we propose that these 18 locations be sampled annually until January 2023 at which point they will be sampled semi-annually until breakthrough is observed on the primary carbon vessel.
- Locations where new POETs are installed are currently sampled on a monthly basis for 3 consecutive monthly rounds, to show that breakthrough does not occur, after which they are sampled quarterly. Based on the performance of these systems to date, we propose that new POET systems be sampled within the first month of installation to demonstrate effectiveness and then sampled annually thereafter.

Proposed Semi-annual Sample Locations			Proposed Annual Sample Locations
15 Hubbardston (P)	14 Gregory Hill	16 Prospect	7 Boylston (P)
18 Mountain (P)	21 Gregory Hill	17 Prospect	12 Boylston (P)
19 Mountain (P)	44 Gregory Hill	18 Prospect	16 Boylston (P)
20 Mountain (P)	7 Hubbardston	21 Prospect	15 Gregory Hill (P)
22 Mountain (P)	19 Hubbardston	26 Prospect	1 Hubbardston (P)
29 Mountain (P)	23 Hubbardston	2 Radford	5 Hubbardston (P)
58 Mountain (P)	33 Hubbardston	7 Radford	39 Hubbardston (P)
64 Mountain (P)	35 Hubbardston	8 Radford	42 Hubbardston (P)
9 Allen Hill	36 Hubbardston	11 Radford	43 Hubbardston (P)
12 Allen Hill	44 Hubbardston	13 Radford	6 Mountain (P)
15 Allen Hill	46 Hubbardston	18 Radford	14 Mountain (POET Pending)
19 Allen Hill	48 Hubbardston	23 Radford	21 Mountain (P)
20 Allen Hill	52 Hubbardston	28 Radford	30 Mountain (P)
32 Allen Hill	73 Hubbardston	29 Radford	51 Mountain (P)
33 Allen Hill	81 Hubbardston	33 Radford	54 Mountain (P)
13 Boylston	55 Merriam	37 Radford	5 Prospect (P)
17 Boylston	57 Merriam	7 Thompson	7 Prospect (POET Pending)
21 Boylston	58 Merriam	1 Worcester	41 Prospect (P)
24 Boylston	59 Merriam	10 Worcester	12 Radford (P)
30 Boylston	70 Merriam	15 Worcester	15 Radford (P)
32 Boylston	85 Merriam	16 Worcester	
40 Boylston	105 Merriam	17 Worcester	
6 Connor	2 Mountain	20 Worcester	
18 Connor	10 Mountain	23 Worcester	
4 Goodnow	33 Mountain		
11 Gregory Hill	38 Mountain		
13 Gregory Hill	11 Prospect		

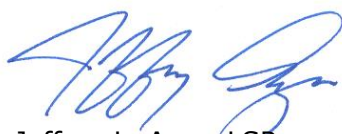
If the proposed potable well monitoring schedule is approved, the next sampling round will be performed in October 2021 and will include those potable well locations within the semi-annual schedule. Any new or recent POET systems will be sampled in the first month of operation and then annually thereafter. Please note that the reduction in sampling does not include the Town Campus public water supply well, which is operated by WhiteWater.

We are also requesting a modification to the requirement in the February 2021 IRA Modification Approval for quarterly runoff sampling. Unless there is earthwork performed at a property, no significant variations in contaminant concentrations in stormwater runoff are expected. The runoff near both 30 Mountain Road and 41 Prospect Street has been sampled and one shows significant PFAS concentrations in runoff (30 Mountain Road) and the other is non-detect (41 Prospect Street). We do not foresee these conditions changing due to the time of year, as the stormwater runoff area and flow path would be expected to be the same regardless of the season.

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 – Request for Access Letters

Appendix C – January 2021 Potable Well Summary

April 2021 Potable Well Summary

POET Status Summary

Table 1, Summary of PFAS Analytical Data

Appendix D – Laboratory Reports

Appendix E – Notification Letters (submitted under separate cover due to file size limitations)

J:\P\0534 Princeton PSB\PFAS 2019\Quarterly Status 6-2021\Quarterly Status Report - Princeton PFAS 6-2021\_REV3.docx





FIGURE 2  
ORTHOPHOTOGRAPH  
SITE PLAN

LEGEND

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

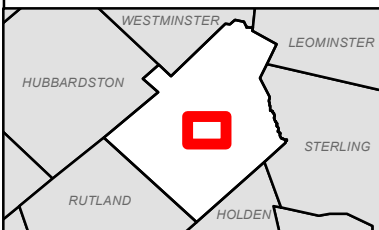
- Greater Than 100
- Greater Than 20 But Less Than 100
- Greater Than 2 But Less Than 20
- Non Detect (<2)
- Non-Community Transient Public Water Supply

- 500' Radius (2021/06/03)
- Previous Radius (2020/10/15)

Affected Property Labels:

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

LOCUS MAP



N



0 300 600  
Feet

1:7,200

NOTES

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

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

Princeton, Massachusetts

June 2021

Tighe&Bond







P-0534  
June 4, 2021

Patrick Brady  
Karen Shadbegian  
18 Connor Lane  
Princeton, Massachusetts 01541

Re: **Residential Well Sampling  
18 Connor Lane, Princeton**

Dear Mr. Brady and Ms. Shadbegian,

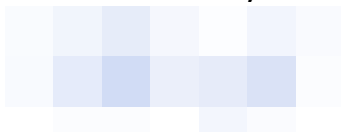
On behalf of the Town of Princeton, Tighe & Bond has been performing environmental monitoring activities in the area of Town Hall Drive, Hubbardston Road, and Mountain Road. Both the Town and Tighe & Bond have previously sent letters to inform you that the town sampled the drinking water well that serves the Princeton Town Hall complex and detected elevated concentrations of "PFAS," a family of compounds consisting of per- and polyfluoroalkyl substances.

Because of these detections in the public water supply well, the Massachusetts Department of Environmental Protection (MassDEP) has required the Town to conduct sampling of all private wells within 500 feet of the Town Hall for PFAS, as well as any additional wells within 500 feet of a well with a detection of PFAS. Your property is within the area where Tighe & Bond is required to perform residential well sampling activities to satisfy the requirements of MassDEP. However, we have been unable to schedule a sampling date with you despite several attempts to contact you to schedule a sampling time at your home. We can schedule the sampling such that it is convenient for you, as necessary (nights and weekends included). Please let us know a convenient time for us to stop by to collect this sample. If we are unable to schedule this sampling, we are required to ask MassDEP to provide assistance with access.

If you have any questions about this process, please call me at 413-572-3227. Thank you very much for your cooperation in this matter.

Very truly yours,

**TIGHE & BOND, INC.**



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

Copy: Sherry Patch, Princeton Town Administrator  
Princeton Board of Health



P-0534  
June 4, 2021

31 Prospect Street, LLC  
58 Elm Street, Unit 12  
Worcester, Massachusetts 01609

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

To whom it may concern,

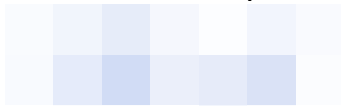
On behalf of the Town of Princeton, Tighe & Bond has been performing environmental monitoring activities in the area of Town Hall Drive, Hubbardston Road, and Mountain Road. Both the Town and Tighe & Bond have previously sent letters to inform you that the town sampled the drinking water well that serves the Princeton Town Hall complex and detected elevated concentrations of "PFAS," a family of compounds consisting of per- and polyfluoroalkyl substances.

Because of these detections in the public water supply well, the Massachusetts Department of Environmental Protection (MassDEP) has required the Town to conduct sampling of all private wells within 500 feet of the Town Hall for PFAS, as well as any additional wells within 500 feet of a well with a detection of PFAS. Your property is within the area where Tighe & Bond is required to perform residential well sampling activities to satisfy the requirements of MassDEP. However, we have been unable to schedule a sampling date with you despite several attempts to contact you to schedule a sampling time at your home. We can schedule the sampling such that it is convenient for you, as necessary (nights and weekends included). Please let us know a convenient time for us to stop by to collect this sample. If we are unable to schedule this sampling, we are required to ask MassDEP to provide assistance with access.

If you have any questions about this process, please call me at 413-572-3227. Thank you very much for your cooperation in this matter.

Very truly yours,

**TIGHE & BOND, INC.**



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

Copy: Sherry Patch, Princeton Town Administrator  
Princeton Board of Health



P-0534  
May 3, 2021

Harold Rehrauer  
Ruth Rehrauer  
38 Boylston Ave  
Princeton, Massachusetts 01541

Re: **Residential Well Sampling  
38 Boylston Ave, Princeton**

Dear Mr. and Mrs. Rehrauer,

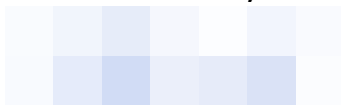
On behalf of the Town of Princeton, Tighe & Bond has been performing environmental monitoring activities in the area of Town Hall Drive, Hubbardston Road, and Mountain Road. Both the Town and Tighe & Bond have previously sent letters to inform you that the town sampled the drinking water well that serves the Princeton Town Hall complex and detected elevated concentrations of "PFAS," a family of compounds consisting of per- and polyfluoroalkyl substances.

Because of these detections in the public water supply well, the Massachusetts Department of Environmental Protection (MassDEP) has required the Town to conduct sampling of all private wells within 500 feet of the Town Hall for PFAS, as well as any additional wells within 500 feet of a well with a detection of PFAS. Your property is within the area where Tighe & Bond is required to perform residential well sampling activities to satisfy the requirements of MassDEP. However, on April 20, 2021 you indicated that you do not want your drinking water sampled because you have installed a treatment system to mitigate PFAS. Please understand that this sampling is being required by MassDEP regardless of any treatment systems you have installed. We are asking that you reconsider our request to sample your drinking water. We can schedule the sampling such that it is convenient for you, as necessary (nights and weekends included). Please let us know a convenient time for us to stop by to collect this sample. If we are unable to schedule this sampling, we are required to ask MassDEP to provide assistance with access.

If you have any questions about this process, please call me at 413-572-3227. Thank you very much for your cooperation in this matter.

Very truly yours,

**TIGHE & BOND, INC.**



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

Copy: Sherry Patch, Princeton Town Administrator  
Princeton Board of Health





TABLE B-1  
Public Notification Schedule  
Princeton, Massachusetts  
RTN 2-21072

JANUARY 2021 SAMPLING					
Sample Location	Date Sampled	Date Data Received	Final Letter Due Date	Date Final Letter Sent	MassDEP Submittal Status
1 Worcester	12/16/2020	1/4/2021	2/3/2021	1/25/2021	Submitted with 6/2021 Quarterly Status Report
20 Allen Hill	1/18/2021	2/5/2021	3/7/2021	3/6/2021	
17 Boylston	1/18/2021	2/5/2021	3/7/2021	3/6/2021	
23 Hubbardston	1/18/2021	2/5/2021	3/7/2021	3/6/2021	
42 Hubbardston	1/19/2021	2/5/2021	3/7/2021	3/6/2021	
44 Hubbardston	1/19/2021	2/5/2021	3/7/2021	3/6/2021	
15 Allen Hill	1/19/2021	2/8/2021	3/10/2021	3/6/2021	
19 Allen Hill	1/19/2021	2/8/2021	3/10/2021	3/6/2021	
24 Boylston	1/19/2021	2/8/2021	3/10/2021	3/6/2021	
11 Gregory Hill	1/19/2021	2/8/2021	3/10/2021	3/6/2021	
13 Gregory Hill	1/19/2021	2/8/2021	3/10/2021	3/6/2021	
16 Boylston	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
40 Boylston	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
14 Gregory Hill	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
44 Gregory Hill	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
105 Merriam	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
38 Mountain	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
16 Prospect	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
37 Radford	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
20 Worcester	1/20/2021	2/9/2021	3/11/2021	3/6/2021	
32 Boylston	1/20/2021	2/12/2021	3/14/2021	3/6/2021	
4 Goodnow	1/21/2021	2/12/2021	3/14/2021	3/6/2021	
36 Hubbardston	1/21/2021	2/12/2021	3/14/2021	3/6/2021	
33 Mountain	1/21/2021	2/12/2021	3/14/2021	3/6/2021	
29 Radford	1/21/2021	2/12/2021	3/14/2021	3/6/2021	
17 Worcester	1/21/2021	2/12/2021	3/14/2021	3/6/2021	
9 Allen Hil	1/19/2021	2/15/2021	3/17/2021	3/17/2021	
12 Allen Hill	1/19/2021	2/15/2021	3/17/2021	3/17/2021	
21 Boylston	1/19/2021	2/15/2021	3/17/2021	3/17/2021	
17 Prospect	1/19/2021	2/15/2021	3/17/2021	3/17/2021	
16 Worcester	1/19/2021	2/15/2021	3/17/2021	3/17/2021	
21 Gregory Hill	1/21/2021	2/16/2021	3/18/2021	3/17/2021	
57 Merriam	1/21/2021	2/16/2021	3/18/2021	3/17/2021	
58 Merriam	1/21/2021	2/16/2021	3/18/2021	3/17/2021	
2 Radford	1/21/2021	2/16/2021	3/18/2021	3/17/2021	
10 Worcester	1/21/2021	2/16/2021	3/18/2021	3/17/2021	
39 Hubbardston	1/22/2021	2/23/2021	3/25/2021	3/17/2021	
46 Hubbardston	1/22/2021	2/23/2021	3/25/2021	3/17/2021	
70 Merriam	1/22/2021	2/23/2021	3/25/2021	3/17/2021	
2 Mountain	1/22/2021	2/23/2021	3/25/2021	3/17/2021	
18 Prospect	1/22/2021	2/23/2021	3/25/2021	3/17/2021	
23 Radford	1/22/2021	2/23/2021	3/25/2021	3/17/2021	
12 Boylston	1/29/2021	2/25/2021	3/27/2021	3/17/2021	
33 Hubbardston	1/21/2021	2/25/2021	3/27/2021	3/17/2021	
48 Hubbardston	1/22/2021	2/25/2021	3/27/2021	3/17/2021	
85 Merriam	1/21/2021	2/25/2021	3/27/2021	3/17/2021	
14 Mountain	1/22/2021	2/25/2021	3/27/2021	3/17/2021	
28 Radford	1/21/2021	2/25/2021	3/27/2021	3/17/2021	
7 Radford	1/21/2021	2/26/2021	3/28/2021	3/17/2021	
32 Allen Hill	1/22/2021	2/26/2021	3/28/2021	3/17/2021	
13 Boylston	1/22/2021	2/26/2021	3/28/2021	3/17/2021	
6 Connor	1/21/2021	2/26/2021	3/28/2021	3/17/2021	
15 Gregory Hill	1/29/2021	2/26/2021	3/28/2021	3/17/2021	
10 Mountain	1/22/2021	2/26/2021	3/28/2021	3/17/2021	
29 Mountain	1/29/2021	2/26/2021	3/28/2021	3/17/2021	
7 Prospect	1/19/2021	2/26/2021	3/28/2021	3/17/2021	
8 Radford	1/21/2021	2/26/2021	3/28/2021	3/17/2021	
11 Radford	1/21/2021	2/26/2021	3/28/2021	3/17/2021	
13 Radford	1/22/2021	2/26/2021	3/28/2021	3/17/2021	
18 Mountain	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
7 Hubbardston	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
19 Mountain	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
64 Mountain	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
18 Radford	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
15 Worcseter	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
23 Worcester	1/29/2021	3/1/2021	3/31/2021	3/31/2021	
1 Hubbardston	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
15 Hubbardston	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
21 Prospect	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
12 Radford	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
33 Radford	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
20 Mountain	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
5 Prospect	1/29/2021	3/8/2021	4/7/2021	4/7/2021	
15 Radford	2/5/2021	3/9/2021	4/8/2021	4/7/2021	
19 Hubbardston	1/23/2021	3/9/2021	4/8/2021	4/7/2021	
52 Hubbardston	1/29/2021	3/9/2021	4/8/2021	4/7/2021	
21 Mountain	2/5/2021	3/9/2021	4/8/2021	4/7/2021	
11 Prospect	1/28/2021	3/9/2021	4/8/2021	4/7/2021	
43 Hubbardston	2/5/2021	3/11/2021	4/10/2021	4/7/2021	
22 Mountain	2/5/2021	3/11/2021	4/10/2021	4/7/2021	
41 Prospect	2/12/2021	3/17/2021	4/16/2021	4/13/2021	
54 Mountain	2/11/2021	3/18/2021	4/17/2021	4/13/2021	
5 Hubbardston	2/5/2021	3/22/2021	4/21/2021	4/13/2021	
55 Merriam	2/5/2021	3/22/2021	4/21/2021	4/13/2021	
6 Mountain	2/5/2021	3/22/2021	4/21/2021	4/13/2021	
51 Mountain	2/5/2021	3/22/2021	4/21/2021	4/13/2021	
58 Mountain	2/5/2021	3/22/2021	4/21/2021	4/13/2021	
30 Mountain	2/22/2021	3/23/2021	4/22/2021	4/13/2021	
7 Boylston	2/22/2021	3/29/2021	4/28/2021	4/13/2021	

TABLE B-1  
Public Notification Schedule  
Princeton, Massachusetts  
RTN 2-21072

APRIL 2021 SAMPLING					
Sample Location	Date Sampled	Date Data Received	Final Letter Due Date	Date Final Letter Sent	MassDEP Submittal Status
16 Boylston	5/27/2021		1/30/1900		
33 Mountain	4/16/2021	5/5/2021	6/4/2021		
85 Merriam	4/19/2021	5/10/2021	6/9/2021		
12 Allen Hill	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
20 Allen Hill	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
32 Allen Hill	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
7 Boylston	4/20/2021	5/10/2021	6/9/2021		
40 Boylston	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
6 Connor	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
11 Gregory Hill	4/21/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
13 Gregory Hill	4/21/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
14 Gregory Hill	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
7 Hubbardston	4/21/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
48 Hubbardston	4/19/2021	5/10/2021	6/9/2021		
6 Mountain	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
10 Mountain	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
14 Mountain	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
18 Mountain	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
21 Mountain	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
22 Mountain	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
29 Mountain	4/20/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
5 Prospect	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
17 Prospect	4/20/2021	5/10/2021	6/9/2021		
18 Prospect	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
21 Prospect	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
41 Prospect	4/21/2021	5/10/2021	6/9/2021		
2 Radford	4/21/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
7 Radford	4/21/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
8 Radford	4/21/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
33 Radford	4/19/2021	5/10/2021	6/9/2021		
37 Radford	4/20/2021	5/10/2021	6/9/2021		
10 Worcester	4/19/2021	5/10/2021	6/9/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
33 Allen Hill	4/20/2021	5/12/2021	6/11/2021		
4 Goodnow	4/20/2021	5/12/2021	6/11/2021		
15 Gregory Hill	4/21/2021	5/12/2021	6/11/2021		
13 Radford	4/21/2021	5/12/2021	6/11/2021		
15 Radford	4/21/2021	5/12/2021	6/11/2021		
19 Allen Hill	4/21/2021	5/14/2021	6/13/2021		
23 Hubbardston	4/22/2021	5/14/2021	6/13/2021		
58 Mountain	4/21/2021	5/14/2021	6/13/2021		
64 Mountain	4/21/2021	5/14/2021	6/13/2021		
16 Prospect	4/22/2021	5/14/2021	6/13/2021		
17 Worcester	4/22/2021	5/14/2021	6/13/2021		
13 Boylston	4/26/2021	5/17/2021	6/16/2021		
21 Boylston	4/26/2021	5/17/2021	6/16/2021		
1 Hubbardston	4/23/2021	5/17/2021	6/16/2021		
33 Hubbardston	4/26/2021	5/17/2021	6/16/2021		
52 Hubbardston	4/26/2021	5/17/2021	6/16/2021		
59 Merriam	4/26/2021	5/17/2021	6/16/2021		
19 Mountain	4/22/2021	5/17/2021	6/16/2021		
54 Mountain	4/23/2021	5/17/2021	6/16/2021		
7 Prospect	4/23/2021	5/17/2021	6/16/2021		
11 Prospect	4/21/2021	5/17/2021	6/16/2021		
11 Radford	4/22/2021	5/17/2021	6/16/2021		
12 Radford	4/23/2021	5/17/2021	6/16/2021		
29 Radford	4/22/2021	5/17/2021	6/16/2021		
15 Allen Hill	4/23/2021	5/18/2021	6/17/2021		
17 Boylston	4/27/2021	5/18/2021	6/17/2021	5/27/2021	Submitted with 6/2021 Quarterly Status
24 Boylston	4/27/2021	5/18/2021	6/17/2021		
16 Worcester	4/23/2021	5/18/2021	6/17/2021		
9 Allen Hil	4/27/2021	5/19/2021	6/18/2021		
32 Boylston	4/27/2021	5/19/2021	6/18/2021		
51 Mountain	4/26/2021	5/20/2021	6/19/2021		
21 Gregory Hill	4/26/2021	5/20/2021	6/19/2021		
44 Gregory Hill	4/26/2021	5/20/2021	6/19/2021		
5 Hubbardston	4/27/2021	5/20/2021	6/19/2021		
35 Hubbardston	4/26/2021	5/20/2021	6/19/2021		
43 Hubbardston	4/27/2021	5/20/2021	6/19/2021		
30 Mountain	4/26/2021	5/20/2021	6/19/2021		
28 Radford	4/26/2021	5/20/2021	6/19/2021		
1 Worcester	4/26/2021	5/20/2021	6/19/2021		
15 Worcseter	4/26/2021	5/20/2021	6/19/2021		
20 Worcester	4/26/2021	5/20/2021	6/19/2021		
23 Worcester	4/26/2021	5/20/2021	6/19/2021		
18 Radford	4/26/2021	5/21/2021	6/20/2021		
36 Hubbardston	4/27/2021	5/21/2021	6/20/2021		
23 Radford	4/26/2021	5/21/2021	6/20/2021		
38 Mountain	4/27/2021	5/21/2021	6/20/2021		
30 Boylston	5/6/2021	5/24/2021	6/23/2021		
15 Hubbardston	4/26/2021	5/24/2021	6/23/2021		
19 Hubbardston	4/30/2021	5/24/2021	6/23/2021		
39 Hubbardston	5/3/2021	5/24/2021	6/23/2021		
42 Hubbardston	4/26/2021	5/24/2021	6/23/2021		
46 Hubbardston	4/26/2021	5/24/2021	6/23/2021		
73 Hubbardston	5/3/2021	5/24/2021	6/23/2021		
81 Hubbardston	5/3/2021	5/24/2021	6/23/2021		
70 Merriam	4/30/2021	5/24/2021	6/23/2021		
105 Merriam	4/26/2021	5/24/2021	6/23/2021		
2 Mountain	4/26/2021	5/24/2021	6/23/2021		
20 Mountain	4/26/2021	5/24/2021	6/23/2021		
7 Thompson	5/6/2021	5/24/2021	6/23/2021		
44 Hubbardston	4/26/2021	5/24/2021	6/23/2021		
55 Merriam	4/26/2021	5/24/2021	6/23/2021		
57 Merriam	4/26/2021	5/24/2021	6/23/2021		



POET SYSTEM STATUS		
Locations >20 ppt	System Status	Date Installed
7 Boylston	POET INSTALLED	3/1/2020
12 Boylston	POET INSTALLED	3/20/2020
16 Boylston	POET INSTALLED	3/23/2021
15 Gregory Hill	POET INSTALLED	2/26/2020
1 Hubbardston	POET INSTALLED	2/26/2020
5 Hubbardston	POET INSTALLED	1/28/2020
15 Hubbardston	POET INSTALLED	2/10/2020
39 Hubbardston	POET INSTALLED	3/12/2021
42 Hubbardston	POET INSTALLED	3/2/2021
43 Hubbardston	POET INSTALLED	3/20/2020
6 Mountain	POET INSTALLED	1/28/2020
14 Mountain	NEEDS A POET	
18 Mountain	LARGE POET INSTALLED	2/10/2020
19 Mountain	LARGE POET INSTALLED	1/10/2020
20 Mountain	POET INSTALLED	2/11/2020
21 Mountain	POET INSTALLED	1/21/2020
22 Mountain	POET INSTALLED	9/3/2020
29 Mountain	POET INSTALLED	2/24/2020
30 Mountain	POET INSTALLED	2/15/2021
51 Mountain	POET INSTALLED	5/1/2020
54 Mountain	POET INSTALLED	6/2/2020
58 Mountain	POET INSTALLED	7/7/2020
64 Mountain	POET INSTALLED	2/18/2020
5 Prospect	POET INSTALLED	1/21/2020
7 Prospect	NEEDS A POET	
41 Prospect	EXISTING POET	NA
12 Radford	POET INSTALLED	6/12/2020
15 Radford	POET INSTALLED	10/21/2020

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	Town Well (WELL-01G)							
		UNKNOWN							
		9/5/2019	9/27/2019	1/8/2020	6/23/2020	9/29/2020	9/29/2020	12/22/2020	2/17/2021
Well Depth (feet)							RERUN		
Sampling Date									
<b>EPA 537.1 (ng/L)</b>									
Perfluorobutanesulfonic acid (PFBS)		26.9	17	31.9	16.1	39.5	42.9	48.6	41.6
Perfluorohexanoic acid (PFHxA)		ND (1.82)	ND (1.87)	2.86	1.48 (J)	2.92	4.51	5.1	5.45
Perfluorohexanesulfonic acid (PFHxS)		94.4	78.1	168	81.7	234	225	329	305
Perfluoroheptanoic acid (PFHpA)		ND (1.82)	ND (1.87)	2.47	1.25 (J)	1.30 (J)	1.9	4.27	4.67
Perfluorooctanoic acid (PFOA)		3.92	3.18	9.52	4.48	8.4	12.3	15.9	14.6
Perfluorooctanesulfonic acid (PFOS)		26.4	18.9	52.6	23.5	56.4	67.4	94.2	86.2
Perfluorononanoic acid (PFNA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	0.555 (J)	0.985 (J)	0.904 (J)	1.17 (J)
Perfluorodecanoic acid (PFDA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
N-EtFOSAA		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
Perfluoroundecanoic acid (PFUnA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
N-MeFOSAA		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
Perfluorododecanoic acid (PFDoA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
Perfluorotridecanoic acid (PFTrDA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
Perfluorotetradecanoic acid (PFTA)		ND (1.82)	ND (1.87)	ND (1.84)	ND (1.90)	ND (1.85)	ND (1.90)	ND (1.81)	ND (1.77)
Total (All Compounds)		151.6	117.2	264.9	127.1	341.9	354.5	497.5	458.1
Regulated Total	20	<b>124.7</b>	<b>100.2</b>	<b>230.1</b>	<b>110.3</b>	<b>299.5</b>	<b>307.1</b>	<b>443.8</b>	<b>411.1</b>

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	MW-6		MW-7DR	MW-10A	MW-10D	MW-14	MW-18R	MW-101	MW-102	MW-102 DUP	Equipment Blank			Trip Blank			Field Blank		
		6/23/2020	1/12/2021	1/12/2021	1/2/2020	1/2/2020	1/2/2020	1/2/2020	1/12/2021	1/12/2021	1/12/2021	1/2/2020	6/23/2020	1/12/2021	1/2/2020	6/23/2020	1/12/2021	1/2/2020	6/23/2020	1/12/2021
Sampling Date																				
<b>EPA 537.1 (ng/L)</b>		4.6	10	16	5.3	7.2	21	3.9	25	66	65	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorobutanesulfonic acid (PFBS)		11	2.3	4.1	4.1	3.6	2.1	2.8	3.3	11	11	ND (2.0)	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)		9.9	13	130	22	39	200	17	200	740	750	ND (2.0)	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)		3.2	ND (2.0)	3.6	2.1	3.3	ND (2.0)	2.1	3	5.1	5.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		15	2.8	7.4	4.5	8.6	6.5	3.1	8.6	16	16	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	6.3	27	4	28	140	7	53	250	270	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFCSA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecane sulfonic acid (PFDSa)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Hexafluoropropylene oxide dimer acid (HFPO-DA)		3.8	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	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)		47.5	34.4	188.1	42.0	89.7	369.6	35.9	292.9	1088.1	1117.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	28.1	22.1	168	32.6	78.9	346.5	29.2	264.6	1011.1	1041.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)

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.  
Bolted values exceed the proposed Method 1 Standard  
MMCL is Massachusetts Maximum Containment Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	Mountain Rd Runoff	
Well Depth (feet)		NA	
Sampling Date		2/27/2020	4/29/2021
<b>EPA 537.1 (ng/L)</b>	20		
Perfluorobutanesulfonic acid (PFBS)		58	20
Perfluorohexanoic acid (PFHxA)		88	24
Perfluorohexanesulfonic acid (PFHxS)		710	350
Perfluoroheptanoic acid (PFHpA)		23	6.2
Perfluorooctanoic acid (PFOA)		100	32
Perfluorooctanesulfonic acid (PFOS)		2,800	2,100
Perfluorononanoic acid (PFNA)		3.1	ND (2.0)
Perfluorodecanoic acid (PFDA)		6.2	2.2
N-EtFOSAA		3.1	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)
N-MeFOSAA		3.9	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)		3795.3	2534.4
Regulated Total		<b>3642.3</b>	<b>2490.4</b>

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Containment Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	9 Allen Hill Rd		
		UNKNOWN		
Well Depth (feet)		2/12/2020	7/23/2020	1/19/2021
Sampling Date				
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)
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 (PFTTrDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Allen Hill Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		2/14/2020	7/27/2020	1/19/2021	4/20/2021
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		2.2	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.8	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.2	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		12.2	ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	12.2	ND (2.0)	ND (2.0)	ND (2.0)

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	33 Allen Hill Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		10/30/2020	12/16/2020	4/20/2021	
			DUPLICATE		
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		47	8	2.3	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)		47	8	2.3	ND (2.0)
Regulated Total	20	47	8	2.3	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 Contaminant Level



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

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

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

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

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

		Massachusetts Contingency Plan GW-1 Standard & MMCL	12 Boylston Ave													
Parameter	-		-	4,939				9,900			13,469			24,535		
Flow Meter Reading (gallons)	1/10/2020		3/20/2020	5/1/2020				6/23/2020			7/31/2020			11/6/2020		
Sampling Date																
			POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)																
Perfluorobutanesulfonic acid (PFBS)		9.1	7.5	ND (2.0)	ND (2.0)	8.9	ND (2.0)	ND (2.0)	7.7	ND (2.0)	ND (2.0)	7.5	ND (2.0)	ND (2.0)		
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorohexanesulfonic acid (PFHxS)		14	14	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)	17	ND (2.0)	ND (2.0)	18	ND (2.0)	ND (2.0)		
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorooctanoic acid (PFOA)		5.7	5.9	ND (2.0)	ND (2.0)	6.8	ND (2.0)	ND (2.0)	4.7	ND (2.0)	ND (2.0)	6	ND (2.0)	ND (2.0)		
Perfluorooctanesulfonic acid (PFOS)		6.4	5.7	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)	5.9	ND (2.0)	ND (2.0)	6.6	ND (2.0)	ND (2.0)		
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorotridecanoic acid (PFTDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		
Total (All Compounds)		35.2	33.1	ND (2.0)	ND (2.0)	42.2	ND (2.0)	ND (2.0)	35.3	ND (2.0)	ND (2.0)	38.1	ND (2.0)	ND (2.0)		
Regulated Total		2026.1	2025.6	ND (2.0)	ND (2.0)	31.2	ND (2.0)	ND (2.0)	27.6	ND (2.0)	ND (2.0)	30.6	ND (2.0)	ND (2.0)		

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	16 Boylston Ave			
		UNKNOWN			
Well Depth (feet)		1/9/2020	5/28/2020	10/7/2020	1/20/2021
Sampling Date					
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		5.3	6.2	5	6.6
Perfluorohexanoic acid (PFHxA)		3.7	3.9	3.3	3.6
Perfluorohexanesulfonic acid (PFHxS)		4.7	5.2	6	9.4
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		8	8.9	8.2	8.9
Perfluorooctanesulfonic acid (PFOS)		7.2	5.5	4.2	5
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)		28.9	29.7	26.7	33.5
Regulated Total	20	19.9	19.6	18.4	<b>23.3</b>

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	30 Boylston Ave
Well Depth (feet)		UNKOWN
Sampling Date		5/6/2021
<b>EPA 537.1 (ng/L)</b>		
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)		2.1
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)		2.1
Regulated Total	20	2.1

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter  Flow Meter Reading (gallons) Sampling Date	Massachusetts Contingency Plan GW-1 Standard & MMCL	1 Hubbardston Rd													
		-	-	865			1,311			3,896			6,577		
		1/8/2020	2/26/2020	3/11/2020			5/1/2020			6/18/2020			7/29/2020		
			POET INSTALLED	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)															
Perfluorobutanesulfonic acid (PFBS)		7		5.7	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)	6.5	ND (2.0)	ND (2.0)	6.4	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		22		19	ND (2.0)	ND (2.0)	21	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	23	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.4		3	ND (2.0)	ND (2.0)	3.1	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		6.1		5.6	ND (2.0)	ND (2.0)	5.7	ND (2.0)	ND (2.0)	6.2	ND (2.0)	ND (2.0)	5.6	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTDA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		38.5		33.3	ND (2.0)	ND (2.0)	36.2	ND (2.0)	ND (2.0)	39.6	ND (2.0)	ND (2.0)	37.9	ND (2.0)	ND (2.0)
Regulated Total	20	31.5		27.6	ND (2.0)	ND (2.0)	29.8	ND (2.0)	ND (2.0)	33.1	ND (2.0)	ND (2.0)	31.5	ND (2.0)	ND (2.0)

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

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

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

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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

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

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



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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	33 Hubbardston Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		2/5/2020	7/23/2020	1/21/2021	4/26/2021
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	2.1	ND (2.0)	2.1
Perfluorooctanesulfonic acid (PFOS)		2.5	2.1	ND (2.0)	2.4
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)		2.5	4.2	ND (2.0)	4.5
Regulated Total	20	2.5	4.2	ND (2.0)	4.5

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	35 Hubbardston Rd
Well Depth (feet)		UNKNOWN
Sampling Date		11/11/2020
<b>EPA 537.1 (ng/L)</b>		
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)		7.5
Perfluorooctanesulfonic acid (PFOS)		8.4
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	15.9

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

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

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

NOTES:  
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Bolded values exceed the proposed Method 1 Standard  
MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	42 Hubbardston Rd										
		3,096					7,975					
		3/25/2021					4/26/2021					
		2/10/2020	7/23/2020	1/19/2021	3/2/2021	POET INSTALLED	INF	MID	EFF	INF	MID	EFF
<i>EPA 537.1 (ng/L)</i>				DUPLICATE								
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	2.1		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	4.1		2.3	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	6		3.1	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	7.8	7.2	20		14	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	7.9	8.5	12		13	ND (2.0)	ND (2.0)	9.2	ND (2.0)	ND (2.0)
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 (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
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)		ND (2.0)	15.7	15.7	44.2		32.4	ND (2.0)	ND (2.0)	22.9	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	15.7	15.7	<b>38.0</b>		<b>30.1</b>	ND (2.0)	ND (2.0)	<b>22.9</b>	ND (2.0)	ND (2.0)

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



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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	43 Hubbardston		
		15,057		
		2/5/2021		
		INF	MID	EFF
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		3.2	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		5.3	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		15	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		13	ND (2.0)	ND (2.0)
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 (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		36.5	ND (2.0)	ND (2.0)
Regulated Total	20	33.3	ND (2.0)	ND (2.0)

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

Parameter	Massachusetts	55 Merriam Road	
Well Depth (feet)	Contingency Plan GW-1 Standard & MMCL	UNKNOWN	
Sampling Date		2/5/2021	4/26/2021
<b>EPA 537.1 (ng/L)</b>	20		
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		ND (2.0)	ND (2.0)

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

\* PFHpA also detected in both the field blank and trip blank, therefore the reported result is considered invalid. Confirmed as laboratory contaminate. Result is not included in total. Reference lab reports 21B0096\_2 and 21B0997\_2

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	58 Merriam Rd	
Well Depth (feet)		UNKNOWN	
Sampling Date		10/6/2020	1/21/2021
<b>EPA 537.1 (ng/L)</b>	20		
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		ND (2.0)	ND (2.0)

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	85 Merriam Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		2/26/2020	7/22/2020	1/21/2021	4/19/2021
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	2	2.0
Perfluorooctanoic acid (PFOA)		4.1	5.1	4.8	5.9
Perfluorooctanesulfonic acid (PFOS)		2.7	2.9	3	3.2
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)		6.8	8.0	9.8	11.1
Regulated Total	20	6.8	8.0	9.8	11.1

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	14 Mountain Rd					
		500'					
Well Depth (feet)		1/9/2020	1/22/2020	5/29/2020	11/11/2020	1/22/2021	4/20/2021
Sampling Date							
<b>EPA 537.1 (ng/L)</b>							
Perfluorobutanesulfonic acid (PFBS)		7.4	8.7	7.8	7.7	10	8.5
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		30	35	33	34	46	42
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.6	2.3	3.3	2.5	3.6	3.3
Perfluorooctanesulfonic acid (PFOS)		6.1	7.8	7	5.1	9.3	8.0
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		46.1	53.8	51.1	49.3	68.9	61.8
Regulated Total	20	<b>38.7</b>	<b>45.1</b>	<b>43.3</b>	<b>41.6</b>	<b>58.9</b>	<b>53.3</b>

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

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

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

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

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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	19 Mountain Rd		
		92,089		
		4/22/2021		
Notes		INF	MID	EFF
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		21	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		6.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		170	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		2.3	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		9.2	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		130	ND (2.0)	ND (2.0)
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 (PFTyDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		338.6	ND (2.0)	ND (2.0)
Regulated Total	20	311.5	ND (2.0)	ND (2.0)

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

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

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

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

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

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

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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	21 Mountain Rd		
		156,974		
		4/19/2021		
Notes		INF	MID	EFF
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		3.2	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		23	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFDA)		4.5	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		18	ND (2.0)	ND (2.0)
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 (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		48.7	ND (2.0)	ND (2.0)
Regulated Total	20	45.5	ND (2.0)	ND (2.0)

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

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

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

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



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

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

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

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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	30 Mountain Rd									
		-			-	37			80		
		1/27/2020	6/5/2020	10/13/2020	2/15/2021	2/22/2021			3/22/2021		
					POET INSTALLED	INF	MID	EFF	INF	MID	EFF
EPA 537.1 (ng/L)											
Perfluorobutanesulfonic acid (PFBS)		<2.0	<2.0	3.2		2.2	ND (2.0)	ND (2.0)	2.9	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		<2.0	<2.0	2.9		2.1	ND (2.0)	ND (2.0)	2.8	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		4.4	3.9	22		16	ND (2.0)	ND (2.0)	16	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	2.3		ND (2.0)	ND (2.0)	ND (2.0)	2.7	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		6.1	4.6	8.6		8.1	ND (2.0)	ND (2.0)	8.2	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		5.4	4.1	16		13	ND (2.0)	ND (2.0)	13	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (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)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		15.9	12.6	52.7		41.4	ND (2.0)	ND (2.0)	45.6	ND (2.0)	ND (2.0)
Regulated Total	20	15.9	12.6	46.6		37.1	ND (2.0)	ND (2.0)	39.9	ND (2.0)	ND (2.0)

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	38 Mountain Rd			
		2/14/2020	7/21/2020	1/20/2021	4/27/2021
Well Depth (feet)					
Sampling Date					
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	3	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.2	2.4	2.1	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)		2.2	5.4	2.1	ND (2.0)
Regulated Total	20	2.2	5.4	2.1	ND (2.0)

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter		Massachusetts Contingency Plan GW-1 Standard & MMCL	51 Mountain Rd														
			211					1,080			3,312			11,491			
			-		-		5/28/2020		6/23/2020		7/31/2020		11/11/2020				
			Flow Meter Reading (gallons)	2/12/2020	5/1/2020	5/28/2020		6/23/2020		7/31/2020		11/11/2020					
Sampling Date			POET INSTALLED	INF	MID	EFF	EFF DUPLICATE	INF	MID	EFF	INF	MID	EFF	INF	MID	EFF	
EPA 537.1 (ng/L)																	
Perfluorobutanesulfonic acid (PFBS)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorohexanoic acid (PFHxA)			6.9		6.1	ND (2.0)	ND (2.0)	ND (2.0)	5.1	ND (2.0)	ND (2.0)	6.8	ND (2.0)	ND (2.0)	6.6	ND (2.0)	
Perfluorohexanesulfonic acid (PFHxS)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroheptanoic acid (PFHpA)			9.5		9.4	ND (2.0)	ND (2.0)	ND (2.0)	9.0	ND (2.0)	ND (2.0)	11	ND (2.0)	ND (2.0)	9.2	ND (2.0)	
Perfluorooctanoic acid (PFOA)			29		29	ND (2.0)	ND (2.0)	ND (2.0)	28	ND (2.0)	ND (2.0)	30	ND (2.0)	ND (2.0)	30	ND (2.0)	
Perfluorooctanesulfonic acid (PFOS)			24		23	ND (2.0)	2.9	ND (2.0)	21	ND (2.0)	ND (2.0)	24	ND (2.0)	ND (2.0)	26	ND (2.0)	
Perfluorononanoic acid (PFNA)			ND (4.0)		3	ND (2.0)	ND (2.0)	ND (2.0)	2.6	ND (2.0)	ND (2.0)	3.2	ND (2.0)	ND (2.0)	3.1	ND (2.0)	
Perfluorodecanoic acid (PFDA)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-EtFOSAA			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluoroundecanoic acid (PFUnA)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
N-MeFOSAA			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorododecanoic acid (PFDoA)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotridecanoic acid (PFTriDA)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Perfluorotetradecanoic acid (PFTA)			ND (4.0)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	
Total (All Compounds)			69.4		70.5	ND (2.0)	2.9	ND (2.0)	65.7	ND (2.0)	ND (2.0)	75.0	ND (2.0)	ND (2.0)	74.9	ND (2.0)	
Regulated Total		20	62.5		64.4	ND (2.0)	2.9	ND (2.0)	60.6	ND (2.0)	ND (2.0)	68.2	ND (2.0)	ND (2.0)	68.3	ND (2.0)	

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	51 Mountain Rd		
Flow Meter Reading (gallons)		18,344		
Sampling Date		2/5/2021		
		INF	MID	EFF
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		4.1	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		7.8	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		25	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		18	ND (2.0)	ND (2.0)
Perfluorononanoic acid (PFNA)		2.2	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)		57.1	ND (2.0)	ND (2.0)
Regulated Total	20	53.0	ND (2.0)	ND (2.0)

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Prospect St				
		UNKNOWN				
Well Depth (feet)		12/9/2019	6/5/2020	10/16/2020	1/19/2021	4/23/2021
Sampling Date						
<b>EPA 537.1 (ng/L)</b>						
Perfluorobutanesulfonic acid (PFBS)		3.1	2.7	2.9	3.4	3.7
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		8.8	11	11	11	15
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		4.5	6	5.2	5	6.9
Perfluorononanoic acid (PFNA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorodecanoic acid (PFDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-EtFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroundecanoic acid (PFUnA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
N-MeFOSAA		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorododecanoic acid (PFDoA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotridecanoic acid (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		16.4	19.7	19.1	19.4	25.6
Regulated Total	20	13.3	17.0	16.2	16.0	21.9

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	41 Prospect Street		
		169,007		
		4/21/2021		
		INF	MID	EFF
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		ND (2.0)	ND (2.0)	ND (2.0)
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 (PFTriDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		ND (2.0)	ND (2.0)	ND (2.0)
Regulated Total	20	ND (2.0)	ND (2.0)	ND (2.0)

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

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

Parameter	Massachusetts	41 Prospect Street Runoff
Flow Meter Reading (gallons)	Contingency Plan	-
Sampling Date	GW-1 Standard & MMCL	4/22/2021
<b>EPA 537.1 (ng/L)</b>		
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 (PFTTrDA)		ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)
Total (All Compounds)		ND (2.0)
Regulated Total	20	ND (2.0)

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	7 Radford Rd			
		2/28/2020	7/21/2020	1/21/2021	4/21/2021
Well Depth (feet)					
Sampling Date					
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	2.7
Perfluorooctanesulfonic acid (PFOS)		2.3	3.2	2.5	3.2
Perfluorononanoic acid (PFNA)		ND (2.0)	2.7	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)		2.3	5.9	2.5	5.9
Regulated Total	20	2.3	5.9	2.5	5.9

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	8 Radford Rd			
		2/28/2020	7/21/2020	1/21/2021	4/21/2021
Well Depth (feet)					
Sampling Date					
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.9	4.1	3.9	5.4
Perfluorooctanesulfonic acid (PFOS)		2.5	3.1	2.4	3.6
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)		6.4	7.2	6.3	9.0
Regulated Total	20	6.4	7.2	6.3	9.0

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	11 Radford Rd			
		2/14/2020	7/22/2021	1/21/2021	4/22/2021
Well Depth (feet)					
Sampling Date					
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		2.7	3.1	2.3	3.7
Perfluorooctanesulfonic acid (PFOS)		2.3	3.1	2.1	2.9
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)		5.0	6.2	4.4	6.6
Regulated Total	20	5.0	6.2	4.4	6.6

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

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

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

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

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

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

NOTES:  
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ND = Not detected above the lab reporting limits shown in parentheses.  
Bolded values exceed the proposed Method 1 Standard  
MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts	18 Radford		
Well Depth (feet)	Contingency Plan			
Sampling Date	GW-1 Standard & MMCL	9/18/2020	1/29/2021	4/26/2021
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	2.0	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	2.7	2.2
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	2.3	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.2	6.5	6
Perfluorooctanesulfonic acid (PFOS)		4.3	5.0	3.7
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 (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		9.5	18.5	11.9
Regulated Total	20	<b>9.5</b>	<b>13.8</b>	<b>9.7</b>

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	28 Radford Rd		
		UNKNOWN		
Well Depth (feet)		1/30/2020	7/21/2020	1/21/2021
Sampling Date				
<b>EPA 537.1 (ng/L)</b>				
Perfluorobutanesulfonic acid (PFBS)		2.1	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		2.7	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		5.4	4.6	4.8
Perfluorooctanesulfonic acid (PFOS)		7	4.0	3.8
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 (PFTrDA)		ND (2.0)	ND (2.0)	ND (2.0)
Perfluorotetradecanoic acid (PFTA)		ND (2.0)	ND (2.0)	ND (2.0)
Total (All Compounds)		17.2	8.6	8.6
Regulated Total	20	15.1	8.6	8.6

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	29 Radford Rd			
		UNKNOWN			
Well Depth (feet)					
Sampling Date		3/17/2020	7/21/2020	1/21/2021	4/22/2021
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		3.2	2.4	3.3	3.3
Perfluorooctanesulfonic acid (PFOS)		3.5	2.8	3.3	3.4
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)		6.7	5.2	6.6	6.7
Regulated Total	20	6.7	5.2	6.6	6.7

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

Parameter	Massachusetts Contingency Plan GW-1 Standard & MMCL	37 Radford Rd			
		70'			
Well Depth (feet)		4/28/2020	10/8/2020	1/20/2021	4/20/2021
Sampling Date					
<b>EPA 537.1 (ng/L)</b>					
Perfluorobutanesulfonic acid (PFBS)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanoic acid (PFHxA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorohexanesulfonic acid (PFHxS)		ND (2.0)	ND (2.0)	2.6	2.8
Perfluoroheptanoic acid (PFHpA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanoic acid (PFOA)		ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Perfluorooctanesulfonic acid (PFOS)		2.1	2.5	2.5	2.2
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)		2.1	2.5	5.1	5.0
Regulated Total	20	2.1	2.5	5.1	5.0

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level



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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level

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

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

**NOTES:**

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

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

Bolded values exceed the proposed Method 1 Standard

MMCL is Massachusetts Maximum Contaminant Level





May 17, 2021

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

Project Location: 41 Prospect., Princeton, MA  
Client Job Number:  
Project Number: P-0534  
Laboratory Work Order Number: 21D1244

Enclosed are results of analyses for samples received by the laboratory on April 22, 2021. 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
Sample Results	5
21D1244-01	5
Sample Preparation Information	6
QC Data	7
Semivolatile Organic Compounds by - LC/MS-MS	7
B281356	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

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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: 5/17/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 21D1244

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

PROJECT LOCATION: 41 Prospect., Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
41 Prospect Runoff	21D1244-01	Drinking Water		EPA 537.1	

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## 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:

##### PF-01

Surrogate recovery is outside of control limits. Sample not re-extracted past holding time per method.

#### Analyte & Samples(s) Qualified:

##### d5-NEtFOSAA

21D1244-01[41 Prospect Runoff]

##### PF-09

Laboratory fortified blank/laboratory control sample recovery outside of control limits. This compound was biased high and was not detected in the sample.

#### Analyte & Samples(s) Qualified:

##### N-EtFOSAA

B281356-BS1

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

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



Lisa A. Worthington  
Technical Representative

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

Project Location: 41 Prospect., Princeton, MA

Sample Description:

Work Order: 21D1244

Date Received: 4/22/2021

Field Sample #: 41 Prospect Runoff

Sampled: 4/22/2021 10:30

Sample ID: 21D1244-01

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	5/6/21	5/17/21 10:40	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
11Cl-PF3OUdS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
9Cl-PF3ONS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	5/6/21	5/17/21 10:40	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
13C-PFHxA	86.8	70-130	
M3HFPO-DA	91.1	70-130	
13C-PFDA	111	70-130	
<b>d5-NEtFOSAA</b>	<b>132</b> *	70-130	PF-01

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**Sample Extraction Data**

**Prep Method:** EPA 537.1    **Analytical Method:** EPA 537.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21D1244-01 [41 Prospect Runoff]	B281356	250	1.00	05/06/21

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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
<b>Batch B281356 - EPA 537.1</b>										
<b>Blank (B281356-BLK1)</b>										
Prepared: 05/06/21 Analyzed: 05/14/21										
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	32.3		ng/L	40.0		80.7	70-130			
Surrogate: M3HFPO-DA	31.8		ng/L	40.0		79.4	70-130			
Surrogate: 13C-PFDA	33.4		ng/L	40.0		83.4	70-130			
Surrogate: d5-NEtFOSAA	149		ng/L	160		93.1	70-130			
<b>LCS (B281356-BS1)</b>										
Prepared: 05/06/21 Analyzed: 05/14/21										
Perfluorobutanesulfonic acid (PFBS)	17.8	2.0	ng/L	17.7		101	70-130			
Perfluorohexanoic acid (PFHxA)	18.3	2.0	ng/L	20.0		91.4	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.1	2.0	ng/L	18.2		93.9	70-130			
Perfluoroheptanoic acid (PFHpA)	17.6	2.0	ng/L	20.0		88.2	70-130			
Perfluorooctanoic acid (PFOA)	20.1	2.0	ng/L	20.0		101	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.9	2.0	ng/L	18.5		96.8	70-130			
Perfluorononanoic acid (PFNA)	18.0	2.0	ng/L	20.0		90.2	70-130			
Perfluorodecanoic acid (PFDA)	18.1	2.0	ng/L	20.0		90.4	70-130			
<b>N-EtFOSAA</b>	26.2	2.0	ng/L	20.0		<b>131</b>	70-130	*		PF-09
Perfluoroundecanoic acid (PFUnA)	19.8	2.0	ng/L	20.0		98.8	70-130			
N-MeFOSAA	23.0	2.0	ng/L	20.0		115	70-130			
Perfluorododecanoic acid (PFDoA)	17.8	2.0	ng/L	20.0		89.0	70-130			
Perfluorotridecanoic acid (PFTTrDA)	18.5	2.0	ng/L	20.0		92.3	70-130			
Perfluorotetradecanoic acid (PFTA)	19.3	2.0	ng/L	20.0		96.4	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	15.3	2.0	ng/L	20.0		76.6	70-130			
11Cl-PF3OUdS (F53B Major)	21.7	2.0	ng/L	18.8		115	70-130			
9Cl-PF3ONS (F53B Minor)	18.8	2.0	ng/L	18.6		101	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	18.3	2.0	ng/L	20.0		91.6	70-130			
Surrogate: 13C-PFHxA	34.8		ng/L	40.0		87.0	70-130			
Surrogate: M3HFPO-DA	35.5		ng/L	40.0		88.7	70-130			
Surrogate: 13C-PFDA	35.0		ng/L	40.0		87.5	70-130			
Surrogate: d5-NEtFOSAA	157		ng/L	160		97.8	70-130			

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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.
PF-01	Surrogate recovery is outside of control limits. Sample not re-extracted past holding time per method.
PF-09	Laboratory fortified blank/laboratory control sample recovery outside of control limits. This compound was biased high and was not detected in the sample.



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

**CERTIFICATIONS**
**Certified Analyses included in this Report**

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

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



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 VR Date 4-22-21 Time 2200

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 - 4.1  
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? 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	<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:

May 27, 2021

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

Project Location: 30 Mountain Rd, Princeton, MA  
Client Job Number:  
Project Number: P-0534  
Laboratory Work Order Number: 21E0125

Enclosed are results of analyses for samples received by the laboratory on May 4, 2021. 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
Sample Results	5
21E0125-01	5
Sample Preparation Information	6
QC Data	7
Semivolatile Organic Compounds by - LC/MS-MS	7
B281760	7
Flag/Qualifier Summary	8
Certifications	9
Chain of Custody/Sample Receipt	10

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332Tighe & Bond, Inc. - Worcester  
120 Front St.  
Worcester, MA 01608-2303  
ATTN: Michael Scherer

REPORT DATE: 5/27/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: P-0534

**ANALYTICAL SUMMARY**

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WORK ORDER NUMBER: 21E0125

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

PROJECT LOCATION: 30 Mountain Rd, Princeton, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
30 Mountain Rd Runoff	21E0125-01	Surface Water		EPA 537.1	

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**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:**

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**PF-01**

Surrogate recovery is outside of control limits. Sample not re-extracted past holding time per method.

**Analyte & Samples(s) Qualified:****13C-PFHxA**

21E0125-01[30 Mountain Rd Runoff]

**M3HFPO-DA**

21E0125-01[30 Mountain Rd Runoff]

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**PF-09**

Laboratory fortified blank/laboratory control sample recovery outside of control limits. This compound was biased high and was not detected in the sample.

**Analyte & Samples(s) Qualified:****11Cl-PF3OUdS (F53B Minor)**

B281760-BS1

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**S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****13C-PFDA**

21E0125-01RE2[30 Mountain Rd Runoff]

**13C-PFHxA**

21E0125-01RE2[30 Mountain Rd Runoff]

**d5-NEtFOSAA**

21E0125-01RE2[30 Mountain Rd Runoff]

**M3HFPO-DA**

21E0125-01RE2[30 Mountain Rd Runoff]

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

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



Lisa A. Worthington  
Technical Representative

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

Project Location: 30 Mountain Rd, Princeton, MA

Sample Description:

Work Order: 21E0125

Date Received: 5/4/2021

Field Sample #: 30 Mountain Rd Runoff

Sampled: 4/29/2021 19:30

Sample ID: 21E0125-01

Sample Matrix: Surface 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)	20	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorohexanoic acid (PFHxA)	24	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorohexanesulfonic acid (PFHxS)	350	20		ng/L	10		EPA 537.1	5/12/21	5/24/21 20:20	BLH
Perfluoroheptanoic acid (PFHpA)	6.2	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorooctanoic acid (PFOA)	32	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorooctanesulfonic acid (PFOS)	2100	200		ng/L	100		EPA 537.1	5/12/21	5/26/21 16:28	BLH
Perfluorononanoic acid (PFNA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorodecanoic acid (PFDA)	2.2	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
N-EtFOSAA	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
N-MeFOSAA	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0		ng/L	1		EPA 537.1	5/12/21	5/22/21 14:30	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C-PFHxA	59.9	*	70-130	PF-01
13C-PFHxA	88.0		70-130	
13C-PFHxA		*	70-130	S-01
M3HFPO-DA	69.0	*	70-130	PF-01
M3HFPO-DA	90.8		70-130	
M3HFPO-DA		*	70-130	S-01
13C-PFDA	84.2		70-130	
13C-PFDA	91.8		70-130	
13C-PFDA		*	70-130	S-01
d5-NEtFOSAA	91.6		70-130	
d5-NEtFOSAA	98.3		70-130	
d5-NEtFOSAA		*	70-130	S-01



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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332**Sample Extraction Data****Prep Method: EPA 537.1      Analytical Method: EPA 537.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E0125-01 [30 Mountain Rd Runoff]	B281760	250	1.00	05/12/21
21E0125-01RE1 [30 Mountain Rd Runoff]	B281760	250	1.00	05/12/21
21E0125-01RE2 [30 Mountain Rd Runoff]	B281760	250	1.00	05/12/21

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
<b>Batch B281760 - EPA 537.1</b>										
<b>Blank (B281760-BLK1)</b>										
Prepared: 05/12/21 Analyzed: 05/21/21										
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 Minor)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Major)	ND	2.0	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Surrogate: 13C-PFHxA	38.6		ng/L	40.0		96.6	70-130			
Surrogate: M3HFPO-DA	45.5		ng/L	40.0		114	70-130			
Surrogate: 13C-PFDA	45.2		ng/L	40.0		113	70-130			
Surrogate: d5-NEtFOSAA	167		ng/L	160		104	70-130			
<b>LCS (B281760-BS1)</b>										
Prepared: 05/12/21 Analyzed: 05/21/21										
Perfluorobutanesulfonic acid (PFBS)	15.8	2.0	ng/L	17.7		89.0	70-130			
Perfluorohexanoic acid (PFHxA)	18.1	2.0	ng/L	20.0		90.7	70-130			
Perfluorohexanesulfonic acid (PFHxS)	15.1	2.0	ng/L	18.2		83.2	70-130			
Perfluoroheptanoic acid (PFHpA)	17.7	2.0	ng/L	20.0		88.3	70-130			
Perfluorooctanoic acid (PFOA)	18.7	2.0	ng/L	20.0		93.7	70-130			
Perfluorooctanesulfonic acid (PFOS)	16.9	2.0	ng/L	18.5		91.4	70-130			
Perfluorononanoic acid (PFNA)	18.8	2.0	ng/L	20.0		94.0	70-130			
Perfluorodecanoic acid (PFDA)	20.6	2.0	ng/L	20.0		103	70-130			
N-EtFOSAA	23.8	2.0	ng/L	20.0		119	70-130			
Perfluoroundecanoic acid (PFUnA)	21.1	2.0	ng/L	20.0		105	70-130			
N-MeFOSAA	21.8	2.0	ng/L	20.0		109	70-130			
Perfluorododecanoic acid (PFDoA)	18.6	2.0	ng/L	20.0		92.9	70-130			
Perfluorotridecanoic acid (PFTTrDA)	18.9	2.0	ng/L	20.0		94.5	70-130			
Perfluorotetradecanoic acid (PFTA)	19.4	2.0	ng/L	20.0		97.1	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.0	2.0	ng/L	20.0		99.9	70-130			
11Cl-PF3OUdS (F53B Minor)	25.3	2.0	ng/L	18.8		134 *	70-130			PF-09
9Cl-PF3ONS (F53B Major)	16.7	2.0	ng/L	18.6		89.9	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	20.5	2.0	ng/L	18.8		109	70-130			
Surrogate: 13C-PFHxA	38.4		ng/L	40.0		96.1	70-130			
Surrogate: M3HFPO-DA	44.1		ng/L	40.0		110	70-130			
Surrogate: 13C-PFDA	44.0		ng/L	40.0		110	70-130			
Surrogate: d5-NEtFOSAA	155		ng/L	160		96.7	70-130			

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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.
PF-01	Surrogate recovery is outside of control limits. Sample not re-extracted past holding time per method.
PF-09	Laboratory fortified blank/laboratory control sample recovery outside of control limits. This compound was biased high and was not detected in the sample.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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

**CERTIFICATIONS**
**Certified Analyses included in this Report**

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

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

21E0125



Phone: 413-525-2332  
Fax: 413-525-6405

Email: info@contestlabs.com

Address: 120 Front Street, Worcester, MA 01608  
Tighe & Bond

Phone: 508-754-2201  
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

<http://www.contestlabs.com>

39 Spruce Street  
East Longmeadow, MA 01028

Doc # 381 Rev 2\_06262019

Page 1 of 1

CHAIN OF CUSTODY RECORD										ANALYSIS REQUESTED									
Customer Information										Analysis Requested									
Project Information										Analysis Requested									
Sample Information										Analysis Requested									
Special Requirements										Analysis Requested									
<p>7-Day <input type="checkbox"/> 10-Day <input checked="" type="checkbox"/> Due Date: <input type="checkbox"/></p> <p>PFAS 10-Day (std) <input type="checkbox"/></p> <p>1-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 4-Day <input type="checkbox"/></p> <p>2-Day <input type="checkbox"/></p> <p>Format: PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/></p> <p>Other: <input type="checkbox"/></p> <p>CLP Like Data Pkg Required: <input type="checkbox"/></p> <p>Email To: <input type="checkbox"/></p> <p>Fax To #: <input type="checkbox"/></p>										<p>Field Filtered <input type="checkbox"/></p> <p>Lab to Filter <input type="checkbox"/></p> <p>Field Filtered <input type="checkbox"/></p> <p>Lab to Filter <input type="checkbox"/></p>									
<p>Beginning Date/Time: 4/24/21</p> <p>Ending Date/Time: 1930</p> <p>Matrix Code: DW</p> <p>Comp/Grab: GRAB</p> <p>Conc Code: U</p> <p>VIALS: 2</p> <p>GLASS: 2</p> <p>PLASTIC: 2</p> <p>BACTERIA: 2</p> <p>ENCORE: 2</p>										<p>Preservation Code: 2</p> <p>Total Number Of: 2</p> <p>VIALS: 2</p> <p>GLASS: 2</p> <p>BACTERIA: 2</p> <p>ENCORE: 2</p> <p>Glassware in the fridge? Y/N</p> <p>Glassware in freezer? Y/N</p> <p>Prepackaged Cooler? Y/N</p> <p>*Context is not responsible for missing samples from prepacked coolers</p>									
<p>1 Matrix Codes:</p> <p>GW = Ground Water</p> <p>WW = Waste Water</p> <p>DW = Drinking Water</p> <p>A = Air</p> <p>S = Soil</p> <p>SL = Sludge</p> <p>SOL = Solid</p> <p>O = Other (please define)</p>										<p>2 Preservation Codes:</p> <p>I = Iced</p> <p>H = HCL</p> <p>M = Methanol</p> <p>N = Nitric Acid</p> <p>S = Sulfuric Acid</p> <p>B = Sodium Bisulfate</p> <p>X = Sodium Hydroxide</p> <p>T = Sodium Thiosulfate</p> <p>O = Other (please define)</p>									
<p>Client Comments:</p>										<p>Please use the following codes to indicate possible sample concentration within the Conc Code column above:</p> <p>H - High; M - Medium; L - Low; C - Clean; U - Unknown</p>									
<p>Relinquished by: (signature) Date/Time: 4/24/21 1500</p> <p>Received by: (signature) Date/Time: 5/4/21 745</p> <p>Relinquished by: (signature) Date/Time: 5/4/21 1405</p> <p>Received by: (signature) Date/Time: 5/4/21 1405</p> <p>Relinquished by: (signature) Date/Time: 5/4/21 1405</p> <p>Received by: (signature) Date/Time: 5/4/21 1405</p>										<p>MA HCLP Required <input checked="" type="checkbox"/></p> <p>MA HCLP Certification Form Required <input type="checkbox"/></p> <p>CT RCP Required <input type="checkbox"/></p> <p>RCP Certification Form Required <input type="checkbox"/></p> <p>MA State DW Required <input type="checkbox"/></p>									
<p>Project Entity</p> <p>Government <input type="checkbox"/> Federal <input type="checkbox"/> City <input type="checkbox"/></p> <p>Municipality <input type="checkbox"/> 21 J <input type="checkbox"/> Brownfield <input type="checkbox"/></p>										<p>AWRA <input type="checkbox"/> WRTA <input type="checkbox"/></p> <p>School <input type="checkbox"/> MBTA <input type="checkbox"/></p> <p>Other <input type="checkbox"/> Chromatogram <input type="checkbox"/> AHA-LAP, LLC <input type="checkbox"/></p>									
<p>Lab Comments:</p>										<p>PCB ONLY <input type="checkbox"/></p> <p>Soxhlet <input type="checkbox"/></p> <p>Non Soxhlet <input type="checkbox"/></p>									

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 [Signature] Date 5/4/21 Time 1405

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 -2.4  
 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 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? 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:



## 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

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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).

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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

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
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.

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**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**Lab Number:** L2000912**Project Number:** Not Specified**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

Lab Number: L2000912

Project Number: Not Specified

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 %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD 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 %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD 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 %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
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**Lab Number:** L2000912**Project Number:** Not Specified**Report Date:** 01/31/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
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)

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:**

Serial\_No:01312010:17  
**Lab Number:** L2000912  
**Report Date:** 01/31/20

### 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	PFTTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-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  
**Project Number:** Not Specified

**Lab Number:** L2000912  
**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.





**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 15

Department: **Quality Assurance**

Published Date: 8/15/2019 9:53:42 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

**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, NO<sub>2</sub>, NO<sub>3</sub>.**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.

## PAGE \_\_\_\_\_ OF \_\_\_\_\_

ALPHA Job #: 62000912

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

### Project Information

ALPHA Quote #:

## Date Due:

Additional Project Information:

☐ Same as Client info      PO #:

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods  
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)  
☐ Yes ☐ No NPDES RGP  
☐ Other State /Fed Program \_\_\_\_\_ Criteria \_\_\_\_\_

<b>ANALYSIS</b>		<b>SAMPLE INFO</b>	
VOC: <input type="checkbox"/> 8260	<input type="checkbox"/> 624 <input type="checkbox"/> 524.2	Filtration	
SVOC: <input type="checkbox"/> ABN	<input type="checkbox"/> PAH	<input type="checkbox"/> Field	
METALS: <input type="checkbox"/> MCP 13	<input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	<input type="checkbox"/> Lab to do	
METALS: <input type="checkbox"/> RCRA5	<input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13	Preservation	
EPH: <input type="checkbox"/> Ranges & Targets	<input type="checkbox"/> Ranges Only	<input type="checkbox"/> Lab to do	
VPH: <input type="checkbox"/> Ranges & Targets	<input type="checkbox"/> Ranges Only		
<input type="checkbox"/> PCB	<input type="checkbox"/> PEST		
TPH: <input type="checkbox"/> Quant Only	<input type="checkbox"/> Fingerprint		

PFAS

FORM NO: 01-01 (rev. 12-Mar-2012)



## ANALYTICAL REPORT

Lab Number:	L2026828
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:	07/06/20

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

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



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2026828-01	FINISH-TC001G WELL 1	DW	PRINCETON BAGG HALL	06/23/20 12:30	06/25/20
L2026828-02	FB	DW	PRINCETON BAGG HALL	06/23/20 12:30	06/25/20

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### 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:** L2026828  
**Report Date:** 07/06/20

### Case Narrative (continued)

#### Report Submission

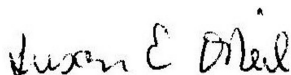
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

L2026828-02: A sample identified as "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: 07/06/20

# ORGANICS

# SEMIVOLATILES



**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**SAMPLE RESULTS**

Lab ID: L2026828-01  
 Client ID: FINISH-TC001G WELL 1  
 Sample Location: PRINCETON BAGG HALL

Date Collected: 06/23/20 12:30  
 Date Received: 06/25/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 122,537  
 Analytical Date: 06/30/20 15:31  
 Analyst: JW

Extraction Method: EPA 537  
 Extraction Date: 06/29/20 06:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	16.1		ng/l	1.90	0.270	1
Perfluorohexanoic Acid (PFHxA)	1.48	J	ng/l	1.90	0.250	1
Perfluoroheptanoic Acid (PFHpA)	1.25	J	ng/l	1.90	0.247	1
Perfluorohexanesulfonic Acid (PFHxS)	81.7		ng/l	1.90	0.455	1
Perfluorooctanoic Acid (PFOA)	4.48		ng/l	1.90	0.592	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.90	0.452	1
Perfluorooctanesulfonic Acid (PFOS)	23.5		ng/l	1.90	0.467	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.611	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.888	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.774	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.903	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.615	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.90	0.482	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.410	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	79		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	90		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**SAMPLE RESULTS**

Lab ID: L2026828-02  
 Client ID: FB  
 Sample Location: PRINCETON BAGG HALL

Date Collected: 06/23/20 12:30  
 Date Received: 06/25/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 122,537  
 Analytical Date: 07/02/20 16:34  
 Analyst: JW

Extraction Method: EPA 537  
 Extraction Date: 07/02/20 11:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.90	0.271	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.90	0.251	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.90	0.248	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.90	0.457	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.90	0.595	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.90	0.454	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.90	0.469	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.614	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.892	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.778	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.907	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.617	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.90	0.484	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.412	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	88		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	90		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 122,537  
**Analytical Date:** 06/30/20 14:48  
**Analyst:** JW

**Extraction Method:** EPA 537  
**Extraction Date:** 06/29/20 06:55

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab for sample(s): 01 Batch: WG1386958-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

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)	92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 122,537  
**Analytical Date:** 07/02/20 16:08  
**Analyst:** JW

**Extraction Method:** EPA 537  
**Extraction Date:** 07/02/20 11:08

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab for sample(s): 02 Batch: WG1388424-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	84		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** Not Specified

**Lab Number:** L2026828

**Report Date:** 07/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 01 Batch: WG1386958-2 WG1386958-3								
Perfluorobutanesulfonic Acid (PFBS)	111		118		70-130	6		30
Perfluorohexanoic Acid (PFHxA)	101		117		70-130	15		30
Perfluoroheptanoic Acid (PFHpA)	110		119		70-130	8		30
Perfluorohexanesulfonic Acid (PFHxS)	106		112		70-130	6		30
Perfluorooctanoic Acid (PFOA)	106		126		70-130	17		30
Perfluorononanoic Acid (PFNA)	112		121		70-130	8		30
Perfluorooctanesulfonic Acid (PFOS)	108		106		70-130	2		30
Perfluorodecanoic Acid (PFDA)	94		110		70-130	16		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	105		110		70-130	5		30
Perfluoroundecanoic Acid (PFUnA)	114		125		70-130	9		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	110		118		70-130	7		30
Perfluorododecanoic Acid (PFDoA)	116		129		70-130	11		30
Perfluorotridecanoic Acid (PFTrDA)	111		125		70-130	12		30
Perfluorotetradecanoic Acid (PFTA)	98		115		70-130	16		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99		103		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	101		105		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	104		103		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** Not Specified

**Lab Number:** L2026828

**Report Date:** 07/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 02 Batch: WG1388424-2 WG1388424-3								
Perfluorobutanesulfonic Acid (PFBS)	95		102		70-130	7		30
Perfluorohexanoic Acid (PFHxA)	87		95		70-130	9		30
Perfluoroheptanoic Acid (PFHpA)	96		102		70-130	6		30
Perfluorohexanesulfonic Acid (PFHxS)	92		93		70-130	1		30
Perfluorooctanoic Acid (PFOA)	96		98		70-130	2		30
Perfluorononanoic Acid (PFNA)	95		104		70-130	9		30
Perfluorooctanesulfonic Acid (PFOS)	86		95		70-130	10		30
Perfluorodecanoic Acid (PFDA)	85		87		70-130	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	89		95		70-130	7		30
Perfluoroundecanoic Acid (PFUnA)	95		100		70-130	5		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	95		97		70-130	2		30
Perfluorododecanoic Acid (PFDoA)	108		117		70-130	8		30
Perfluorotridecanoic Acid (PFTrDA)	98		100		70-130	2		30
Perfluorotetradecanoic Acid (PFTA)	82		84		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	88		91		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	89		86		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		92		70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** Not Specified

**Lab Number:** L2026828

**Report Date:** 07/06/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1386958-5 QC Sample: L2026828-01 Client ID: FINISH-TC001G WELL 1						
Perfluorobutanesulfonic Acid (PFBS)	16.1	20.6	ng/l	25		30
Perfluorohexanoic Acid (PFHxA)	1.48J	1.68J	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	1.25J	1.49J	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	81.7	98.1	ng/l	18		30
Perfluorooctanoic Acid (PFOA)	4.48	5.67	ng/l	23		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	23.5	29.2	ng/l	22		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		98		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	79		99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	90		90		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2026828-01A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		5.0	Y	Absent		A2-537(14)
L2026828-01B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		5.0	Y	Absent		A2-537(14)
L2026828-02A	Plastic 250ml Trizma preserved	A	NA		5.0	Y	Absent		A2-537(14)



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:**

Serial\_No:07062015:13  
**Lab Number:** L2026828  
**Report Date:** 07/06/20

### 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	PFTTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-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:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20

## 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: DU Report with 'J' Qualifiers*

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20

- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- 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

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**Data Qualifiers**

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

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**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

## 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.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 17

Published Date: 4/28/2020 9:42:21 AM

Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **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.



CHAIN OF CUSTODY					Date Rec'd in Lab: 6/25/20		ALPHA Job #: C2026828	
Project Information					Report Information - Data Deliverables		Billing Information	
<b>Client Information</b> Client: <u>Whitelwater</u> Address: Phone: Fax: Email: <input type="checkbox"/> These samples have been previously analyzed by Alpha					<input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ADEx <input type="checkbox"/> Add'l Deliverables		<input type="checkbox"/> Same as Client info PO #: <u>N/A Per Mass DEP Request</u>	
<b>Project Information</b> Project Name: <u>Princeton Town Campus</u> Project Location: <u>Princeton Bagg Hall</u> Project #: Project Manager: ALPHA Quote #: <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved!) Date Due: Time:					<b>Regulatory Requirements/Report Limits</b> State /Fed Program Criteria			
Other Project Specific Requirements/Comments/Detection Limits:					ANALYSIS <u>PFAS</u>		<b>SAMPLE HANDLING</b> Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	
							TOTAL # BOTTLES	
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	Sample Specific Comments		
	<u>PFAS</u>							
<u>26828-01</u>	<u>Finish-TC0016</u>	<u>Well 1</u>	<u>6/23/2020 12:30</u>	<u>WH</u>	<u>✓</u>			
					Container Type			
					Preservative			
Relinquished By:					Date/Time	Received By:	Date/Time	
<u>William Hibbs</u>					<u>6/23/2020 16:00</u>	<u>MGM</u>	<u>6/25/20 13:10</u>	
<u>MGM</u>					<u>6/23/20 14:46</u>	<u>ALC</u>	<u>6/25/20 17:28</u>	
<u>ALC</u>					<u>6/25/20 15:05</u>	<u>MGM</u>	<u>6/25/20 17:05</u>	
<u>ALC</u>					<u>6/25/20 10:05</u>	<u>ALC</u>	<u>6/25/20 16:05</u>	

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



## ANALYTICAL REPORT

Lab Number:	L2026828
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:	07/06/20

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

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





**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2026828-01	FINISH-TC001G WELL 1	DW	PRINCETON BAGG HALL	06/23/20 12:30	06/25/20
L2026828-02	FB	DW	PRINCETON BAGG HALL	06/23/20 12:30	06/25/20

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### 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.

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**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### Case Narrative (continued)

#### Report Submission

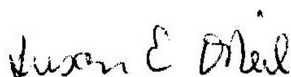
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

L2026828-02: A sample identified as "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: 07/06/20

# ORGANICS

# SEMIVOLATILES

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**SAMPLE RESULTS**

Lab ID: L2026828-01  
 Client ID: FINISH-TC001G WELL 1  
 Sample Location: PRINCETON BAGG HALL

Date Collected: 06/23/20 12:30  
 Date Received: 06/25/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 122,537  
 Analytical Date: 06/30/20 15:31  
 Analyst: JW

Extraction Method: EPA 537  
 Extraction Date: 06/29/20 06:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	16.1		ng/l	1.90	0.270	1
Perfluorohexanoic Acid (PFHxA)	1.48	J	ng/l	1.90	0.250	1
Perfluoroheptanoic Acid (PFHpA)	1.25	J	ng/l	1.90	0.247	1
Perfluorohexanesulfonic Acid (PFHxS)	81.7		ng/l	1.90	0.455	1
Perfluorooctanoic Acid (PFOA)	4.48		ng/l	1.90	0.592	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.90	0.452	1
Perfluorooctanesulfonic Acid (PFOS)	23.5		ng/l	1.90	0.467	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.611	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.888	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.774	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.903	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.615	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.90	0.482	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.410	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	79		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	90		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**SAMPLE RESULTS**

Lab ID: L2026828-02  
 Client ID: FB  
 Sample Location: PRINCETON BAGG HALL

Date Collected: 06/23/20 12:30  
 Date Received: 06/25/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 122,537  
 Analytical Date: 07/02/20 16:34  
 Analyst: JW

Extraction Method: EPA 537  
 Extraction Date: 07/02/20 11:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.90	0.271	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.90	0.251	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.90	0.248	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.90	0.457	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.90	0.595	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.90	0.454	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.90	0.469	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.614	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.892	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.778	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.907	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.617	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.90	0.484	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.412	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	88		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	90		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 122,537  
**Analytical Date:** 06/30/20 14:48  
**Analyst:** JW

**Extraction Method:** EPA 537  
**Extraction Date:** 06/29/20 06:55

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab for sample(s): 01 Batch: WG1386958-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

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)	92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101		70-130



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 122,537  
**Analytical Date:** 07/02/20 16:08  
**Analyst:** JW

**Extraction Method:** EPA 537  
**Extraction Date:** 07/02/20 11:08

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab for sample(s): 02 Batch: WG1388424-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	84		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** Not Specified

**Lab Number:** L2026828

**Report Date:** 07/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 01 Batch: WG1386958-2 WG1386958-3								
Perfluorobutanesulfonic Acid (PFBS)	111		118		70-130	6		30
Perfluorohexanoic Acid (PFHxA)	101		117		70-130	15		30
Perfluoroheptanoic Acid (PFHpA)	110		119		70-130	8		30
Perfluorohexanesulfonic Acid (PFHxS)	106		112		70-130	6		30
Perfluorooctanoic Acid (PFOA)	106		126		70-130	17		30
Perfluorononanoic Acid (PFNA)	112		121		70-130	8		30
Perfluorooctanesulfonic Acid (PFOS)	108		106		70-130	2		30
Perfluorodecanoic Acid (PFDA)	94		110		70-130	16		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	105		110		70-130	5		30
Perfluoroundecanoic Acid (PFUnA)	114		125		70-130	9		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	110		118		70-130	7		30
Perfluorododecanoic Acid (PFDoA)	116		129		70-130	11		30
Perfluorotridecanoic Acid (PFTrDA)	111		125		70-130	12		30
Perfluorotetradecanoic Acid (PFTA)	98		115		70-130	16		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99		103		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	101		105		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	104		103		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** Not Specified

**Lab Number:** L2026828

**Report Date:** 07/06/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 02 Batch: WG1388424-2 WG1388424-3								
Perfluorobutanesulfonic Acid (PFBS)	95		102		70-130	7		30
Perfluorohexanoic Acid (PFHxA)	87		95		70-130	9		30
Perfluoroheptanoic Acid (PFHpA)	96		102		70-130	6		30
Perfluorohexanesulfonic Acid (PFHxS)	92		93		70-130	1		30
Perfluorooctanoic Acid (PFOA)	96		98		70-130	2		30
Perfluorononanoic Acid (PFNA)	95		104		70-130	9		30
Perfluorooctanesulfonic Acid (PFOS)	86		95		70-130	10		30
Perfluorodecanoic Acid (PFDA)	85		87		70-130	2		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	89		95		70-130	7		30
Perfluoroundecanoic Acid (PFUnA)	95		100		70-130	5		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	95		97		70-130	2		30
Perfluorododecanoic Acid (PFDoA)	108		117		70-130	8		30
Perfluorotridecanoic Acid (PFTrDA)	98		100		70-130	2		30
Perfluorotetradecanoic Acid (PFTA)	82		84		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	88		91		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	89		86		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		92		70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** Not Specified

**Lab Number:** L2026828

**Report Date:** 07/06/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1386958-5 QC Sample: L2026828-01 Client ID: FINISH-TC001G WELL 1						
Perfluorobutanesulfonic Acid (PFBS)	16.1	20.6	ng/l	25		30
Perfluorohexanoic Acid (PFHxA)	1.48J	1.68J	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	1.25J	1.49J	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	81.7	98.1	ng/l	18		30
Perfluorooctanoic Acid (PFOA)	4.48	5.67	ng/l	23		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	23.5	29.2	ng/l	22		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		98		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	79		99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	90		90		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2026828-01A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		5.0	Y	Absent		A2-537(14)
L2026828-01B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		5.0	Y	Absent		A2-537(14)
L2026828-02A	Plastic 250ml Trizma preserved	A	NA		5.0	Y	Absent		A2-537(14)

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:**

Serial\_No:07062015:13  
**Lab Number:** L2026828  
**Report Date:** 07/06/20

### 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	PFTTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-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:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20

## 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: DU Report with 'J' Qualifiers*

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20

- 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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- 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

**Report Format:** DU Report with 'J' Qualifiers





**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2026828**Project Number:** Not Specified**Report Date:** 07/06/20**Data Qualifiers**

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** Not Specified

**Lab Number:** L2026828  
**Report Date:** 07/06/20

## 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.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 17

Published Date: 4/28/2020 9:42:21 AM

Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **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.

CHAIN OF CUSTODY					Date Rec'd in Lab: 6/25/20		ALPHA Job #: C2026828	
Project Information					Report Information - Data Deliverables		Billing Information	
<b>Client Information</b> Client: <u>Whitelwater</u> Address: Phone: Fax: Email: <input type="checkbox"/> These samples have been previously analyzed by Alpha					Project Name: <u>Princeton Town Campus</u> Project Location: <u>Princeton Bagg Hall</u> Project #: Project Manager: ALPHA Quote #: <b>Turn-Around Time</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH (only confirmed if pre-approved!) Date Due: Time:		<input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ADEx <input type="checkbox"/> Add'l Deliverables <b>Regulatory Requirements/Report Limits</b> State /Fed Program Criteria Same as Client info PO #: <u>N/A Per Mass DEP Request</u>	
Other Project Specific Requirements/Comments/Detection Limits:					<b>ANALYSIS</b> <b>PFAS</b>			
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Matrix	Sampler's Initials	<b>SAMPLE HANDLING</b> Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below) Sample Specific Comments			
	<u>PFAS</u>							
<u>26828-01</u>	<u>Finish-TC001G Well 1</u>	<u>6/23/2020 12:30</u>	<u>WH</u>	<u>✓</u>				
Container Type								
Preservative								
Relinquished By:		Date/Time	Received By:		Date/Time		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.	
<u>William Hibbs</u>		<u>6/23/2020 16:00</u>	<u>MGM</u>		<u>6/25/20 13:10</u>			
<u>MGM</u>		<u>6/23/20 14:46</u>	<u>ALC</u>		<u>6/25/20 17:28</u>			
<u>ALC</u>		<u>6/25/20 15:05</u>	<u>ALC</u>		<u>6/25/20 17:05</u>			
<u>ALC</u>		<u>6/25/20 10:05</u>	<u>ALC</u>		<u>6/25/20 16:05</u>			



## ANALYTICAL REPORT

Lab Number:	L2041392
Client:	White Water Inc. 253B Worcester Road Charlton, MA 01507
ATTN:	Andrew Donnelly
Phone:	(888) 377-7678
Project Name:	PRINCETON TOWN CAMPUS
Project Number:	2241017
Report Date:	10/21/20

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

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508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2041392-01	TC001G WELL 1	DW	6 TOWN HALL DRIVE, PRINCETON, MA	09/29/20 09:00	09/30/20
L2041392-02	TC001G WELL 1 FIELD BLANK	DW	6 TOWN HALL DRIVE, PRINCETON, MA	09/29/20 09:00	09/30/20

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### 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.

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**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Case Narrative (continued)

#### Report Revision

October 21, 2020: Results for the field blank have been reported.

#### Report Submission

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

#### Sample Receipt

L2041392-02: The sample identified as "trip blank" on the chain of custody was identified as "field blank" on the container label. At the client's request, the sample is reported as "TC001G WELL 1 FIELD BLANK".

#### Perfluorinated Alkyl Acids

L2041392-01: The surrogate recovery was outside the acceptance criteria for perfluoro-n-[1,2-13c2]decanoic acid (13c-pfda) (61%); however, re-extraction achieved the result with other surrogate exceedances, perfluoro-n-[1,2-13c2]hexanoic acid (13c-pfhxa) (134%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

L2041392-02 was activated and extracted with the method required holding time exceeded.

WG1421574-1: The surrogate recovery is above the acceptance criteria for perfluoro-n-[1,2-13c2]hexanoic acid (13c-pfhxa) (136%). Since the blank was non-detect for all target analytes, re-analysis was not required.

WG1421574-2/-3: The LCS/LCSD recoveries, associated with L2041392-01, are within the 50-150% acceptance criteria for low level Perfluorinated Alkyl Acids except where noted.

The WG1421574-2/-3 LCS/LCSD recoveries, associated with L2041392-01, were above the acceptance criteria for perfluorooctanoic acid (pfoa) (152% LCS only), perfluorodecanoic acid (pfda) (160% LCS only), perfluoroundecanoic acid (pfuna) (154%/154%), and perfluorotetradecanoic acid (pfta) (182%/184%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

WG1421574-2/-3: The LCS/LCSD RPDs, associated with L2041392-01, are within the 50% acceptance



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Case Narrative (continued)

criteria for low level Perfluorinated Alkyl Acids.

The surrogate recoveries for the WG1421574-2 LCS, associated with L2041392-01, are outside the acceptance criteria for perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]hexanoic acid (13c-pfhexa) (143%) and perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]decanoic acid (13c-pfda) (140%).

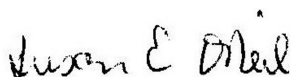
The surrogate recoveries for the WG1421574-3 LCSD, associated with L2041392-01, are outside the acceptance criteria for perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]hexanoic acid (13c-pfhexa) (135%) and perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]decanoic acid (13c-pfda) (136%).

The WG1422636-2 LCS recoveries, associated with L2041392-02, were below the acceptance criteria for 9CI-PF3ONS, NMeFOSAA and NEtFOSAA; however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated targets are considered to have a potential bias for these compounds.

The WG1422636-3 LCSD recovery, associated with L2041392-02, was below the acceptance criteria for PFHxS; however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated targets are considered to have a potential bias for these compounds.

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: 10/21/20

# ORGANICS

# SEMIVOLATILES

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**SAMPLE RESULTS**

Lab ID: L2041392-01  
 Client ID: TC001G WELL 1  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 09/29/20 09:00  
 Date Received: 09/30/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 10/08/20 16:03  
 Analyst: SH

Extraction Method: EPA 537  
 Extraction Date: 10/08/20 06:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	39.5		ng/l	1.85	0.263	1
Perfluorohexanoic Acid (PFHxA)	2.92		ng/l	1.85	0.244	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.70	0.418	1
Perfluoroheptanoic Acid (PFHpA)	1.30	J	ng/l	1.85	0.241	1
Perfluorohexanesulfonic Acid (PFHxS)	234		ng/l	1.85	0.444	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.85	0.066	1
Perfluorooctanoic Acid (PFOA)	8.40		ng/l	1.85	0.578	1
Perfluorononanoic Acid (PFNA)	0.555	J	ng/l	1.85	0.441	1
Perfluorooctanesulfonic Acid (PFOS)	56.4		ng/l	1.85	0.455	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.85	0.596	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.85	0.255	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.85	0.866	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.85	0.755	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.85	0.881	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.85	0.600	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.85	0.194	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.85	0.470	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.85	0.400	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	76		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	70		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	61	Q	70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	79		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**SAMPLE RESULTS**

Lab ID: L2041392-01 RE  
 Client ID: TC001G WELL 1  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 09/29/20 09:00  
 Date Received: 09/30/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 10/14/20 10:50  
 Analyst: SH

Extraction Method: EPA 537  
 Extraction Date: 10/13/20 17:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	42.9		ng/l	1.90	0.269	1
Perfluorohexanoic Acid (PFHxA)	4.51		ng/l	1.90	0.249	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.79	0.428	1
Perfluoroheptanoic Acid (PFHpA)	1.90		ng/l	1.90	0.246	1
Perfluorohexanesulfonic Acid (PFHxS)	225		ng/l	1.90	0.455	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.90	0.068	1
Perfluorooctanoic Acid (PFOA)	12.3		ng/l	1.90	0.591	1
Perfluorononanoic Acid (PFNA)	0.985	J	ng/l	1.90	0.451	1
Perfluorooctanesulfonic Acid (PFOS)	67.4		ng/l	1.90	0.466	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.610	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.90	0.261	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.887	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.773	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.902	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.614	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.90	0.199	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.90	0.481	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.409	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	134	Q	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	113		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	120		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	80		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**SAMPLE RESULTS**

Lab ID: L2041392-02  
 Client ID: TC001G WELL 1 FIELD BLANK  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 09/29/20 09:00  
 Date Received: 09/30/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 10/16/20 19:43  
 Analyst: SH

Extraction Method: EPA 537  
 Extraction Date: 10/15/20 20:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.73	0.246	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.73	0.228	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.46	0.392	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.73	0.225	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.73	0.416	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.73	0.062	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.73	0.541	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.73	0.412	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.73	0.426	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.73	0.558	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.73	0.238	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.73	0.811	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.73	0.707	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.73	0.825	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.73	0.561	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.73	0.182	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.73	0.440	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.73	0.374	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	92		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	89		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 10/08/20 12:55  
**Analyst:** SH

**Extraction Method:** EPA 537  
**Extraction Date:** 10/08/20 06:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01 Batch: WG1419607-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	85		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	78		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	92		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 10/14/20 10:06  
**Analyst:** SH

**Extraction Method:** EPA 537  
**Extraction Date:** 10/13/20 17:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01 Batch: WG1421574-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	136	Q	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	123		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	130		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	106		70-130



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 10/16/20 18:59  
**Analyst:** SH

**Extraction Method:** EPA 537  
**Extraction Date:** 10/15/20 20:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 02 Batch: WG1422636-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	101		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	93		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	109		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1419607-2								
Perfluorobutanesulfonic Acid (PFBS)	82		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	77		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	79		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	78		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	83		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	82		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	86		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	83		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	80		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	83		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	80		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	79		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	77		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	80		-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	75		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	83		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	90		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	105		-		70-130	-		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1419607-2

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	81				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	76				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88				70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Lab Number: L2041392

Report Date: 10/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1421574-2 WG1421574-3								
Perfluorobutanesulfonic Acid (PFBS)	110		104		70-130	6		30
Perfluorohexanoic Acid (PFHxA)	150		150		70-130	0		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	122		136		70-130	11		30
Perfluoroheptanoic Acid (PFHpA)	142		146		70-130	3		30
Perfluorohexanesulfonic Acid (PFHxS)	107		98		70-130	9		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	150		148		70-130	1		30
Perfluorooctanoic Acid (PFOA)	152	Q	150		70-130	1		30
Perfluorononanoic Acid (PFNA)	148		150		70-130	1		30
Perfluorooctanesulfonic Acid (PFOS)	112		108		70-130	4		30
Perfluorodecanoic Acid (PFDA)	160	Q	150		70-130	6		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	90		114		70-130	24		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		96		70-130	4		30
Perfluoroundecanoic Acid (PFUnA)	154	Q	154	Q	70-130	0		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	90		96		70-130	6		30
Perfluorododecanoic Acid (PFDoA)	140		148		70-130	6		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	112		70		70-130	46		30
Perfluorotridecanoic Acid (PFTrDA)	142		146		70-130	3		30
Perfluorotetradecanoic Acid (PFTA)	182	Q	184	Q	70-130	1		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1421574-2 WG1421574-3

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2- <sup>13</sup> C <sub>2</sub> ]hexanoic Acid (13C-PFHxA)	<b>143</b>	Q	<b>135</b>	Q	70-130
Tetrafluoro-2-heptafluoropropoxy-[ <sup>13</sup> C <sub>3</sub> ]-propanoic acid (13C <sub>3</sub> -HFPO-DA)	122		122		70-130
Perfluoro-n-[1,2- <sup>13</sup> C <sub>2</sub> ]decanoic Acid (13C-PFDA)	<b>140</b>	Q	<b>136</b>	Q	70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	105		98		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Lab Number: L2041392

Report Date: 10/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 Batch: WG1422636-2 WG1422636-3								
Perfluorobutanesulfonic Acid (PFBS)	78		73		70-130	7		30
Perfluorohexanoic Acid (PFHxA)	86		86		70-130	0		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	80		80		70-130	0		30
Perfluoroheptanoic Acid (PFHpA)	102		96		70-130	6		30
Perfluorohexanesulfonic Acid (PFHxS)	76		69	Q	70-130	10		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	85		82		70-130	4		30
Perfluorooctanoic Acid (PFOA)	101		103		70-130	2		30
Perfluorononanoic Acid (PFNA)	88		83		70-130	6		30
Perfluorooctanesulfonic Acid (PFOS)	78		71		70-130	9		30
Perfluorodecanoic Acid (PFDA)	84		82		70-130	2		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	69	Q	70		70-130	1		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	63	Q	71		70-130	12		30
Perfluoroundecanoic Acid (PFUnA)	86		87		70-130	1		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	63	Q	76		70-130	19		30
Perfluorododecanoic Acid (PFDoA)	98		96		70-130	2		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	71		70		70-130	1		30
Perfluorotridecanoic Acid (PFTrDA)	96		95		70-130	1		30
Perfluorotetradecanoic Acid (PFTA)	123		119		70-130	3		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 Batch: WG1422636-2 WG1422636-3

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	92		92		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	88		89		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102		99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	75		88		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab		Associated sample(s): 01			QC Batch ID: WG1419607-3		QC Sample: L2041319-01		Client ID: MS Sample			
Perfluorobutanesulfonic Acid (PFBS)	ND	126	98.5	78		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	ND	142	106	75		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	142	103	73		-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	142	101	71		-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	129	98.8	76		-	-		70-130	-		30
4,8-Dioxo-3h-Perfluorononanoic Acid (ADONA)	ND	134	93.8	70		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	142	105	74		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	ND	142	104	73		-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	131	103	78		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	142	105	74		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	132	95.4	72		-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	142	103	73		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	142	98.6	70		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	142	107	76		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	142	92.3	65	Q	-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	134	102	76		-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTTrDA)	ND	142	108	76		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	142	123	87		-	-		70-130	-		30



**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2041392**Report Date:** 10/21/20

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab    Associated sample(s): 01    QC Batch ID: WG1419607-3    QC Sample: L2041319-01    Client ID: MS Sample

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	76				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	69	Q			70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	78				70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1422636-4 QC Sample: L2044171-01 Client ID: MS Sample												
Perfluorobutanesulfonic Acid (PFBS)	0.358J	128	95.6	75		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	0.322J	144	101	70		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	144	94.1	65	Q	-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	0.287J	144	111	77		-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	0.609J	132	92.2	70		-	-		70-130	-		30
4,8-Dioxo-3h-Perfluorononanoic Acid (ADONA)	ND	136	128	94		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	1.58J	144	119	81		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	ND	144	99.2	69	Q	-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	1.32J	134	108	81		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	144	117	81		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	134	90.6	67	Q	-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	144	102	71		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	144	104	72		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	144	108	75		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	144	103	71		-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	136	102	75		-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTTrDA)	ND	144	111	77		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTTA)	ND	144	161	112		-	-		70-130	-		30

**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2041392**Report Date:** 10/21/20

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab    Associated sample(s): 02    QC Batch ID: WG1422636-4    QC Sample: L2044171-01    Client ID: MS Sample

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	76				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	91				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	84				70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1419607-4 QC Sample: L2041324-01 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	1.58J	1.69J	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	6.56	5.91	ng/l	10		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	5.55	5.21	ng/l	6		30
Perfluorohexanesulfonic Acid (PFHxS)	0.600J	0.624J	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	13.3	12.1	ng/l	9		30
Perfluorononanoic Acid (PFNA)	0.600J	0.514J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1419607-4 QC Sample: L2041324-01 Client ID: DUP Sample						

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	58	Q	52	Q	70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	52	Q	50	Q	70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	58	Q	56	Q	70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	80		86		70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1422636-5 QC Sample: L2044171-03 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	1.49J	1.44J	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	5.82	6.40	ng/l	9		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	3.71	4.09	ng/l	10		30
Perfluorohexanesulfonic Acid (PFHxS)	1.86	2.06	ng/l	10		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	11.3	12.1	ng/l	7		30
Perfluorononanoic Acid (PFNA)	1.34J	1.62J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	14.4	14.0	ng/l	3		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1422636-5 QC Sample: L2044171-03 Client ID: DUP Sample						

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	75		84		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	68	Q	71		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	76		81		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		88		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2041392-01A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		4.3	Y	Absent		A2-537.1(14)
L2041392-01B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		4.3	Y	Absent		A2-537.1(14)
L2041392-02A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		4.3	Y	Absent		A2-537.1(14)
L2041392-02B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	NA	NA			Y	Absent		A2-537.1(14)



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

Serial\_No:10212009:39  
**Lab Number:** L2041392  
**Report Date:** 10/21/20

### PFAS PARAMETER SUMMARY

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

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20

## 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.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: DU Report with 'J' Qualifiers*

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

**Data Qualifiers**

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

## REFERENCES

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

## LIMITATION OF LIABILITIES

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

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



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 17

Published Date: 4/28/2020 9:42:21 AM

Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **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.



# WhiteWater

WATER & WASTEWATER SOLUTIONS

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

☒ ROUTINE SAMPLE

☐ SPECIAL SAMPLE

☐ REPEAT SAMPLE

☐ WAF SAMPLE

☐ 24 HR RUSH?

☐ PRESEASON SAMPLE

PWS ID #: 2241017 PWS CLASS: TNC JOB/SO #: \_\_\_\_\_

PWS NAME: Princeton Town Campus

PWS ADDRESS: 6 Town Hall Drive, Princeton, MA 01541

PWS PHONE #: (978) 464 2100

DATE COLLECTED: 9/29/2020 Is the source treated? YES ☐ NO ☒

Sample after treatment? YES ☐ NO ☒

## SPECIAL NOTES:

PFAS Quarterly per client

METER READINGS: Cu Ft. or Gal

0219360

LOCATION CODE	SAMPLE LOCATION	SAMPLE TYPE	TIME	CHLORINE RESIDUAL	PFAS					NOTES (# of Bottles)
TC001G	Well 1	Finish	09:00	NA	✓					2 Bottles = One Kit Plus Trip Blank

Custody Transfer	Name & Signature	DATE	TIME
Sampler:	<u>William Hibbs</u>	<u>9/29/2020</u>	<u>09:00</u>
Relinquished by:	<u>William Hibbs</u>	<u>9/30/2020</u>	<u>13:05</u>
Received by:	<u>Rob Maesto</u>	<u>9/30/20</u>	<u>13:05</u>
Relinquished by:	<u>Rob Maesto</u>	<u>9/30/20</u>	<u>21:00</u>
Received by:	<u>[Signature]</u>	<u>9/30/20</u>	<u>21:00</u>

0500 02/11/20 0500  
ALL - AM



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 1 of 2

I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
TC001G	WELL 1	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	09/29/20	W.H.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

--

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	10/08/20	10/08/20	1	Primary Lab:	L2041392-01
				Subcontracted Lab:	L2041392-01

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	56.4		-	0.455	1.85
335-67-1	Perfluorooctanoic Acid (PFOA)	8.40			0.578	1.85
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	234			0.444	1.85
375-95-1	Perfluorononanoic Acid (PFNA)	0.555	J		0.441	1.85
375-85-9	Perfluorohexanoic Acid (PFHpA)	1.30	J		0.241	1.85
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.596	1.85
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		= 298.8	--	20	-	-
UNREGULATED PFAS CONTAMINANTS						
375-73-5	Perfluorobutane sulfonic acid (PFBS)	39.5		-	0.263	1.85
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.600	1.85
307-24-4	Perfluorohexanoic acid (PFHxA)	2.92			0.244	1.85
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.400	1.85
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND			0.470	1.85
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.755	1.85
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND			0.881	1.85
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.866	1.85
763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.194	1.85
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.255	1.85
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.066	1.85
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.418	3.70

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.





## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 2 of 2

PWS ID#:

2241017

Lab Sample ID#:

Primary Lab:

L2041392-01

Subcontracted Lab:

L2041392-01

CAS#	UNREGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L
				-		

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	76	
<sup>13</sup> C <sub>2</sub> -PFDA	61	
d <sub>5</sub> -NEtFOSAA	79	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	70	

Note: <sup>13</sup>C<sub>3</sub>-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ Laboratory analytical report with QC attached (check one item below).☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	L2041392-01: The surrogate recovery was outside the acceptance criteria for perfluoro-n-[1,2-13c2]decanoic acid (13c-pfda) (61%); however, re-extraction achieved the result with other surrogate exceedances, perfluoro-n-[1,2-13c2]hexanoic acid (13c-pfha) (134%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

\* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date:

10/21/20

If not submitting these results electronically, mail **TWO** copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).

MassDEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 1 of 2

## I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
TC001G	WELL 1	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	09/29/20	W.H.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

--

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	10/13/20	10/14/20	1	Primary Lab:	L2041392-01RE
				Subcontracted Lab:	L2041392-01RE

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	67.4		-	0.466	1.90
335-67-1	Perfluorooctanoic Acid (PFOA)	12.3			0.591	1.90
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	225			0.455	1.90
375-95-1	Perfluorononanoic Acid (PFNA)	0.985	J		0.451	1.90
375-85-9	Perfluorohexanoic Acid (PFHpA)	1.90			0.246	1.90
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.610	1.90
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		= 306.6	--	20	-	-
UNREGULATED PFAS CONTAMINANTS						
375-73-5	Perfluorobutane sulfonic acid (PFBS)	42.9		-	0.269	1.90
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.614	1.90
307-24-4	Perfluorohexanoic acid (PFHxA)	4.51			0.249	1.90
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.409	1.90
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND			0.481	1.90
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.773	1.90
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND			0.902	1.90
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.887	1.90
763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.199	1.90
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.261	1.90
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.068	1.90
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.428	3.79

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 2 of 2

PWS ID#:

2241017

Lab Sample ID#:

Primary Lab:

L2041392-01RE

Subcontracted Lab:

L2041392-01RE

CAS#	UNREGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L
				-		

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	134	
<sup>13</sup> C <sub>2</sub> -PFDA	120	
d <sub>5</sub> -NEtFOSAA	80	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	113	

Note: <sup>13</sup>C<sub>3</sub>-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ Laboratory analytical report with QC attached (check one item below).☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	L2041392-01: The surrogate recovery was outside the acceptance criteria for perfluoro-n-[1,2-13c2]decanoic acid (13c-pfda) (61%); however, re-extraction achieved the result with other surrogate exceedances, perfluoro-n-[1,2-13c2]hexanoic acid (13c-pfha) (134%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

\* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

*Joseph Wackens*

Date:

10/21/20

If not submitting these results electronically, mail **TWO** copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).

MassDEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 1 of 2

## I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
	<b>FIELD BLANK</b>	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	<b>09/29/20</b>	<b>W.H.</b>
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
<b>SAMPLE COMMENTS</b> - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

--

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	10/15/20	10/16/20	1	Primary Lab:	L2041392-02
				Subcontracted Lab:	L2041392-02

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	ND		-	0.426	1.73
335-67-1	Perfluorooctanoic Acid (PFOA)	ND			0.541	1.73
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	ND			0.416	1.73
375-95-1	Perfluorononanoic Acid (PFNA)	ND			0.412	1.73
375-85-9	Perfluorohexanoic Acid (PFHpA)	ND			0.225	1.73
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.558	1.73
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		=	--	20	-	-
UNREGULATED PFAS CONTAMINANTS						
375-73-5	Perfluorobutane sulfonic acid (PFBS)	ND		-	0.246	1.73
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.561	1.73
307-24-4	Perfluorohexanoic acid (PFHxA)	ND			0.228	1.73
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.374	1.73
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND			0.440	1.73
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.707	1.73
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NtFOSAA)	ND			0.825	1.73
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.811	1.73
763051-92-9	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.182	1.73
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.238	1.73
919005-14-4	4,8-dioxo-3H-perfluorononanoic acid (ADONA)	ND			0.062	1.73
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.392	3.46

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 2 of 2

PWS ID#:

2241017

Lab Sample ID#:

Primary Lab:

L2041392-02

Subcontracted Lab:

L2041392-02

CAS#	UNREGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L
				-		

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	92	
<sup>13</sup> C <sub>2</sub> -PFDA	94	
d <sub>5</sub> -NEtFOSAA	91	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	89	

Note: <sup>13</sup>C<sub>3</sub>-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ Laboratory analytical report with QC attached (check one item below).☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	L2041392-02 was activated and extracted with the method required holding time exceeded.

\* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

Date:

10/21/20

If not submitting these results electronically, mail **TWO** copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).

MassDEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		

# WhiteWater

WATER & WASTEWATER SOLUTIONS

10/1/20

L2041393

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

- ☒ ROUTINE SAMPLE      ☐ SPECIAL SAMPLE  
☐ REPEAT SAMPLE      ☐ WAF SAMPLE  
☐ 24 HR RUSH?      ☐ PRESEASON SAMPLE

PWS ID #: 2241017 PWS CLASS: TNC JOB/SO #: \_\_\_\_\_

PWS NAME: Princeton Town Campus

PWS ADDRESS: 6 Town Hall Drive, Princeton, MA 01541

PWS PHONE #: (978) 464 2100

DATE COLLECTED: 9/29/2020      Is the source treated? YES ☐ NO ☒  
 Sample after treatment? YES ☐ NO ☒

## SPECIAL NOTES:

PFAS Quarterly per client

METER READINGS: Cu Ft. or Gal

0219360

LOCATION CODE	SAMPLE LOCATION	SAMPLE TYPE	TIME	CHLORINE RESIDUAL	PFAS				NOTES (# of Bottles)
TC001G	Well 1	Finish	09:00	NA	✓				2 Bottles = One Kit Plus Trip Blank

Custody Transfer	Name & Signature	DATE	TIME
Sampler:	<u>William Hibbs</u>	<u>9/29/2020</u>	<u>09:00</u>
Relinquished by:	<u>William Hibbs</u>	<u>9/30/2020</u>	<u>13:05</u>
Received by:	<u>Rob Maesto</u> <u>AR</u>	<u>9/30/20</u>	<u>13:05</u>
Relinquished by:	<u>Rob Maesto</u> <u>AR</u>	<u>9/30/20</u>	<u>21:00</u>
Received by:	<u>[Signature]</u>	<u>9/30/20</u>	<u>21:00</u>

PLEASE EMAIL THIS REPORT WITH RESULTS & INVOICE TO: ADonnelly@RHWhite.com and CStephen@RHWhite.com

Handy Morris 10/1/20 4:00 T. Hurdell 10/1/20 0400 T. Hurdell 10/1/20 0500  
 10/1/20 0500

10/1/20 0500  
AR - AM





## ANALYTICAL REPORT

Lab Number:	L2041392
Client:	White Water Inc. 253B Worcester Road Charlton, MA 01507
ATTN:	Andrew Donnelly
Phone:	(888) 377-7678
Project Name:	PRINCETON TOWN CAMPUS
Project Number:	2241017
Report Date:	10/21/20

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

---

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



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2041392-01	TC001G WELL 1	DW	6 TOWN HALL DRIVE, PRINCETON, MA	09/29/20 09:00	09/30/20
L2041392-02	TC001G WELL 1 FIELD BLANK	DW	6 TOWN HALL DRIVE, PRINCETON, MA	09/29/20 09:00	09/30/20



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### 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:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Case Narrative (continued)

#### Report Revision

October 21, 2020: Results for the field blank have been reported.

#### Report Submission

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

#### Sample Receipt

L2041392-02: The sample identified as "trip blank" on the chain of custody was identified as "field blank" on the container label. At the client's request, the sample is reported as "TC001G WELL 1 FIELD BLANK".

#### Perfluorinated Alkyl Acids

L2041392-01: The surrogate recovery was outside the acceptance criteria for perfluoro-n-[1,2-13c2]decanoic acid (13c-pfda) (61%); however, re-extraction achieved the result with other surrogate exceedances, perfluoro-n-[1,2-13c2]hexanoic acid (13c-pfhxa) (134%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

L2041392-02 was activated and extracted with the method required holding time exceeded.

WG1421574-1: The surrogate recovery is above the acceptance criteria for perfluoro-n-[1,2-13c2]hexanoic acid (13c-pfhxa) (136%). Since the blank was non-detect for all target analytes, re-analysis was not required.

WG1421574-2/-3: The LCS/LCSD recoveries, associated with L2041392-01, are within the 50-150% acceptance criteria for low level Perfluorinated Alkyl Acids except where noted.

The WG1421574-2/-3 LCS/LCSD recoveries, associated with L2041392-01, were above the acceptance criteria for perfluorooctanoic acid (pfoa) (152% LCS only), perfluorodecanoic acid (pfda) (160% LCS only), perfluoroundecanoic acid (pfuna) (154%/154%), and perfluorotetradecanoic acid (pfta) (182%/184%); however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all positive detects are considered to have a potentially high bias for these compounds.

WG1421574-2/-3: The LCS/LCSD RPDs, associated with L2041392-01, are within the 50% acceptance

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Case Narrative (continued)

criteria for low level Perfluorinated Alkyl Acids.

The surrogate recoveries for the WG1421574-2 LCS, associated with L2041392-01, are outside the acceptance criteria for perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]hexanoic acid (13c-pfhexa) (143%) and perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]decanoic acid (13c-pfda) (140%).

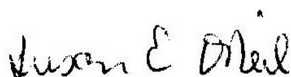
The surrogate recoveries for the WG1421574-3 LCSD, associated with L2041392-01, are outside the acceptance criteria for perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]hexanoic acid (13c-pfhexa) (135%) and perfluoro-n-[1,2-<sup>13</sup>C<sub>2</sub>]decanoic acid (13c-pfda) (136%).

The WG1422636-2 LCS recoveries, associated with L2041392-02, were below the acceptance criteria for 9CI-PF3ONS, NMeFOSAA and NEtFOSAA; however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated targets are considered to have a potential bias for these compounds.

The WG1422636-3 LCSD recovery, associated with L2041392-02, was below the acceptance criteria for PFHxS; however, re-extraction could not be performed due to lack of additional sample. The results of the original analysis are reported; however, all associated targets are considered to have a potential bias for these compounds.

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: 10/21/20

# ORGANICS

# SEMIVOLATILES

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**SAMPLE RESULTS**

Lab ID: L2041392-01  
 Client ID: TC001G WELL 1  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 09/29/20 09:00  
 Date Received: 09/30/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 10/08/20 16:03  
 Analyst: SH

Extraction Method: EPA 537  
 Extraction Date: 10/08/20 06:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	39.5		ng/l	1.85	0.263	1
Perfluorohexanoic Acid (PFHxA)	2.92		ng/l	1.85	0.244	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.70	0.418	1
Perfluoroheptanoic Acid (PFHpA)	1.30	J	ng/l	1.85	0.241	1
Perfluorohexanesulfonic Acid (PFHxS)	234		ng/l	1.85	0.444	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.85	0.066	1
Perfluorooctanoic Acid (PFOA)	8.40		ng/l	1.85	0.578	1
Perfluorononanoic Acid (PFNA)	0.555	J	ng/l	1.85	0.441	1
Perfluorooctanesulfonic Acid (PFOS)	56.4		ng/l	1.85	0.455	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.85	0.596	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.85	0.255	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.85	0.866	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.85	0.755	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.85	0.881	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.85	0.600	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.85	0.194	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.85	0.470	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.85	0.400	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	76		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	70		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	61	Q	70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	79		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**SAMPLE RESULTS**

Lab ID: L2041392-01 RE  
 Client ID: TC001G WELL 1  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 09/29/20 09:00  
 Date Received: 09/30/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 10/14/20 10:50  
 Analyst: SH

Extraction Method: EPA 537  
 Extraction Date: 10/13/20 17:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	42.9		ng/l	1.90	0.269	1
Perfluorohexanoic Acid (PFHxA)	4.51		ng/l	1.90	0.249	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.79	0.428	1
Perfluoroheptanoic Acid (PFHpA)	1.90		ng/l	1.90	0.246	1
Perfluorohexanesulfonic Acid (PFHxS)	225		ng/l	1.90	0.455	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.90	0.068	1
Perfluorooctanoic Acid (PFOA)	12.3		ng/l	1.90	0.591	1
Perfluorononanoic Acid (PFNA)	0.985	J	ng/l	1.90	0.451	1
Perfluorooctanesulfonic Acid (PFOS)	67.4		ng/l	1.90	0.466	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.610	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.90	0.261	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.887	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.773	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.902	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.614	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.90	0.199	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.90	0.481	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.409	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	134	Q	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	113		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	120		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	80		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**SAMPLE RESULTS**

Lab ID: L2041392-02  
 Client ID: TC001G WELL 1 FIELD BLANK  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 09/29/20 09:00  
 Date Received: 09/30/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 10/16/20 19:43  
 Analyst: SH

Extraction Method: EPA 537  
 Extraction Date: 10/15/20 20:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.73	0.246	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.73	0.228	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.46	0.392	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.73	0.225	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.73	0.416	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.73	0.062	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.73	0.541	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.73	0.412	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.73	0.426	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.73	0.558	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.73	0.238	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.73	0.811	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.73	0.707	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.73	0.825	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.73	0.561	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.73	0.182	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.73	0.440	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.73	0.374	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	92		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	89		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	94		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91		70-130



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 10/08/20 12:55  
**Analyst:** SH

**Extraction Method:** EPA 537  
**Extraction Date:** 10/08/20 06:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01 Batch: WG1419607-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	85		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	78		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	92		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 10/14/20 10:06  
**Analyst:** SH

**Extraction Method:** EPA 537  
**Extraction Date:** 10/13/20 17:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01 Batch: WG1421574-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	136	Q	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	123		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	130		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	106		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 10/16/20 18:59  
**Analyst:** SH

**Extraction Method:** EPA 537  
**Extraction Date:** 10/15/20 20:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 02 Batch: WG1422636-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.936
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.816
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.952
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	101		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	93		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	109		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1419607-2								
Perfluorobutanesulfonic Acid (PFBS)	82		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	77		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	79		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	78		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	83		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	82		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	86		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	83		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	80		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	83		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	80		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	79		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	77		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	80		-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	75		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	83		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	90		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	105		-		70-130	-		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2041392**Report Date:** 10/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1419607-2								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	81				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	76				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88				70-130

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1421574-2 WG1421574-3								
Perfluorobutanesulfonic Acid (PFBS)	110		104		70-130	6		30
Perfluorohexanoic Acid (PFHxA)	150		150		70-130	0		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	122		136		70-130	11		30
Perfluoroheptanoic Acid (PFHpA)	142		146		70-130	3		30
Perfluorohexanesulfonic Acid (PFHxS)	107		98		70-130	9		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	150		148		70-130	1		30
Perfluorooctanoic Acid (PFOA)	152	Q	150		70-130	1		30
Perfluorononanoic Acid (PFNA)	148		150		70-130	1		30
Perfluorooctanesulfonic Acid (PFOS)	112		108		70-130	4		30
Perfluorodecanoic Acid (PFDA)	160	Q	150		70-130	6		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	90		114		70-130	24		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		96		70-130	4		30
Perfluoroundecanoic Acid (PFUnA)	154	Q	154	Q	70-130	0		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	90		96		70-130	6		30
Perfluorododecanoic Acid (PFDoA)	140		148		70-130	6		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	112		70		70-130	46		30
Perfluorotridecanoic Acid (PFTrDA)	142		146		70-130	3		30
Perfluorotetradecanoic Acid (PFTA)	182	Q	184	Q	70-130	1		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1421574-2 WG1421574-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	<b>143</b>	Q	<b>135</b>	Q	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	122		122		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	<b>140</b>	Q	<b>136</b>	Q	70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	105		98		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 Batch: WG1422636-2 WG1422636-3								
Perfluorobutanesulfonic Acid (PFBS)	78		73		70-130	7		30
Perfluorohexanoic Acid (PFHxA)	86		86		70-130	0		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	80		80		70-130	0		30
Perfluoroheptanoic Acid (PFHpA)	102		96		70-130	6		30
Perfluorohexanesulfonic Acid (PFHxS)	76		69	Q	70-130	10		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	85		82		70-130	4		30
Perfluorooctanoic Acid (PFOA)	101		103		70-130	2		30
Perfluorononanoic Acid (PFNA)	88		83		70-130	6		30
Perfluorooctanesulfonic Acid (PFOS)	78		71		70-130	9		30
Perfluorodecanoic Acid (PFDA)	84		82		70-130	2		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	69	Q	70		70-130	1		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	63	Q	71		70-130	12		30
Perfluoroundecanoic Acid (PFUnA)	86		87		70-130	1		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	63	Q	76		70-130	19		30
Perfluorododecanoic Acid (PFDoA)	98		96		70-130	2		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	71		70		70-130	1		30
Perfluorotridecanoic Acid (PFTrDA)	96		95		70-130	1		30
Perfluorotetradecanoic Acid (PFTA)	123		119		70-130	3		30



**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 Batch: WG1422636-2 WG1422636-3

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	92		92		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	88		89		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102		99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	75		88		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab		Associated sample(s): 01			QC Batch ID: WG1419607-3		QC Sample: L2041319-01		Client ID: MS Sample			
Perfluorobutanesulfonic Acid (PFBS)	ND	126	98.5	78		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	ND	142	106	75		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	142	103	73		-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	142	101	71		-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	129	98.8	76		-	-		70-130	-		30
4,8-Dioxo-3h-Perfluorononanoic Acid (ADONA)	ND	134	93.8	70		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	142	105	74		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	ND	142	104	73		-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	131	103	78		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	142	105	74		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	132	95.4	72		-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	142	103	73		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	142	98.6	70		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	142	107	76		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	142	92.3	65	Q	-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	134	102	76		-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTTrDA)	ND	142	108	76		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	142	123	87		-	-		70-130	-		30

**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2041392**Report Date:** 10/21/20

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab    Associated sample(s): 01    QC Batch ID: WG1419607-3    QC Sample: L2041319-01    Client ID: MS Sample

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	76				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	<b>69</b>	Q			70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	78				70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1422636-4 QC Sample: L2044171-01 Client ID: MS Sample												
Perfluorobutanesulfonic Acid (PFBS)	0.358J	128	95.6	75		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	0.322J	144	101	70		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	144	94.1	65	Q	-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	0.287J	144	111	77		-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	0.609J	132	92.2	70		-	-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	136	128	94		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	1.58J	144	119	81		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	ND	144	99.2	69	Q	-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	1.32J	134	108	81		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	144	117	81		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	134	90.6	67	Q	-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	144	102	71		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	144	104	72		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	144	108	75		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	144	103	71		-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	136	102	75		-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTTrDA)	ND	144	111	77		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	144	161	112		-	-		70-130	-		30

**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2041392**Report Date:** 10/21/20

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab    Associated sample(s): 02    QC Batch ID: WG1422636-4    QC Sample: L2044171-01    Client ID: MS Sample

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	76				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	91				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	84				70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1419607-4 QC Sample: L2041324-01 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	1.58J	1.69J	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	6.56	5.91	ng/l	10		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	5.55	5.21	ng/l	6		30
Perfluorohexanesulfonic Acid (PFHxS)	0.600J	0.624J	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	13.3	12.1	ng/l	9		30
Perfluorononanoic Acid (PFNA)	0.600J	0.514J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1419607-4 QC Sample: L2041324-01 Client ID: DUP Sample						

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	58	Q	52	Q	70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	52	Q	50	Q	70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	58	Q	56	Q	70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	80		86		70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1422636-5 QC Sample: L2044171-03 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	1.49J	1.44J	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	5.82	6.40	ng/l	9		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	3.71	4.09	ng/l	10		30
Perfluorohexanesulfonic Acid (PFHxS)	1.86	2.06	ng/l	10		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	11.3	12.1	ng/l	7		30
Perfluorononanoic Acid (PFNA)	1.34J	1.62J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	14.4	14.0	ng/l	3		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30



# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2041392

**Report Date:** 10/21/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1422636-5 QC Sample: L2044171-03 Client ID: DUP Sample						

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	75		84		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	68	Q	71		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	76		81		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		88		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2041392-01A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		4.3	Y	Absent		A2-537.1(14)
L2041392-01B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		4.3	Y	Absent		A2-537.1(14)
L2041392-02A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		4.3	Y	Absent		A2-537.1(14)
L2041392-02B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	NA	NA			Y	Absent		A2-537.1(14)

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

Serial\_No:10212009:39  
**Lab Number:** L2041392  
**Report Date:** 10/21/20

### PFAS PARAMETER SUMMARY

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

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2041392**Project Number:** 2241017**Report Date:** 10/21/20

## 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.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: DU Report with 'J' Qualifiers*

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

**Data Qualifiers**

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2041392  
**Report Date:** 10/21/20

## REFERENCES

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

## LIMITATION OF LIABILITIES

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

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



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 17

Department: **Quality Assurance**

Published Date: 4/28/2020 9:42:21 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **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.



# WhiteWater

WATER & WASTEWATER SOLUTIONS

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

☒ ROUTINE SAMPLE

☐ SPECIAL SAMPLE

☐ REPEAT SAMPLE

☐ WAF SAMPLE

☐ 24 HR RUSH?

☐ PRESEASON SAMPLE

PWS ID #: 2241017 PWS CLASS: TNC JOB/SO #: \_\_\_\_\_

PWS NAME: Princeton Town Campus

PWS ADDRESS: 6 Town Hall Drive, Princeton, MA 01541

PWS PHONE #: (978) 464 2100

DATE COLLECTED: 9/29/2020 Is the source treated? YES ☐ NO ☒

Sample after treatment? YES ☐ NO ☒

## SPECIAL NOTES:

PFAS Quarterly per client

METER READINGS: Cu Ft. or Gal

0219360

LOCATION CODE	SAMPLE LOCATION	SAMPLE TYPE	TIME	CHLORINE RESIDUAL	PFAS					NOTES (# of Bottles)
TC001G	Well 1	Finish	09:00	NA	✓					2 Bottles = One Kit Plus Trip Blank

Custody Transfer	Name & Signature	DATE	TIME
Sampler:	<u>William Hibbs</u>	<u>9/29/2020</u>	<u>09:00</u>
Relinquished by:	<u>William Hibbs</u>	<u>9/30/2020</u>	<u>13:05</u>
Received by:	<u>Rob Maesto</u> <u>AR</u>	<u>9/30/20</u>	<u>13:05</u>
Relinquished by:	<u>Rob Maesto</u> <u>AR</u>	<u>9/30/20</u>	<u>21:00</u>
Received by:	<u>[Signature]</u>	<u>9/30/20</u>	<u>21:00</u>

0500 02/11/20 0500  
AR - AR



## ANALYTICAL REPORT

Lab Number:	L2057462
Client:	White Water Inc. 253B Worcester Road Charlton, MA 01507
ATTN:	Andrew Donnelly
Phone:	(888) 377-7678
Project Name:	PRINCETON TOWN CAMPUS
Project Number:	2241017
Report Date:	01/05/21

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

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



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2057462-01	TC001G WELL1	DW	6 TOWN HALL DRIVE, PRINCETON, MA	12/22/20 08:15	12/23/20
L2057462-02	TC001G WELL1-FB	DW	6 TOWN HALL DRIVE, PRINCETON, MA	12/22/20 08:15	12/23/20

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

### 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.

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**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

**Case Narrative (continued)**

Report Submission

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

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

Authorized Signature:



Alycia Mogayzel

Title: Technical Director/Representative

Date: 01/05/21

# ORGANICS

# SEMIVOLATILES

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2057462**Project Number:** 2241017**Report Date:** 01/05/21**SAMPLE RESULTS**

Lab ID: L2057462-01  
 Client ID: TC001G WELL1  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 12/22/20 08:15  
 Date Received: 12/23/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 01/04/21 21:47  
 Analyst: LV

Extraction Method: EPA 537.1  
 Extraction Date: 01/02/21 07:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	48.6		ng/l	1.81	0.257	1
Perfluorohexanoic Acid (PFHxA)	5.10		ng/l	1.81	0.238	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.62	0.409	1
Perfluoroheptanoic Acid (PFHpA)	4.27		ng/l	1.81	0.235	1
Perfluorohexanesulfonic Acid (PFHxS)	329		ng/l	1.81	0.434	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.81	0.065	1
Perfluorooctanoic Acid (PFOA)	15.9		ng/l	1.81	0.564	1
Perfluorononanoic Acid (PFNA)	0.904	J	ng/l	1.81	0.430	1
Perfluorooctanesulfonic Acid (PFOS)	94.2		ng/l	1.81	0.445	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.81	0.582	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.81	0.249	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.81	0.543	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.81	0.387	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.81	0.506	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.81	0.586	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.81	0.190	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.81	0.459	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.81	0.391	1
PFAS, Total (6)	443		ng/l	1.81	0.235	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	89		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	72		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	80		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	97		70-130



**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2057462**Project Number:** 2241017**Report Date:** 01/05/21**SAMPLE RESULTS**

Lab ID: L2057462-02  
 Client ID: TC001G WELL1-FB  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA

Date Collected: 12/22/20 08:15  
 Date Received: 12/23/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 01/04/21 18:18  
 Analyst: LV

Extraction Method: EPA 537.1  
 Extraction Date: 01/03/21 13:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.86	0.264	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.86	0.245	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	3.72	0.420	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.86	0.242	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.86	0.446	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.86	0.067	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.86	0.580	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.86	0.442	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.86	0.457	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.86	0.599	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.86	0.256	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.86	0.558	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.86	0.398	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.86	0.521	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.86	0.602	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.86	0.195	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.86	0.472	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.86	0.402	1
PFAS, Total (6)	ND		ng/l	1.86	0.242	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	98		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	86		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	97		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 01/04/21 20:03  
**Analyst:** LV

**Extraction Method:** EPA 537.1  
**Extraction Date:** 01/02/21 07:00

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01 Batch: WG1450958-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.600
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.428
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.560
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432
PFAS, Total (6)	ND		ng/l	2.00	0.260

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	100		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	86		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	99		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	97		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 01/04/21 16:24  
**Analyst:** LV

**Extraction Method:** EPA 537.1  
**Extraction Date:** 01/03/21 13:10

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 02 Batch: WG1451084-1					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	4.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.600
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.428
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.560
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432
PFAS, Total (6)	ND		ng/l	2.00	0.260

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	109		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	93		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	100		70-130

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Lab Number: L2057462

Report Date: 01/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1450958-2								
Perfluorobutanesulfonic Acid (PFBS)	112		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	101		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	86		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	106		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	110		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	100		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	109		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	105		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	97		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	103		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	93		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	113		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	106		-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	109		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	92		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	106		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	110		-		70-130	-		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2057462**Project Number:** 2241017**Report Date:** 01/05/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1450958-2

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	86				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	97				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	99				70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2057462

**Report Date:** 01/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 Batch: WG1451084-2								
Perfluorobutanesulfonic Acid (PFBS)	115		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	108		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	98		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	122		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	120		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	102		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	114		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	120		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	127		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	100		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	88		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	104		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	100		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	94		-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	118		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	70		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	106		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	112		-		70-130	-		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2057462**Project Number:** 2241017**Report Date:** 01/05/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 Batch: WG1451084-2

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	110				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	94				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	105				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	97				70-130

**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2057462**Report Date:** 01/05/21

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab		Associated sample(s): 01			QC Batch ID: WG1450958-3		QC Sample: L2057460-01		Client ID: MS Sample			
Perfluorobutanesulfonic Acid (PFBS)	ND	32.9	38.8	118	-	-	-	-	70-130	-	-	30
Perfluorohexanoic Acid (PFHxA)	ND	37.1	40.1	108	-	-	-	-	70-130	-	-	30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	37.1	34.5	93	-	-	-	-	70-130	-	-	30
Perfluoroheptanoic Acid (PFHpA)	ND	37.1	43.5	117	-	-	-	-	70-130	-	-	30
Perfluorohexanesulfonic Acid (PFHxS)	ND	33.9	36.9	109	-	-	-	-	70-130	-	-	30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	35	37.5	107	-	-	-	-	70-130	-	-	30
Perfluorooctanoic Acid (PFOA)	ND	37.1	46.6	126	-	-	-	-	70-130	-	-	30
Perfluorononanoic Acid (PFNA)	ND	37.1	43.7	118	-	-	-	-	70-130	-	-	30
Perfluorooctanesulfonic Acid (PFOS)	ND	34.4	34.5	100	-	-	-	-	70-130	-	-	30
Perfluorodecanoic Acid (PFDA)	ND	37.1	37.3	101	-	-	-	-	70-130	-	-	30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	34.5	32.3	94	-	-	-	-	70-130	-	-	30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37.1	34.4	93	-	-	-	-	70-130	-	-	30
Perfluoroundecanoic Acid (PFUnA)	ND	37.1	42.0	113	-	-	-	-	70-130	-	-	30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37.1	35.1	95	-	-	-	-	70-130	-	-	30
Perfluorododecanoic Acid (PFDoA)	ND	37.1	42.4	114	-	-	-	-	70-130	-	-	30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	35	32.2	92	-	-	-	-	70-130	-	-	30
Perfluorotridecanoic Acid (PFTTrDA)	ND	37.1	41.2	111	-	-	-	-	70-130	-	-	30
Perfluorotetradecanoic Acid (PFTA)	ND	37.1	44.6	120	-	-	-	-	70-130	-	-	30



**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2057462**Report Date:** 01/05/21

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab    Associated sample(s): 01    QC Batch ID: WG1450958-3    QC Sample: L2057460-01    Client ID: MS Sample

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	92				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	89				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	112				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	108				70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1451084-3 WG1451084-4 QC Sample: L2057060-01 Client ID: MS Sample												
Perfluorobutanesulfonic Acid (PFBS)	ND	1.65	1.74J	106		1.84	113		70-130	6		30
Perfluorohexanoic Acid (PFHxA)	ND	1.86	1.82J	98		1.94	106		70-130	6		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	1.86	1.60J	86		1.69J	92		70-130	5		30
Perfluoroheptanoic Acid (PFHpA)	ND	1.86	2.04	110		2.16	118		70-130	6		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	1.7	1.74J	103		1.80J	107		70-130	3		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	1.75	1.74J	99		1.76J	102		70-130	1		30
Perfluorooctanoic Acid (PFOA)	ND	1.86	2.19	118		2.24	122		70-130	2		30
Perfluorononanoic Acid (PFNA)	ND	1.86	2.00	108		2.16	118		70-130	8		30
Perfluorooctanesulfonic Acid (PFOS)	ND	1.72	1.60J	93		1.84	108		70-130	14		30
Perfluorodecanoic Acid (PFDA)	ND	1.86	1.78J	96		1.91	104		70-130	7		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	1.73	1.93	111		2.20	129		70-130	13		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	1.86	1.37J	74		1.94	106		70-130	34		30
Perfluoroundecanoic Acid (PFUnA)	ND	1.86	1.93	104		2.50	136		70-130	26		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.86	2.08	112		1.54J	84		70-130	30		30
Perfluorododecanoic Acid (PFDoA)	ND	1.86	1.89	102		2.06	112		70-130	9		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	1.75	1.60J	91		1.43J	83		70-130	11		30
Perfluorotridecanoic Acid (PFTrDA)	ND	1.86	1.71J	92		1.91	104		70-130	11		30
Perfluorotetradecanoic Acid (PFTA)	ND	1.86	1.74J	94		1.98	108		70-130	13		30

**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2057462**Report Date:** 01/05/21

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab    Associated sample(s): 02    QC Batch ID: WG1451084-3    WG1451084-4    QC Sample: L2057060-01    Client ID: MS Sample												

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	84		86		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	94		89		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	96		96		70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	96		96		70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2057462

**Report Date:** 01/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1450958-4 QC Sample: L2057460-03 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/l	NC		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30
PFOA/PFOS, Total	ND	ND	ng/l	NC		30
PFAS, Total (5)	ND	ND	ng/l	NC		30

# **Lab Duplicate Analysis** **Batch Quality Control**

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2057462

**Report Date:** 01/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1450958-4 QC Sample: L2057460-03 Client ID: DUP Sample						
PFAS, Total (6)	ND	ND	ng/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	99		73		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	86		61	Q	70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	100		70		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	102		87		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2057462**Project Number:** 2241017**Report Date:** 01/05/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2057462-01A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		3.2	Y	Absent		A2-MA-537.1(14)
L2057462-01B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		3.2	Y	Absent		A2-MA-537.1(14)
L2057462-02A	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	A	NA		3.2	Y	Absent		A2-MA-537.1(14)
L2057462-02B	2 Plastic Trizma/1 Plastic/1 H2O+Trizma	NA	NA			Y	Absent		-

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

Serial\_No:01052114:34  
**Lab Number:** L2057462  
**Report Date:** 01/05/21

### PFAS PARAMETER SUMMARY

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

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2057462**Project Number:** 2241017**Report Date:** 01/05/21

## GLOSSARY

### Acronyms

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

*Report Format: DU Report with 'J' Qualifiers*



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

**Data Qualifiers**

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

Report Format: DU Report with 'J' Qualifiers

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**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2057462  
**Report Date:** 01/05/21

## REFERENCES

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

## LIMITATION OF LIABILITIES

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

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



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 17

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Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.

**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **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.





## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 1 of 2

## I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
TC001G	WELL 1	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	12/22/20	W.H.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

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Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	01/02/21	01/04/21	1	Primary Lab:	L2057462-01
				Subcontracted Lab:	L2057462-01

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	94.2		20	0.445	1.81
335-67-1	Perfluorooctanoic Acid (PFOA)	15.9			0.564	1.81
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	329			0.434	1.81
375-95-1	Perfluorononanoic Acid (PFNA)	0.904	J		0.430	1.81
375-85-9	Perfluorohexanoic Acid (PFHpA)	4.27			0.235	1.81
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.582	1.81
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		443	--	20	-	-
UNREGULATED PFAS CONTAMINANTS						
375-73-5	Perfluorobutane sulfonic acid (PFBS)	48.6		20	0.257	1.81
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.586	1.81
307-24-4	Perfluorohexanoic acid (PFHxA)	5.10			0.238	1.81
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.391	1.81
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND			0.459	1.81
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.387	1.81
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND			0.506	1.81
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.543	1.81
763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.190	1.81
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.249	1.81
919005-14-4	4,8-dioxo-3H-perfluorononanoic acid (ADONA)	ND			0.065	1.81
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.409	3.62

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 2 of 2

PWS ID#:

2241017

Lab Sample ID#:

Primary Lab: L2057462-01

Subcontracted Lab: L2057462-01

CAS#	UNREGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L
				-		

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	89	
<sup>13</sup> C <sub>2</sub> -PFDA	80	
d <sub>5</sub> -NEtFOSAA	97	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	72	

Note: <sup>13</sup>C<sub>3</sub>-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ Laboratory analytical report with QC attached (check one item below).☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	

\* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: Joseph WackensDate: 1/5/21

If not submitting these results electronically, mail **TWO** copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).

MassDEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		





## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 1 of 2

## I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
TC001G	WELL 1 (FB)	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	12/22/20	W.H.
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

--

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	01/03/21	01/04/21	1	Primary Lab:	L2057462-02
				Subcontracted Lab:	L2057462-02

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	ND		20	0.457	1.86
335-67-1	Perfluorooctanoic Acid (PFOA)	ND			0.580	1.86
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	ND			0.446	1.86
375-95-1	Perfluorononanoic Acid (PFNA)	ND			0.442	1.86
375-85-9	Perfluorohexanoic Acid (PFHpA)	ND			0.242	1.86
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.599	1.86
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		=	--	20	-	-
UNREGULATED PFAS CONTAMINANTS						
375-73-5	Perfluorobutane sulfonic acid (PFBS)	ND		20	0.264	1.86
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.602	1.86
307-24-4	Perfluorohexanoic acid (PFHxA)	ND			0.245	1.86
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.402	1.86
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND			0.472	1.86
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.398	1.86
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND			0.521	1.86
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.558	1.86
763051-92-9	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.195	1.86
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.256	1.86
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.067	1.86
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.420	3.72

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.





## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 2 of 2

PWS ID#:

2241017

Lab Sample ID#:

Primary Lab: L2057462-02

Subcontracted Lab: L2057462-02

CAS#	UNREGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L
				-		

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	98	
<sup>13</sup> C <sub>2</sub> -PFDA	97	
d <sub>5</sub> -NEtFOSAA	93	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	86	

Note: <sup>13</sup>C<sub>3</sub>-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ Laboratory analytical report with QC attached (check one item below).☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	

\* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: Joseph WackensDate: 1/5/21

If not submitting these results electronically, mail **TWO** copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).

MassDEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		

L2057462



☐ PRESEASON SAMPLE

Sample after treatment? YES

## Run Field Blank

253860

-04

**PLEASE EMAIL THIS REPORT WITH RESULTS & INVOICE TO: ADonnelly@RHWhite.com and CStephen@RHWhite.com**



## ANALYTICAL REPORT

Lab Number:	L2108968
Client:	White Water Inc. 253B Worcester Road Charlton, MA 01507
ATTN:	Andrew Donnelly
Phone:	(888) 377-7678
Project Name:	PRINCETON TOWN CAMPUS
Project Number:	2241017
Report Date:	03/04/21

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

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



**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2108968  
**Report Date:** 03/04/21

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2108968-01	TC001G WELL 1	DW	6 TOWN HALL DRIVE, PRINCETON, MA 01541	02/17/21 08:15	02/24/21
L2108968-02	TC001G WELL 1 FB	DW	6 TOWN HALL DRIVE, PRINCETON, MA 01541	02/17/21 08:15	02/24/21

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2108968  
**Report Date:** 03/04/21

### Case Narrative

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

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

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

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

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

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

---

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2108968  
**Report Date:** 03/04/21

### Case Narrative (continued)

#### Report Submission

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

#### Perfluorinated Alkyl Acids

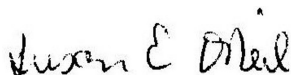
WG1469510-1R: The sample was re-analyzed due to QC failures in the original analysis. The results of the re-analysis are reported.

WG1469510-2: The LCS recoveries, associated with L2108968-01 and -02, are within the 50-150% acceptance criteria for low level Perfluorinated Alkyl Acids, except where noted.

The WG1469510-2 LCS recovery, associated with L2108968-01 and -02, is above the acceptance criteria for n-ethyl perfluorooctanesulfonamidoacetic acid (netfosaa) (170%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

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: 03/04/21

# ORGANICS

# SEMIVOLATILES



**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2108968**Project Number:** 2241017**Report Date:** 03/04/21**SAMPLE RESULTS**

Lab ID: L2108968-01  
 Client ID: TC001G WELL 1  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA 01541

Date Collected: 02/17/21 08:15  
 Date Received: 02/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 03/02/21 19:58  
 Analyst: LV

Extraction Method: EPA 537.1  
 Extraction Date: 03/02/21 04:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	41.6		ng/l	1.77	0.251	1
Perfluorohexanoic Acid (PFHxA)	5.45		ng/l	1.77	0.233	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.77	0.400	1
Perfluoroheptanoic Acid (PFHpA)	4.67		ng/l	1.77	0.230	1
Perfluorohexanesulfonic Acid (PFHxS)	305		ng/l	1.77	0.425	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.77	0.063	1
Perfluorooctanoic Acid (PFOA)	14.6		ng/l	1.77	0.552	1
Perfluorononanoic Acid (PFNA)	1.17	J	ng/l	1.77	0.421	1
Perfluorooctanesulfonic Acid (PFOS)	86.2		ng/l	1.77	0.435	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.77	0.570	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.77	0.243	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.77	0.531	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.77	0.379	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.77	0.495	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.77	0.573	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.77	0.186	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.77	0.449	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.77	0.382	1
PFAS, Total (6)	410		ng/l	1.77	0.230	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	83		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		70-130

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2108968**Project Number:** 2241017**Report Date:** 03/04/21**SAMPLE RESULTS**

Lab ID: L2108968-02  
 Client ID: TC001G WELL 1 FB  
 Sample Location: 6 TOWN HALL DRIVE, PRINCETON, MA 01541

Date Collected: 02/17/21 08:15  
 Date Received: 02/24/21  
 Field Prep: Not Specified

Sample Depth:

Matrix: Dw  
 Analytical Method: 133,537.1  
 Analytical Date: 03/02/21 20:07  
 Analyst: LV

Extraction Method: EPA 537.1  
 Extraction Date: 03/02/21 04:08

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.92	0.273	1
Perfluorohexanoic Acid (PFHxA)	0.769	J	ng/l	1.92	0.253	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	1.92	0.435	1
Perfluoroheptanoic Acid (PFHpA)	0.577	J	ng/l	1.92	0.250	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.92	0.462	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	1.92	0.069	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.92	0.600	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.92	0.458	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.92	0.473	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.92	0.619	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	1.92	0.265	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.92	0.577	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.92	0.412	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.92	0.538	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.92	0.623	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	1.92	0.202	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.92	0.488	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.92	0.415	1
PFAS, Total (6)	ND		ng/l	1.92	0.250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	91		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	95		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	100		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	94		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2108968  
**Report Date:** 03/04/21

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 133,537.1  
**Analytical Date:** 03/03/21 10:13  
**Analyst:** JW

**Extraction Method:** EPA 537.1  
**Extraction Date:** 03/02/21 04:08

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01-02 Batch: WG1469510-1 R					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.284
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.263
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.452
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.260
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.480
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.072
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.624
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.476
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.492
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.644
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.275
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.600
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.428
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.560
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.648
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.210
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.508
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.432
PFAS, Total (6)	ND		ng/l	2.00	0.260

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	93		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	96		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	87		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	99		70-130

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: PRINCETON TOWN CAMPUS

Project Number: 2241017

Lab Number: L2108968

Report Date: 03/04/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1469510-2								
Perfluorobutanesulfonic Acid (PFBS)	90		-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	132		-		70-130	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	116		-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	126		-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	114		-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	91		-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	120		-		70-130	-		30
Perfluorononanoic Acid (PFNA)	116		-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	97		-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	94		-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	99		-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	98		-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	120		-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	170	Q	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	132		-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	93		-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	130		-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	114		-		70-130	-		30

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2108968**Project Number:** 2241017**Report Date:** 03/04/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1469510-2

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	90				70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	96				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	97				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	93				70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2108968

**Report Date:** 03/04/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Sample Associated sample(s): 01-02 QC Batch ID: WG1469510-3 QC Sample: L2108418-01 Client ID: MS												
Perfluorobutanesulfonic Acid (PFBS)	16.9	1.6	18.6	106		-	-		70-130	-		30
Perfluorohexanoic Acid (PFHxA)	2.39	1.8	4.07	93		-	-		70-130	-		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	1.8	2.02	112		-	-		70-130	-		30
Perfluoroheptanoic Acid (PFHpA)	1.66J	1.8	3.46	192	Q	-	-		70-130	-		30
Perfluorohexanesulfonic Acid (PFHxS)	0.615J	1.65	2.52	153	Q	-	-		70-130	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	1.7	1.69J	99		-	-		70-130	-		30
Perfluorooctanoic Acid (PFOA)	3.84	1.8	5.73	105		-	-		70-130	-		30
Perfluorononanoic Acid (PFNA)	0.543J	1.8	2.38	132		-	-		70-130	-		30
Perfluorooctanesulfonic Acid (PFOS)	4.56	1.67	6.23	100		-	-		70-130	-		30
Perfluorodecanoic Acid (PFDA)	ND	1.8	1.73J	96		-	-		70-130	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	1.68	1.58J	94		-	-		70-130	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	1.8	1.62J	90		-	-		70-130	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	1.8	2.05	114		-	-		70-130	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.8	1.76J	98		-	-		70-130	-		30
Perfluorododecanoic Acid (PFDoA)	ND	1.8	2.23	124		-	-		70-130	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	1.7	1.55J	91		-	-		70-130	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	1.8	2.05	114		-	-		70-130	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	1.8	2.02	112		-	-		70-130	-		30

**Matrix Spike Analysis****Batch Quality Control****Project Name:** PRINCETON TOWN CAMPUS**Project Number:** 2241017**Lab Number:** L2108968**Report Date:** 03/04/21

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1469510-3 QC Sample: L2108418-01 Client ID: MS Sample												

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	105				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	91				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	99				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	98				70-130

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2108968

**Report Date:** 03/04/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1469510-4 QC Sample: L2108418-03 Client ID: DUP Sample						
Perfluorobutanesulfonic Acid (PFBS)	5.53	5.66	ng/l	2		30
Perfluorohexanoic Acid (PFHxA)	3.15	2.89	ng/l	9		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	1.83	1.44J	ng/l	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	0.549J	ND	ng/l	NC		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	3.44	2.96	ng/l	15		30
Perfluorononanoic Acid (PFNA)	0.659J	0.505J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	1.58J	1.44J	ng/l	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30



# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** PRINCETON TOWN CAMPUS

**Project Number:** 2241017

**Lab Number:** L2108968

**Report Date:** 03/04/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1469510-4 QC Sample: L2108418-03 Client ID: DUP Sample						

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	102		93		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	103		93		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	101		92		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		95		70-130

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

Serial\_No:03042116:17  
**Lab Number:** L2108968  
**Report Date:** 03/04/21

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2108968-01A	Plastic 250ml Trizma preserved	A	NA		5.4	Y	Absent		A2-MA-537.1(14)
L2108968-01B	Plastic 250ml Trizma preserved	A	NA		5.4	Y	Absent		A2-MA-537.1(14)
L2108968-02A	Plastic 250ml Trizma preserved	A	NA		5.4	Y	Absent		A2-MA-537.1(14)

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

Serial\_No:03042116:17  
**Lab Number:** L2108968  
**Report Date:** 03/04/21

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

**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2108968**Project Number:** 2241017**Report Date:** 03/04/21

## GLOSSARY

### Acronyms

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

*Report Format: DU Report with 'J' Qualifiers*

**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2108968  
**Report Date:** 03/04/21

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PRINCETON TOWN CAMPUS**Lab Number:** L2108968**Project Number:** 2241017**Report Date:** 03/04/21**Data Qualifiers**

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

Report Format: DU Report with 'J' Qualifiers

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**Project Name:** PRINCETON TOWN CAMPUS  
**Project Number:** 2241017

**Lab Number:** L2108968  
**Report Date:** 03/04/21

## REFERENCES

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

## LIMITATION OF LIABILITIES

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

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



**Alpha Analytical, Inc.**

ID No.:17873

Facility: **Company-wide**

Revision 18

Department: **Quality Assurance**

Published Date: 2/16/2021 5:32:02 PM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

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

**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **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, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.**EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

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





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

PWS ID #: 2241017 PWS CLASS: TNC JOB/SO #: \_\_\_\_\_

PWS NAME: Princeton Town Campus

PWS ADDRESS: 6 Town Hall Drive, Princeton, MA 01541

PWS PHONE #: (978) 464 2100

DATE COLLECTED: 2-17-21

Is the source treated? YES ☒ NO ☐

Sample after treatment? YES ☒ NO ☐

<input checked="" type="checkbox"/> ROUTINE SAMPLE	<input type="checkbox"/> SPECIAL SAMPLE
<input type="checkbox"/> REPEAT SAMPLE	<input type="checkbox"/> WAF SAMPLE
<input type="checkbox"/> 24 HR RUSH?	<input type="checkbox"/> PRESEASON SAMPLE

**SPECIAL NOTES:**

**PFAS Quarterly per client**

RUN FIELD BLANK

METER READINGS:      Cu Ft.   or   Gal

0262750

[illegible]

Custody Transfer	Name & Signature	DATE	TIME
Sampler:	BILL HIGGS	2-17-21	0815
Relinquished by:	With Hill	2-17-21	1400
Received by:	Paul DAVIS AAC	2-24-21	14:04
Relinquished by:	Paul DAVIS AAC	2-24-21	16:00
Received by:	Kevin Jones	2/24/21	16:00



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 1 of 4

## I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
TC001G	Well 1	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input checked="" type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	02/17/21	BH
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical Labs** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical Labs**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

--

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	03/02/21	03/02/21	1	Primary Lab:	L2108968-01
				Subcontracted Lab:	L2108968-01

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	86.2			0.435	1.77
335-67-1	Perfluorooctanoic Acid (PFOA)	14.6			0.552	1.77
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	305			0.425	1.77
375-95-1	Perfluorononanoic Acid (PFNA)	1.17	J		0.421	1.77
375-85-9	Perfluoroheptanoic Acid (PFHpA)	4.67			0.230	1.77
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.570	1.77
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		= 410	--	20	-	-
	UNREGULATED PFAS CONTAMINANTS					
375-73-5	Perfluorobutane sulfonic acid (PFBS)	41.6			0.251	1.77
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.573	1.77
307-24-4	Perfluorohexanoic acid (PFHxA)	5.45			0.233	1.77
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.382	1.77
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND			0.449	1.77
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.379	1.77
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND			0.495	1.77
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.531	1.77
763051-92-9	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			0.186	1.77
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ND			0.243	1.77
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.063	1.77
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.400	1.77

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.

# Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 2 of 4

**PWS ID#:**

2241017

**Lab Sample ID#:**

**Primary Lab:**

L2108968-01

Subcontracted Lab:

L2108968-01

[illegible]

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	91	
<sup>13</sup> C <sub>2</sub> -PFDA	92	
d <sub>5</sub> -NEtFOSAA	87	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	83	

Note:  $^{13}\text{C}_3\text{-HFPO-DA}$  is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ **Laboratory analytical report with QC attached (check one item below).**

☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LSM/LFSD or FD) and RPD.

☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.

**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	

\* MCL or proposed MCL

*I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.*

**Primary Lab Director Signature:**

Joseph Watkins

Date:

3/5/21

*If not submitting these results electronically, mail TWO copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).*

MassDEP REVIEW STATUS (Initial & Date)  <input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved	Review Comments	<input type="checkbox"/> WQTS Data Entered
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## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 3 of 4

## I. PWS INFORMATION: Please refer to your MassDEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: **2241017** City / Town: **PRINCETON**

PWS Name: **PRINCETON TOWN CAMPUS** PWS Class: **COM** ☐ **NTNC** ☐ **TNC** ☒

MassDEP Location (LOC) ID#	MassDEP Location Name	Sample Information		Date Collected	Collected By
TC001G	Well 1-FB	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input checked="" type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	02/17/21	BH
Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:			
		(1) Reason for Resubmission		(2) Collection Date of Original Sample	
<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction			
SAMPLE COMMENTS - Such as, if a Manifold/Multiple sample, list the source(s) that were on-line during sample collection or if this is a field reagent blank					

## II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab Cert. #: **M-MA086** Primary Lab Name: **Alpha Analytical Labs** Subcontracted? (Y/N) **Y**

Analysis Lab Cert. #: **M-MA030** Analysis Lab Name: **Alpha Analytical Labs**

If Analysis Lab is not certified by MassDEP or U.S. EPA, list certification authority:

--

Lab Method	Date Extracted	Date Analyzed	Dilution Factor	Lab Sample IDs#	
537.1	03/02/21	03/02/21	1	Primary Lab:	L2108968-02
				Subcontracted Lab:	L2108968-02

CAS#	REGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL* ng/L	MDL ng/L	MRL ng/L
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)	ND		20	0.473	1.92
335-67-1	Perfluorooctanoic Acid (PFOA)	ND			0.600	1.92
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)	ND			0.462	1.92
375-95-1	Perfluorononanoic Acid (PFNA)	ND			0.458	1.92
375-85-9	Perfluorohexanoic Acid (PFHxA)	0.577	J		0.250	1.92
335-76-2	Perfluorodecanoic acid (PFDA)	ND			0.619	1.92
PFAS6 (sum of PFOS, PFOA, PFHxS, PFNA, PFHxA and PFDA; only include Results at or above the MRL; do not include estimated Results as described by a Result Qualifier in the next column)		=	--	20	-	-
UNREGULATED PFAS CONTAMINANTS						
375-73-5	Perfluorobutane sulfonic acid (PFBS)	ND		20	0.273	1.92
307-55-1	Perfluorododecanoic acid (PFDoA)	ND			0.623	1.92
307-24-4	Perfluorohexanoic acid (PFHxA)	0.769	J		0.253	1.92
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND			0.415	1.92
72629-94-8	Perfluorotridecanoic acid (PFTDA)	ND			0.488	1.92
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND			0.412	1.92
2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND			0.538	1.92
2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND			0.577	1.92
763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	ND			0.202	1.92
756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CI-PF3ONS)	ND			0.265	1.92
919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND			0.069	1.92
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND			0.435	1.92

<sup>1</sup> A field reagent blank (FRB) must be analyzed and reported on a separate PFAS form if any PFAS are detected above the MRL.

<sup>2</sup> All qualifiers must be described under Lab Analysis Comments on page 2.



## Per- and Polyfluoroalkyl Substances (PFAS) Report

Page 4 of 4

PWS ID#:

2241017

Lab Sample ID#:

Primary Lab:

L2108968-02

Subcontracted Lab:

L2108968-02

CAS#	UNREGULATED PFAS CONTAMINANTS	Result <sup>1</sup> ng/L	Result <sup>2</sup> Qualifier	MCL * ng/L	MDL ng/L	MRL ng/L

Surrogate Name	% Recovery (70 – 130%)	Alternate Surrogate (must document reason for change)
<sup>13</sup> C <sub>2</sub> -PFHxA	91	
<sup>13</sup> C <sub>2</sub> -PFDA	100	
d <sub>5</sub> -NEtFOSAA	94	
<sup>13</sup> C <sub>3</sub> -HFPO-DA	95	

Note: <sup>13</sup>C<sub>3</sub>-HFPO-DA is not required for EPA Method 537 v1.1

In addition to the SUR above you must attach the results of the ongoing QC results as specified by the method for the sample's extraction batch.

☒ **Laboratory analytical report with QC attached (check one item below).**☐ All associated QC criteria reported within control limits including Lab Reagent/Method Blank (LRB), Field Reagent Blank (FRB), Surrogate Standards (SUR), Laboratory Fortified Blank (LFB), Matrix Spike/Duplicate (LFSM/LFSMD or FD) and RPD.☒ All associated sample and/or QC batch criteria not met. See Lab Analysis Comments below and narrative in attached report.**Lab Analysis Comments:** (include sample/method parameters outside of or affecting QC controls/limits and result qualifiers)

Result Qualifier	Qualifier Description
J	The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit.
Other Analysis Comments:	

\* MCL or proposed MCL

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature:

*Joseph Wackens*

Date:

3/5/21

If not submitting these results electronically, mail TWO copies of this report to your MassDEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner. Note that during the Massachusetts COVID-19 state of emergency, in addition to submitting by mail reports may be emailed to [program.director-dwp@mass.gov](mailto:program.director-dwp@mass.gov).

MassDEP REVIEW STATUS (Initial & Date)	Review Comments	<input type="checkbox"/> WQTS Data Entered
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved		





## PRESEASON SAMPLE

1937

2/24/11	DUE	11:00	2/24/12	2:00	Brush	2/24/21 2005
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## APPENDIX E

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