317 Elm Street
Milford, NH 03055

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Sales@chemservelab.com

Monday, March 08, 2021

Derek S. Bennett
NHDES MtBE Remediation Bureau
29 Hazen Drive, PO Box 95
Concord NH 03302-0095

Project Name: MTBE_01
Project #: Londonderry Survey Requests
Project Location: Londonderry
Control #: 21020280

Lab ID: 21020280
Date Received: 2/22/2021

Dear Derek S. Bennett

Enclosed please find the laboratory results for the above referenced samples that were received by the ChemServe sample custodian on the above referenced date. Any abnormalities to the samples upon receipt would be noted on the enclosed chain of custody document. This report is not valid without a completed chain of custody with the corresponding control number, attached.

All samples analyzed by ChemServe are subject to quality standards. These standards are as stringent or more stringent than those established under NELAC, 40 CFR Part 136, state certification programs, and corresponding methodologies. ChemServe has a written QA/QC Procedures Manual that outlines these standards, and is available for your reference, upon request. Unless otherwise stated on the Chain of Custody or within the report, all holding times, preservation techniques, container types, and analytical methods are analogous with those outlined by NELAC. All units are based on “as received” weight unless denoted “dry”.

Residual chlorine, sulfite and pH are intended to be performed as an immediate field analysis. Should any of these analyses be performed in the lab instead of in the field it will result in those analyses being performed out of holding time.

Acrolein and 2-chloroethylvinyl ether require an additional analysis with an un-preserved sample. If unpreserved vials were not submitted for these compounds then acrolein and 2-CEVE are not reported due to not meeting method requirements, but may be reported as estimated upon request for EPA 624.1 or EPA 524.2.

I certify that I have reviewed the above referenced analytical data and state forms, and I have found this report within compliance with the procedures outlined within NELAC. ChemServe’s certified parameter list can be found at http://www.chemservelab.com/Laboratory-Information-and-Documentation.aspx

Jay Chrystal - President/Laboratory Director

NELAP ACCREDITED TNI LABORATORY

Certificate Number 1008

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NHDES MtBE Remediation Bureau
Derek S. Bennett
29 Hazen Drive, PO Box 95
Concord NH 03302-0

Control #: 21020280
Project Number: Londonderry Survey Request
Project Name: MTBE_01
Project Location: Londonderry

Lab ID: 21020280
Date: 3/8/2021

Lab ID: 21020280

Sample Receiving and Comment Summary

Were samples received with a chain of custody?	Yes
Do all samples received match the chain of custody?	Yes
Were all samples received within applicable holding times?	Yes
Were all containers intact when received?	Yes
Were samples for volatile organic analysis free of headspace (per method)?	Yes
Was there evidence of cooling or submitted the same day as sampling?	Yes
Were samples collected with appropriate preservative if required?	Yes
Were samples for dissolved metals already filtered by the client or field sampling?	N/A
Were samples for O-phos filtered in the field?	N/A
Were samples received in the appropriate containers?	Yes
Were samples acceptable per any temperature requirements?	Yes

Sample	Method	Client Identity	Matrix	Analyst
21020280-001	EPA 524.2	MTBE_16295	Drinking water	LauraB

Comment: no comment

**** Blank comment sections denote "No Comment"***

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NHDES MtBE Remediation Bureau
Derek S. Bennett
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Concord NH 03302-0

Analytical Results

Control #: 21020280
Project Number: Londonderry Survey Request
Project Name: MTBE_01
Project Location: 4 Lawson Farm Rd Londonderry, NH

Lab ID: 21020280
Date: 3/8/2021

Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix
21020280-001	MTBE_16295	2/18/2021 12:02:00 PM	Drinking water

Parameter	Method	Result	MCL	Qualifier	Date/Time Analyzed	RDL	Analyst
1,1,1,2-Tetrachloroethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,1,1-Trichloroethane	EPA 524.2	< 0.5 ug/L	200		2/25/2021	0.5	LauraB
1,1,2,2-Tetrachloroethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,1,2-Trichloroethane	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
1,1-Dichloroethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,1-Dichloroethene	EPA 524.2	< 0.5 ug/L	7		2/25/2021	0.5	LauraB
1,1-Dichloropropene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,2,3-Trichlorobenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,2,3-Trichloropropane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,2,4-Trichlorobenzene	EPA 524.2	< 0.5 ug/L	70		2/25/2021	0.5	LauraB
1,2,4-Trimethylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,2-Dibromo-3-Chloropropane	EPA 524.2	< 2 ug/L			2/25/2021	2	LauraB
1,2-Dibromoethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,2-Dichlorobenzene	EPA 524.2	< 0.5 ug/L	600		2/25/2021	0.5	LauraB
1,2-Dichloroethane	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
1,2-Dichloropropane	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
1,3,5-Trichlorobenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,3,5-Trimethylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,3-Dichlorobenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,3-Dichloropropane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
1,4-Dichlorobenzene	EPA 524.2	< 0.5 ug/L	75		2/25/2021	0.5	LauraB
2,2-Dichloropropane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
2-Chlorotoluene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
2-Ethoxy-2-Methyl Propane (ETBE)	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
2-Hexanone	EPA 524.2	< 12 ug/L			2/25/2021	12	LauraB
2-Methoxy-2-Methyl Butane (TAME)	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
2-Methoxy-2-Methyl Propane (MTBE)	EPA 524.2	< 0.5 ug/L	13		2/25/2021	0.5	LauraB
2-Methyl-2-Propanol (TBA)	EPA 524.2	< 12 ug/L			2/25/2021	12	LauraB
4-Chlorotoluene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
4-Isopropyltoluene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Acetone	EPA 524.2	< 12 ug/L			2/25/2021	12	LauraB
Benzene	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
Bromobenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Bromochloromethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Bromodichloromethane	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB
Bromoform	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB
Bromomethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Carbon Disulfide	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Carbon Tetrachloride	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
Chlorobenzene	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB

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Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix
21020280-001	MTBE_16295	2/18/2021 12:02:00 PM	Drinking water

Parameter	Method	Result	MCL	Qualifier	Date/Time Analyzed	RDL	Analyst
Chloroethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Chloroform	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB
Chloromethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Cis-1,2-Dichloroethene	EPA 524.2	< 0.5 ug/L	70		2/25/2021	0.5	LauraB
Cis-1,3-Dichloropropene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Dibromochloromethane	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB
Dibromomethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Dichlorodifluoromethane	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Diethyl Ether	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Di-Isopropyl Ether	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Ethylbenzene	EPA 524.2	< 0.5 ug/L	700		2/25/2021	0.5	LauraB
Hexachlorobutadiene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Isopropylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Methyl ethyl ketone (MEK)	EPA 524.2	< 12 ug/L			2/25/2021	12	LauraB
Methyl isobutyl ketone (MIBK)	EPA 524.2	< 12 ug/L			2/25/2021	12	LauraB
Methylene Chloride	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
Naphthalene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
N-Butylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
N-Propylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Sec-Butylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Styrene	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB
Tert-Butylbenzene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Tetrachloroethene	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
Tetrahydrofuran	EPA 524.2	< 12 ug/L			2/25/2021	12	LauraB
Toluene	EPA 524.2	< 0.5 ug/L	1000		2/25/2021	0.5	LauraB
Total Xylenes	EPA 524.2	< 0.5 ug/L	10000		2/25/2021	0.5	LauraB
Trans-1,2-Dichloroethene	EPA 524.2	< 0.5 ug/L	100		2/25/2021	0.5	LauraB
Trans-1,3-Dichloropropene	EPA 524.2	< 0.5 ug/L			2/25/2021	0.5	LauraB
Trichloroethene	EPA 524.2	< 0.5 ug/L	5		2/25/2021	0.5	LauraB
Trichlorofluoromethane	EPA 524.2	< 1 ug/L			2/25/2021	1	LauraB
Vinyl Chloride	EPA 524.2	< 0.5 ug/L	2		2/25/2021	0.5	LauraB

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Qualifier:	Description:
B-	Method blank contaminated with target analyte.
B1-	BOD had total oxygen loss. Result reported as ">"the highest dilution.
B2-	BOD had no oxygen loss. Result reported as "<" the lowest dilution.
G-	Reporting limit elevated due to matrix interference.
H-	Method prescribed holding time exceeded.
J-	Indicates an estimated value. Value is less than the quantitation limit.
IL-	Internal Standard(s) recovery was low due to matrix. Result may be biased high.
IH-	Internal Standard(s) recovery was high due to matrix. Result may be biased low.
LH-	Laboratory control spike(s) was high. Results may be biased high.
LL-	Laboratory control spike(s) was low. Results may be biased low.
MH-	Matrix spike recovery high due to matrix. Results may be biased high.
ML-	Matrix spike recovery low due to matrix. Results may be biased low.
N-	Non-target compound. Reported as a TIC.
NC-	Spike recovery was not calculated due to the concentration of the analyte being >4 times the concentration of the spike added.
R-	RPD outside acceptable recovery limits.
RO-	Sample received out of holding time.
SH-	Surrogate recovery high due to matrix
SL-	Surrogate recovery low due to matrix
U-	BOD/CBOD blank had an oxygen depletion greater than the suggested amount of 0.200.
V-	Sample pH for volatile analysis was not <2 when checked at time of analysis.
Z	Too numerous to count (TNTC)

MCL is the Maximun Contaminant Level allowed. Any result exceeding the MCL is considered unsatisfactory.

Total Trihalomethane MCL is 80ug/l.

The Perchlorate MCL of 2.0ug/l is based on the Massachusetts Department of Environmental Protection.

An "A" in the result column on the report indicates absent for presence/absent bacteria and a "P" indicates present for presence/absent bacteria.

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ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-30720-1
Laboratory SDG: 4 Lawson Farm Rd, Londonderry, NH
Client Project/Site: Londonderry Survey Requests

For:
New Hampshire Dept of Environmental Serv
Waste Mgmt Div MtBe Remediation Bureau
29 Hazen Dr
PO BOX 95
Concord, New Hampshire 03302-0095

Attn: Mr. Derek Bennett

Vanessa T. Badman

Authorized for release by:
3/9/2021 10:18:31 AM

Vanessa Badman, Project Manager
(717)556-9762
vanessa.badman@eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

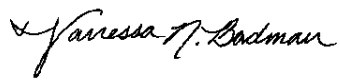
Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Vanessa Badman
Project Manager
3/9/2021 10:18:31 AM

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Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-30720-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative
410-30720-1

Receipt

The sample was received on 2/27/2021 12:06 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C

LCMS

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

Detection Summary

Client: New Hampshire Dept of Environmental Serv
Job ID: 410-30720-1
Project/Site: Londonderry Survey Requests
SDG: 4 Lawson Farm Rd, Londonderry, NH

Client Sample ID: MTBE_16295
Lab Sample ID: 410-30720-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6	J	4.7	1.9	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPA)	3.2		1.9	0.47	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		1.9	0.47	ng/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		1.9	0.47	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	9.2		1.9	0.47	ng/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.1		1.9	0.47	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.5	J	1.9	0.47	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.5	J	1.9	0.47	ng/L	1		533	Total/NA

This Detection Summary does not include radiochemical test results.

Client: New Hampshire Dept of Environmental Serv
Project/Site: Londonderry Survey Requests

Job ID: 410-30720-1
SDG: 4 Lawson Farm Rd, Londonderry, NH

Client Sample ID: MTBE_16295
Date Collected: 02/19/21 12:02
Date Received: 02/27/21 12:06

Lab Sample ID: 410-30720-1
Matrix: Water

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.6**	**J**	4.7	1.9	ng/L			03/06/21 05:38	1
Perfluoropentanoic acid (PFPA)	**3.2**		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorohexanoic acid (PFHxA)	**3.6**		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluoroheptanoic acid (PFHpA)	**2.0**		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorooctanoic acid (PFOA)	**9.2**		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorobutanesulfonic acid (PFBS)	**4.1**		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorohexanesulfonic acid (PFHxS)	**1.5**	**J**	1.9	0.47	ng/L			03/06/21 05:38	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluorooctanesulfonic acid (PFOS)	**1.5**	**J**	1.9	0.47	ng/L			03/06/21 05:38	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	ND		1.9	0.47	ng/L			03/06/21 05:38	1
Perfluoro(2-propoxypropanoic) acid (GenX)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	ND		1.9	0.47	ng/L			03/06/21 05:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		9.3	1.9	ng/L			03/06/21 05:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		1.9	0.47	ng/L			03/06/21 05:38	1
PFECA B	ND		1.9	0.47	ng/L			03/06/21 05:38	1
PFECA F	ND		1.9	0.47	ng/L			03/06/21 05:38	1
PFECA A	ND		1.9	0.47	ng/L			03/06/21 05:38	1
PES	ND		1.9	0.47	ng/L			03/06/21 05:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.9	0.47	ng/L			03/06/21 05:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*50 - 200*		*03/06/21 05:38*	*1*
13C4 PFBA	*99*		*50 - 200*		*03/06/21 05:38*	*1*
13C3 PFBS	*98*		*50 - 200*		*03/06/21 05:38*	*1*
13C5 PFPeA	*101*		*50 - 200*		*03/06/21 05:38*	*1*
13C5 PFHxA	*102*		*50 - 200*		*03/06/21 05:38*	*1*
13C4 PFHpA	*99*		*50 - 200*		*03/06/21 05:38*	*1*
13C8 PFOA	*99*		*50 - 200*		*03/06/21 05:38*	*1*
13C9 PFNA	*100*		*50 - 200*		*03/06/21 05:38*	*1*
13C6 PFDA	*98*		*50 - 200*		*03/06/21 05:38*	*1*
13C7 PFUnA	*97*		*50 - 200*		*03/06/21 05:38*	*1*
13C2 PFDoA	*95*		*50 - 200*		*03/06/21 05:38*	*1*
13C8 PFOS	*95*		*50 - 200*		*03/06/21 05:38*	*1*
M2-4:2 FTS	*108*		*50 - 200*		*03/06/21 05:38*	*1*
M2-6:2 FTS	*112*		*50 - 200*		*03/06/21 05:38*	*1*

Client: New Hampshire Dept of Environmental Serv
Project/Site: Londonderry Survey Requests

Job ID: 410-30720-1
SDG: 4 Lawson Farm Rd, Londonderry, NH

Client Sample ID: MTBE_16295
Date Collected: 02/19/21 12:02
Date Received: 02/27/21 12:06

Lab Sample ID: 410-30720-1
Matrix: Water

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	117		50 - 200		03/06/21 05:38	1
13C3 PFHxS	99		50 - 200		03/06/21 05:38	1

Isotope Dilution Summary

Client: New Hampshire Dept of Environmental Serv
Job ID: 410-30720-1
Project/Site: Londonderry Survey Requests
SDG: 4 Lawson Farm Rd, Londonderry, NH

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	PFBA	C3PFBS	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
410-30720-1	MTBE_16295	99	99	98	101	102	99	99	100
LCS 410-98501/2-A	Lab Control Sample	103	101	98	102	101	101	100	101
LCSD 410-98501/3-A	Lab Control Sample Dup	102	102	99	103	102	101	104	103
MB 410-98501/1-A	Method Blank	97	94	89	91	94	94	94	96

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA	13C7PUA	PFDoA	C8PFOS	M242FTS	M262FTS	M282FTS	C3PFHS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
410-30720-1	MTBE_16295	98	97	95	95	108	112	117	99
LCS 410-98501/2-A	Lab Control Sample	98	98	97	97	99	105	112	100
LCSD 410-98501/3-A	Lab Control Sample Dup	101	101	100	99	101	106	112	98
MB 410-98501/1-A	Method Blank	96	92	91	88	93	98	117	88

Surrogate Legend

HFPODA = 13C3 HFPO-DA
PFBA = 13C4 PFBA
C3PFBS = 13C3 PFBS
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C8PFOS = 13C8 PFOS
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS
C3PFHS = 13C3 PFHxS

Client: New Hampshire Dept of Environmental Serv
Project/Site: Londonderry Survey Requests

Job ID: 410-30720-1
SDG: 4 Lawson Farm Rd, Londonderry, NH

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MB 410-98501/1-A
Matrix: Water
Analysis Batch: 100321

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0	2.0	ng/L			03/06/21 04:04	1
Perfluoropentanoic acid (PFPA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3O	ND		2.0	0.50	ng/L			03/06/21 04:04	1
Perfluoro(2-propoxypropanoic) acid (GenX)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF	ND		2.0	0.50	ng/L			03/06/21 04:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		10	2.0	ng/L			03/06/21 04:04	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	0.50	ng/L			03/06/21 04:04	1
PFECA B	ND		2.0	0.50	ng/L			03/06/21 04:04	1
PFECA F	ND		2.0	0.50	ng/L			03/06/21 04:04	1
PFECA A	ND		2.0	0.50	ng/L			03/06/21 04:04	1
PES	ND		2.0	0.50	ng/L			03/06/21 04:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	0.50	ng/L			03/06/21 04:04	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*50 - 200*		*03/06/21 04:04*	*1*
13C4 PFBA	*94*		*50 - 200*		*03/06/21 04:04*	*1*
13C3 PFBS	*89*		*50 - 200*		*03/06/21 04:04*	*1*
13C5 PFPeA	*91*		*50 - 200*		*03/06/21 04:04*	*1*
13C5 PFHxA	*94*		*50 - 200*		*03/06/21 04:04*	*1*
13C4 PFHpA	*94*		*50 - 200*		*03/06/21 04:04*	*1*
13C8 PFOA	*94*		*50 - 200*		*03/06/21 04:04*	*1*
13C9 PFNA	*96*		*50 - 200*		*03/06/21 04:04*	*1*
13C6 PFDA	*96*		*50 - 200*		*03/06/21 04:04*	*1*
13C7 PFUnA	*92*		*50 - 200*		*03/06/21 04:04*	*1*
13C2 PFDoA	*91*		*50 - 200*		*03/06/21 04:04*	*1*
13C8 PFOS	*88*		*50 - 200*		*03/06/21 04:04*	*1*
M2-4:2 FTS	*93*		*50 - 200*		*03/06/21 04:04*	*1*
M2-6:2 FTS	*98*		*50 - 200*		*03/06/21 04:04*	*1*
M2-8:2 FTS	*117*		*50 - 200*		*03/06/21 04:04*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MB 410-98501/1-A
Matrix: Water
Analysis Batch: 100321

Client Sample ID: Method Blank
Prep Type: Total/NA

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	88		50 - 200		03/06/21 04:04	1

Lab Sample ID: LCS 410-98501/2-A
Matrix: Water
Analysis Batch: 100321

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	10.0	11.2		ng/L		112	70 - 130
Perfluoropentanoic acid (PFPA)	10.0	11.2		ng/L		112	70 - 130
Perfluorohexanoic acid (PFHxA)	10.0	11.3		ng/L		113	70 - 130
Perfluoroheptanoic acid (PFHpA)	10.0	11.6		ng/L		116	70 - 130
Perfluorooctanoic acid (PFOA)	10.0	11.1		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	10.0	11.3		ng/L		113	70 - 130
Perfluorodecanoic acid (PFDA)	10.0	11.4		ng/L		114	70 - 130
Perfluoroundecanoic acid (PFUnA)	10.0	11.3		ng/L		113	70 - 130
Perfluorododecanoic acid (PFDoA)	10.0	11.2		ng/L		112	70 - 130
Perfluorobutanesulfonic acid (PFBS)	8.85	9.82		ng/L		111	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	9.12	9.94		ng/L		109	70 - 130
Perfluoroheptanesulfonic Acid (PFHpS)	9.52	11.0		ng/L		115	70 - 130
Perfluorooctanesulfonic acid (PFOS)	9.26	10.2		ng/L		110	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	9.38	9.86		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid (9Cl-PF3O	9.30	9.89		ng/L		106	70 - 130
Perfluoro(2-propoxypropanoic) acid (GenX)	10.0	11.0		ng/L		110	70 - 130
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF	9.30	9.98		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.34	10.6		ng/L		113	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	9.48	10.7		ng/L		113	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.58	10.7		ng/L		112	70 - 130
PFECA B	10.0	11.3		ng/L		113	70 - 130
PFECA F	10.0	11.3		ng/L		113	70 - 130
PFECA A	10.0	11.3		ng/L		113	70 - 130
PES	8.90	9.80		ng/L		110	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.45	10.7		ng/L		113	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	103		50 - 200
13C4 PFBA	101		50 - 200
13C3 PFBS	98		50 - 200
13C5 PFPeA	102		50 - 200

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LCS 410-98501/2-A
Matrix: Water
Analysis Batch: 100321

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

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C5 PFHxA	101		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	100		50 - 200
13C9 PFNA	101		50 - 200
13C6 PFDA	98		50 - 200
13C7 PFUnA	98		50 - 200
13C2 PFDoA	97		50 - 200
13C8 PFOS	97		50 - 200
M2-4:2 FTS	99		50 - 200
M2-6:2 FTS	105		50 - 200
M2-8:2 FTS	112		50 - 200
13C3 PFHxS	100		50 - 200

Lab Sample ID: LCSD 410-98501/3-A
Matrix: Water
Analysis Batch: 100321

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			10.0	11.3		ng/L		113	70 - 130	1	30
Perfluoropentanoic acid (PFPA)			10.0	11.2		ng/L		112	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)			10.0	11.1		ng/L		111	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)			10.0	11.7		ng/L		117	70 - 130	1	30
Perfluorooctanoic acid (PFOA)			10.0	11.0		ng/L		110	70 - 130	1	30
Perfluorononanoic acid (PFNA)			10.0	11.3		ng/L		113	70 - 130	0	30
Perfluorodecanoic acid (PFDA)			10.0	10.8		ng/L		108	70 - 130	5	30
Perfluoroundecanoic acid (PFUnA)			10.0	11.6		ng/L		116	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)			10.0	11.4		ng/L		114	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)			8.85	9.93		ng/L		112	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)			9.12	10.3		ng/L		113	70 - 130	3	30
Perfluoroheptanesulfonic Acid (PFHpS)			9.52	11.0		ng/L		116	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)			9.26	10.4		ng/L		112	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)			9.38	10.4		ng/L		111	70 - 130	5	30
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid (9Cl-PF3O			9.30	10.3		ng/L		110	70 - 130	4	30
Perfluoro(2-propoxypropanoic) acid (GenX)			10.0	10.7		ng/L		107	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF			9.30	10.1		ng/L		108	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			9.34	10.4		ng/L		111	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			9.48	10.8		ng/L		114	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			9.58	10.9		ng/L		114	70 - 130	2	30
PFECA B			10.0	10.9		ng/L		109	70 - 130	3	30

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LCSD 410-98501/3-A
Matrix: Water
Analysis Batch: 100321

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PFECA F			10.0	11.2		ng/L		112	70 - 130	1	30
PFECA A			10.0	10.8		ng/L		108	70 - 130	5	30
PES			8.90	10.1		ng/L		113	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			9.45	10.8		ng/L		114	70 - 130	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*102*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C3 PFBS	*99*		*50 - 200*
13C5 PFPeA	*103*		*50 - 200*
13C5 PFHxA	*102*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*104*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C6 PFDA	*101*		*50 - 200*
13C7 PFUnA	*101*		*50 - 200*
13C2 PFDoA	*100*		*50 - 200*
13C8 PFOS	*99*		*50 - 200*
M2-4:2 FTS	*101*		*50 - 200*
M2-6:2 FTS	*106*		*50 - 200*
M2-8:2 FTS	*112*		*50 - 200*
13C3 PFHxS	*98*		*50 - 200*

QC Association Summary

Client: New Hampshire Dept of Environmental Serv
Job ID: 410-30720-1
Project/Site: Londonderry Survey Requests
SDG: 4 Lawson Farm Rd, Londonderry, NH

LCMS

Analysis Batch: 100321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-30720-1	MTBE_16295	Total/NA	Water	533	
MB 410-98501/1-A	Method Blank	Total/NA	Water	533	
LCS 410-98501/2-A	Lab Control Sample	Total/NA	Water	533	
LCSD 410-98501/3-A	Lab Control Sample Dup	Total/NA	Water	533	

Lab Chronicle

Client: New Hampshire Dept of Environmental Serv
Job ID: 410-30720-1
Project/Site: Londonderry Survey Requests
SDG: 4 Lawson Farm Rd, Londonderry, NH

Client Sample ID: MTBE_16295
Lab Sample ID: 410-30720-1
Date Collected: 02/19/21 12:02
Matrix: Water
Date Received: 02/27/21 12:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	533		1	100321	03/06/21 05:38	VK3G	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: New Hampshire Dept of Environmental Serv
Job ID: 410-30720-1
Project/Site: Londonderry Survey Requests
SDG: 4 Lawson Farm Rd, Londonderry, NH

Laboratory: Eurofins Lancaster Laboratories Env, LLC

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

Authority	Program	Identification Number	Expiration Date
New Hampshire	NELAP	273019	01-10-22

Method Summary

Client: New Hampshire Dept of Environmental Serv
Job ID: 410-30720-1
Project/Site: Londonderry Survey Requests
SDG: 4 Lawson Farm Rd, Londonderry, NH

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	ELLE
533 Prep	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: New Hampshire Dept of Environmental Serv
Project/Site: Londonderry Survey Requests

Job ID: 410-30720-1
SDG: 4 Lawson Farm Rd, Londonderry, NH

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-30720-1	MTBE_16295	Water	02/19/21 12:02	02/27/21 12:06	

Login Sample Receipt Checklist

Client: New Hampshire Dept of Environmental Serv

Job Number: 410-30720-1

SDG Number: 4 Lawson Farm Rd, Londonderry, NH

Login Number: 30720

List Source: Eurofins Lancaster Laboratories Env

List Number: 1

Creator: Rivera-Santa, Julissa

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	