



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Tetra Tech Inc.
1777 Sentry Parkway West
Bldg 12, Suite 102
Blue Bell PA 19422

Report Date: April 23, 2019 12:06

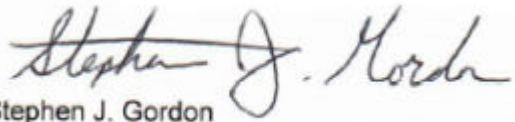
Project: PA DEP Newberry PFAS

Account #: 19700
Group Number: 2039385
SDG: ALC26
PO Number: 103S5435015
State of Sample Origin: PA

Electronic Copy To Tetra Tech Inc.

Attn: John McCall

Respectfully Submitted,



Stephen J. Gordon
Project Manager

(724) 597-2027

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
Well-009-041619 Grab Potable Water	04/16/2019 10:40	1036285
Well-999-041619 Grab Potable Water	04/16/2019 10:42	1036286
Well-009-041619-FB Grab Water	04/16/2019 10:44	1036287
Well-010-041619 Grab Potable Water	04/16/2019 11:00	1036288
Well-010-041619-FB Grab Water	04/16/2019 11:02	1036289
Well-007-041619-FB Grab Water	04/16/2019 11:30	1036290
Well-007-041619 Grab Potable Water	04/16/2019 11:34	1036291
Well-008-041619 Grab Potable Water	04/16/2019 11:52	1036292
Well-011-041619 Grab Potable Water	04/16/2019 12:48	1036293
Well-011-041619-FB Grab Water	04/16/2019 12:38	1036294
Well-006-041619-FB Grab Water	04/16/2019 13:20	1036295
Well-006-041619 Grab Potable Water	04/16/2019 13:30	1036296
EP-101-041619 Grab Potable Water	04/16/2019 14:02	1036297
EP-101-041619-FB Grab Water	04/16/2019 14:00	1036298
Well-001-041619 Grab Potable Water	04/16/2019 14:04	1036299
Well-001-041619-FB Grab Water	04/16/2019 13:58	1036300
Well-002-041619 Grab Potable Water	04/16/2019 14:34	1036301
Well-998-041619 Grab Potable Water	04/16/2019 14:36	1036302
Well-002-041619-FB Grab Water	04/16/2019 14:32	1036303
EP-102-041619 Grab Potable Water	04/16/2019 14:58	1036304
EP-102-041619-FB Grab Water	04/16/2019 14:52	1036305
Well-003-041619 Grab Potable Water	04/16/2019 15:00	1036306

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: PA DEP Newberry PFAS
ELLE Group #: 2039385

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: Well-009-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036285
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 10:40
SDG#: ALC26-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	6.2	0.47	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	2.1	0.47	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	2.0	0.47	1.9	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.47	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	7.7	0.47	1.9	1
14070	Perfluorooctanoic acid	335-67-1	5.9	0.47	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 18:19	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-999-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036286
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 10:42
SDG#: ALC26-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	6.4	0.46	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	2.0	0.46	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	2.0	0.46	1.8	1
14070	Perfluorononanoic acid	375-95-1	0.47 J	0.46	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	7.5	0.46	1.8	1
14070	Perfluorooctanoic acid	335-67-1	5.9	0.46	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 18:31	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-009-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036287
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 10:44
SDG#: ALC26-03FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.45	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.45	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.45	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 18:43	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-010-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036288
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 11:00
SDG#: ALC26-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	6.5	0.47	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	2.0	0.47	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	2.0	0.47	1.9	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.47	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	7.8	0.47	1.9	1
14070	Perfluorooctanoic acid	335-67-1	5.5	0.47	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 18:54	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-010-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036289
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 11:02
SDG#: ALC26-05FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.44	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.44	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.44	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.44	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.44	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.44	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 19:06	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-007-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036290
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 11:30
SDG#: ALC26-06FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.45	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.45	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.45	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 19:17	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-007-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036291
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submission Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 11:34
SDG#: ALC26-07

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	3.1	0.47	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	1.1 J	0.47	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	3.5	0.47	1.9	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.47	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	4.4	0.47	1.9	1
14070	Perfluorooctanoic acid	335-67-1	3.2	0.47	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 19:29	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-008-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036292
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 11:52
SDG#: ALC26-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	3.2	0.46	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	1.1 J	0.46	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	3.8	0.46	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.46	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	4.3	0.46	1.8	1
14070	Perfluorooctanoic acid	335-67-1	3.2	0.46	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 19:52	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-011-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036293
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submission Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 12:48
SDG#: ALC26-09

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	0.48 J	0.46	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	0.50 J	0.46	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	0.49 J	0.46	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.46	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	1.4 J	0.46	1.8	1
14070	Perfluorooctanoic acid	335-67-1	1.3 J	0.46	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 20:03	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-011-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036294
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 12:38
SDG#: ALC26-10FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1	ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.45	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.45	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.45	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 20:15	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-006-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036295
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 13:20
SDG#: ALC26-11FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1	ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.44	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.44	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.44	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.44	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.44	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.44	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 20:26	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-006-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036296
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submission Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 13:30
SDG#: ALC26-12

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	3.9	0.47	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	4.3	0.47	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	6.8	0.47	1.9	1
14070	Perfluorononanoic acid	375-95-1	1.3 J	0.47	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	8.4	0.47	1.9	1
14070	Perfluorooctanoic acid	335-67-1	9.1	0.47	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 20:38	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: EP-101-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036297
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submission Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:02
SDG#: ALC26-13

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.48	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.48	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.48	1.9	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.48	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.48	1.9	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.48	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 20:49	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: EP-101-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036298
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:00
SDG#: ALC26-14FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1	ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.46	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.46	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.46	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.46	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.46	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.46	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 21:01	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-001-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036299
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:04
SDG#: ALC26-15

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	2.7	0.46	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	2.9	0.46	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	4.9	0.46	1.8	1
14070	Perfluorononanoic acid	375-95-1	0.87 J	0.46	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	11	0.46	1.8	1
14070	Perfluorooctanoic acid	335-67-1	7.1	0.46	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 21:12	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-001-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036300
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 13:58
SDG#: ALC26-16FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.44	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.44	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.44	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.44	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.44	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.44	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 21:24	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-002-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036301
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:34
SDG#: ALC26-17

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	13	0.48	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	8.4	0.48	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	92	4.8	19	10
14070	Perfluorononanoic acid	375-95-1	8.3	0.48	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	120	4.8	19	10
14070	Perfluorooctanoic acid	335-67-1	11	0.48	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 21:36	Marissa C Drexinger	1
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 23:42	Marissa C Drexinger	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-998-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036302
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:36
SDG#: ALC26-18

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
14070	Perfluorobutanesulfonate	375-73-5	12	0.47	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	8.0	0.47	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	83	4.7	19	10
14070	Perfluorononanoic acid	375-95-1	7.9	0.47	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	110	4.7	19	10
14070	Perfluorooctanoic acid	335-67-1	10	0.47	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 21:59	Marissa C Drexinger	1
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 23:54	Marissa C Drexinger	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-002-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036303
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:32
SDG#: ALC26-19FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1	ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.46	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.46	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.46	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.46	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.46	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.46	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 22:10	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: EP-102-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036304
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:58
SDG#: ALC26-20

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1	ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	0.93 J	0.48	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	0.64 J	0.48	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	7.6	0.48	1.9	1
14070	Perfluorononanoic acid	375-95-1	0.64 J	0.48	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	12	0.48	1.9	1
14070	Perfluorooctanoic acid	335-67-1	0.89 J	0.48	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109001	04/22/2019 22:22	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109001	04/19/2019 08:10	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: EP-102-041619-FB Grab Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036305
ELLE Group #: 2039385
Matrix: Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 14:52
SDG#: ALC26-21FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1	ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	N.D.	0.45	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	N.D.	0.45	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	N.D.	0.45	1.8	1
14070	Perfluorononanoic acid	375-95-1	N.D.	0.45	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	N.D.	0.45	1.8	1
14070	Perfluorooctanoic acid	335-67-1	N.D.	0.45	1.8	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109002	04/22/2019 23:19	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109002	04/19/2019 08:15	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: Well-003-041619 Grab Potable Water
PA DEP-Newberry

Tetra Tech Inc.
ELLE Sample #: PW 1036306
ELLE Group #: 2039385
Matrix: Potable Water

Project Name: PA DEP Newberry PFAS

Submittal Date/Time: 04/16/2019 17:00
Collection Date/Time: 04/16/2019 15:00
SDG#: ALC26-22

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1						
			ng/l	ng/l	ng/l	
14070	Perfluorobutanesulfonate	375-73-5	11	0.47	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	3.3	0.47	1.9	1
14070	Perfluorohexanesulfonate	355-46-4	92	4.7	19	10
14070	Perfluorononanoic acid	375-95-1	1.5 J	0.47	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	160	4.7	19	10
14070	Perfluorooctanoic acid	335-67-1	8.1	0.47	1.9	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/20.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109002	04/22/2019 23:31	Marissa C Drexinger	1
14070	6 UCMR 3 PFAS	EPA 537 Version 1.1	1	19109002	04/23/2019 00:17	Marissa C Drexinger	10
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19109002	04/19/2019 08:15	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Tetra Tech Inc.
Reported: 04/23/2019 12:06

Group Number: 2039385

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 was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ng/l	MDL** ng/l	LOQ ng/l
Batch number: 19109001	Sample number(s): 1036285-1036304		
Perfluorobutanesulfonate	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonate	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluoro-octanesulfonate	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0
Batch number: 19109002	Sample number(s): 1036305-1036306		
Perfluorobutanesulfonate	N.D.	0.50	2.0
Perfluoroheptanoic acid	N.D.	0.50	2.0
Perfluorohexanesulfonate	N.D.	0.50	2.0
Perfluorononanoic acid	N.D.	0.50	2.0
Perfluoro-octanesulfonate	N.D.	0.50	2.0
Perfluorooctanoic acid	N.D.	0.50	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19109001	Sample number(s): 1036285-1036304								
Perfluorobutanesulfonate	3.40	2.81	3.40	3.01	83	89	50-150	7	30
Perfluoroheptanoic acid	3.84	3.37	3.84	3.51	88	91	50-150	4	30
Perfluorohexanesulfonate	3.50	3.11	3.50	3.31	89	94	50-150	6	30
Perfluorononanoic acid	3.84	3.29	3.84	3.80	86	99	50-150	14	30
Perfluoro-octanesulfonate	3.55	3.05	3.55	3.27	86	92	50-150	7	30
Perfluorooctanoic acid	3.84	3.35	3.84	3.63	87	95	50-150	8	30
Batch number: 19109002	Sample number(s): 1036305-1036306								
Perfluorobutanesulfonate	18.12	16.85	18.12	17.52	93	97	70-130	4	30
Perfluoroheptanoic acid	20.48	19.44	20.48	20.05	95	98	70-130	3	30
Perfluorohexanesulfonate	18.68	17.94	18.68	18.69	96	100	70-130	4	30
Perfluorononanoic acid	20.48	21.01	20.48	21.21	103	104	70-130	1	30
Perfluoro-octanesulfonate	18.96	17.09	18.96	17.91	90	94	70-130	5	30
Perfluorooctanoic acid	20.48	19.52	20.48	20.92	95	102	70-130	7	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Tetra Tech Inc.
Reported: 04/23/2019 12:06

Group Number: 2039385

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 6 UCMR 3 PFAS
Batch number: 19109001

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1036285	99	112	91
1036286	96	104	94
1036287	105	114	98
1036288	94	106	100
1036289	99	106	104
1036290	104	108	93
1036291	92	99	93
1036292	102	109	103
1036293	94	100	92
1036294	101	107	91
1036295	101	111	91
1036296	82	109	89
1036297	101	103	98
1036298	101	111	90
1036299	99	110	95
1036300	98	114	104
1036301	105	112	102
1036302	98	106	98
1036303	109	118	91
1036304	105	115	103
Blank	90	101	89
LCS	101	103	98
LCSD	107	111	100
Limits:	70-130	70-130	70-130

Analysis Name: 6 UCMR 3 PFAS
Batch number: 19109002

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1036305	107	119	96
1036306	104	114	105
Blank	104	106	102
LCS	102	108	94
LCSD	102	108	102
Limits:	70-130	70-130	70-130

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 19700 Group # 2039385 Sample # 103 6245-306

COC # 582282

Client Information				Matrix			Analysis Requested										For Lab Use Only							
Client: <u>Tetra Tech Inc.</u>		Acct. #:		<input type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/> Potable <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Other:	Water	Total # of Containers	Preservation and Filtration Codes										FSC:	SCR#: <u>241837</u>						
Project Name/ #: <u>PADEP- Newberry</u>		PWSID #:															Preservation Codes							
Project Manager: <u>JOHN McCALL</u>		P.O. #:															H=HCl	T=Thiosulfate						
Sampler: <u>J. DALIASSIO</u>		Quote #:															N=HNO ₃	B=NaOH						
State where samples were collected: <u>PA</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>												S=H ₂ SO ₄	P=H ₃ PO ₄	Remarks								
Sample Identification		Collected		Grab	Composite	Soil	Water	Other:	Total # of Containers															
Date	Time																							
<u>Well-009-041619</u>	<u>04-16-19</u>	<u>1040</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-999-041619</u>	<u>04-16-19</u>	<u>1042</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-009-041619-FB</u>	<u>04-16-19</u>	<u>1044</u>	<input checked="" type="checkbox"/>						<u>1</u>	<input checked="" type="checkbox"/>														
<u>FB-01</u>	<u>04-16-19</u>	<u>1050</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-010-041619</u>	<u>04-16-19</u>	<u>1100</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-010-041619-FB</u>	<u>04-16-19</u>	<u>1102</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-007-041619-FB</u>	<u>04-16-19</u>	<u>1130</u>	<input checked="" type="checkbox"/>						<u>1</u>	<input checked="" type="checkbox"/>														
<u>Well-007-041619</u>	<u>04-16-19</u>	<u>1134</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-008-041619</u>	<u>04-16-19</u>	<u>1152</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														
<u>Well-011-041619</u>	<u>04-16-19</u>	<u>1248</u>	<input checked="" type="checkbox"/>						<u>2</u>	<input checked="" type="checkbox"/>														

PFAS by EPA 537 Rev.1.1

Turnaround Time (TAT) Requested (please circle)

Standard _____ Rush _____

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10

E-mail address: John.McCall@tetratech.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by <u>Edwin Hernandez</u>	Date <u>4/15/19</u>	Time <u>1515</u>	Received by <u>JJL</u>	Date <u>4/15/19</u>	Time <u>0800</u>
Relinquished by <u>JJL</u>	Date <u>4/16/19</u>	Time <u>1700</u>	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by <u>CW</u>	Date <u>4-16-19</u>	Time <u>1700</u>

EDD Required? Yes No

If yes, format: _____

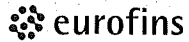
Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Temperature upon receipt 20 °C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 19700 Group # 2039385 Sample # 1036285-306

COC # 582281

Client Information				Matrix			Analysis Requested										For Lab Use Only																																																															
Client: <u>Tetra Tech Inc.</u>		Acct. #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>	Potable <input type="checkbox"/> Ground <input type="checkbox"/>	Water <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/>	Preservation and Filtration Codes										FSC: _____	SCR#: _____																																																														
Project Name/#: <u>PADEP - Newberry</u>		PWSID #:					<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																																																									
Project Manager: <u>John McCall</u>		P.O. #:		Other: _____		Total # of Containers											Remarks _____ _____																																																															
Sampler: <u>J. DALIESSIO</u>		Quote #:					PFAS by EPA 537 Rev. 11																																																																									
State where samples were collected: <u>PA</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Grab	Composite																																																																											
Sample Identification		Collected																																																																														
		Date	Time																																																																													
Well-011-041619-FB		04-16-19	1238	X			X			1	X																																																																					
Well-006-041619-FB		04-16-19	1320	X						1	X																																																																					
Well-006-041619		04-16-19	1330	X						2	X																																																																					
EP-101-041619		04-16-19	1402	X						2	X																																																																					
EP-101-041619-FB		04-16-19	1400	X						1	X																																																																					
Well-001-041619		04-16-19	1404	X						2	X																																																																					
Well-001-041619-FB		04-16-19	1358	X						1	X																																																																					
Well-002-041619		04-16-19	1434	X						2	X																																																																					
Well-998-041619		04-16-19	1436	X						2	X																																																																					
Well-002-041619-FB		04-16-19	1432	X						1	X																																																																					

Turnaround Time (TAT) Requested (please circle)

Standard _____ Rush _____

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10

E-mail address: John McCall @ tetra tech, com

Relinquished by <u>J.J.L.</u>	Date <u>4/15/19</u>	Time <u>1700</u>	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by _____	Date _____	Time _____
Relinquished by _____	Date _____	Time _____	Received by <u>Ch</u>	Date <u>4-16-19</u>	Time <u>1700</u>

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

EDD Required? (Yes) No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt 2.0 °C

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 19700 Group # 2039385 Sample # 1036285-306

COC # 582278

Client Information				Matrix				Analysis Requested										For Lab Use Only	
Client: <u>Tetra Tech, Inc.</u>		Acct. #:		<input type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/> Potable <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Other:		Preservation and Filtration Codes Total # of Containers: <u>PFAS by EPA 537 Rev. 1</u>										FSC: _____			
Project Name/ #: <u>PADEP - Newberry</u>		PWSID #:														SCR#: _____			
Project Manager: <u>John McCall</u>		P.O. #:				Preservation Codes													
Sampler: <u>J. DALIASSIO</u>		Quote #:				H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other													
State where samples were collected: <u>PA</u>		For Compliance: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue		Remarks													
Sample Identification		Collected		Water															
		Date	Time	Grab	Composite														
<u>EP-102-041619</u>		<u>04-16-19</u>	<u>1458</u>	<input checked="" type="checkbox"/>															
<u>EP-102-041619-FB</u>		<u>04-16-19</u>	<u>1452</u>	<input checked="" type="checkbox"/>															
<u>Well-003-041619</u>		<u>04-16-19</u>	<u>1500</u>	<input checked="" type="checkbox"/>															

Turnaround Time (TAT) Requested (please circle) Standard Rush (Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by <u>JJL</u>		Date <u>4/16/19</u>	Time <u>1700</u>	Received by		Date	Time
Requested TAT in business days: <u>10</u>				Relinquished by		Date	Time	Received by		Date	Time
E-mail address: <u>John.McCall@tetratech.com</u>				Relinquished by		Date	Time	Received by		Date	Time
Data Package Options (circle if required) Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) NJ DKQP TX TRRP-13 NYSDEC Category A or B MA MCP CT RCP				Relinquished by		Date	Time	Received by		Date <u>4-16-19</u>	Time <u>1700</u>
EDD Required? <input checked="" type="checkbox"/> Yes No If yes, format: _____				Relinquished by Commercial Carrier:				UPS _____ FedEx _____ Other _____			
Site-Specific QC (MS/MSD/Dup)? <input checked="" type="checkbox"/> Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>2.0</u> °C							



Client: Tetra Tech

Delivery and Receipt Information

Delivery Method: Client Drop Off Arrival Timestamp: 04/16/2019 17:00
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: PA

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Juan Carrion (16 518) at 06:12 on 04/17/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp)* All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	2.0	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
Well-010-041619-FB	1	2	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

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

Tests 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.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report
B	Detection in the Blank
Q0	LCS/LCSD Low
Q1	LCS/LCSD High
Q2	MS/MSD Low
Q3	MS/MSD High
Q7	LCS/LCSD RPD
Q8	DUP RPD
Q9	MS/MSD RPD

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.