

Serialized: 08/28/2017 02:53pm QC36

RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD

WARRINGTON, PA 18976

Regarding:

WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD
WARRINGTON, PA 18976

PROJECT ID:

W00674 BRISTOL EPA

LABORATORY REPORT NUMBER:

L6913753



Authorized by: Raphael C. Fratti, Laboratory Director

RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD
WARRINGTON, PA 18976

Regarding:
RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD
WARRINGTON, PA 18976

Account No: W00674, WARRINGTON TWP WATER & SEWER **P.O. No:** **Inv. No:** EOM-08/17
Project No: W00674 BRISTOL EPA, WARRINGTON TOWNSHIP WATER & SEWER **PWSID No:** 1090070

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6913753-1	EP104 WELL 8 SINK	08/09/17 02:42pm NA C	Suzanne E. Hughes, Eurofins QC, Inc.
Received Date/Time/Temp 08/09/17 04:05pm 6.0 C		Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
PENTADEC AFLUORO-OCTANOIC ACID

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6913753-2	EP105 WELL 8 SINK	08/09/17 03:04pm NA C	Suzanne E. Hughes, Eurofins QC, Inc.
Received Date/Time/Temp 08/09/17 04:05pm 6.0 C		Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
PENTADEC AFLUORO-OCTANOIC ACID

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6913753-3	EP107 WELL 11 SINK	08/09/17 02:18pm NA C	Suzanne E. Hughes, Eurofins QC, Inc.
Received Date/Time/Temp 08/09/17 04:05pm 6.0 C		Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
PENTADEC AFLUORO-OCTANOIC ACID

Sample Comments | Result Qualifiers:

PIN: 85448

Serial Number: 6366885

Account No: W00674, WARRINGTON TWP WATER & SEWER

P.O. No:

Inv. No: EOM-08/17

Project No: W00674 BRISTOL EPA, WARRINGTON TOWNSHIP WATER & SEWER

PWSID No: 1090070

L6913753-1 :

L6913753-2 :

L6913753-3 :



PIN: 85448

Serial Number: 6366885

DEFINITIONS

Eurofins OC, Inc. (EOC)

The following terms or abbreviations are used in this report:

MPN	Most probable number	DF	Dilution Factor (For Microbiology, DF = volume of sample tested)
CFU	Colony forming unit	QUAL	Qualifier (Q)
POS	Positive / Present	NTU	Nephelometric turbidity units
NEG	Negative / Absent	RL	Laboratory reporting limit or Limit of Quantitation (LOQ)
PRES	Presumptive	MCL	EPA recommended "Maximum Contaminant Level"
MF	Membrane Filtration	MDL	Method Detection Limit
TNTC	Too numerous to count	ND	Analyte concentration not detected greater than the RL / MDL
DRY	The result was reported on a dry weight basis.	ND	For the odor test: No Odor Observed
TON	Threshold Odor Number		

ppm (mg/l) Parts per million: equivalent to 1 milligram per kilogram (mg/Kg) for solids or one milligram per liter (mg/L) for aqueous samples.

ppb (ug/L) Parts per billion: equivalent to 1 microgram per kilogram (ug/Kg) for solids or one microgram per liter (ug/L) for aqueous samples.

< Less than: In conjunction with a numerical value, indicates a concentration less than RL / MDL.

> Greater than: In conjunction with a numerical value, indicates a concentration greater than RL / MDL.

Data Qualifiers

J	Estimated value \geq MDL but $<$ RL.
T	Temperature receipt exceedance, refer to Sample Comments/ Results Qualifiers section.
E	Microbiology: estimated CFU count
Q	Qualifier: defined in Sample Comment section on report

Warranties, Terms, and Conditions

- Analyses for Odor and Odor Threshold are performed at the EQCI Southampton facility (1205 Industrial Boulevard, Southampton, PA 18966). Unless otherwise specified in the Parameter field, analyses (excluding "Field Parameters") for environmental microbiology, environmental chemistry, and pharmaceutical microbiology are performed at the EQCI Horsham facility (702 Electronic Dr. Horsham, PA 19044).
- The test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.
- The report shall not be reproduced, except in full, without the written consent of the laboratory.
- All samples are collected as "grab" samples unless otherwise identified.
- The reported results relate only to the sample as tested. EQCI is not responsible for sample integrity unless sampling has been performed by a member of our staff.
- EQCI is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance. EQCI's internet program "LIVE ACCESS" will provide you with real-time access to collection dates and testing results. Please contact Customer Service for further information.
- The following personnel or their deputies have approved the results of the tests performed by EQCI: Nicki Smith (Environmental Chemistry), Amanda Berd (Pharmaceutical), Sue Abbott (EQCI Delaware), and Bhavita Shah (EQCI Horsham, Microbiology).

EOC Accreditations

Southampton, PA	EPA ID: PA00018	Horsham, PA	NELAP IDs: PA: 46-05499
	NELAP IDs: PA 09-00131; NJ PA166; NY 11223		NJ: PA093
	State IDs: DE PA-018;		
	FDA Reg #: 3009048205		
New Castle, DE	State IDs: DE 00011; MD 138		
Wind Gap, PA	State IDs: PA 48-01334; NJ PA001		
East Rutherford, NJ	State ID: NJ 02015		
Vineland, NJ	State ID: NJ 06005		

EQC

Picksheet: P6913753
Eurofins QC, Inc Cust: W00674 BRISTOL EPA
Sched: 50081

RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD

WARRINGTON, PA 18976
(215)343-1800
(215)768-6109 SAM-CELL
(215)768-6103 RICK ZEITLER-CELL

Route: 6 SUE HUGHES

PWSID: 1090070

Expected: MONDAY 08/07/17 - 08/31/17
Project Name: WARRINGTON TOWNSHIP WATER & SEWER
Start Date: 11/17/16 Stop Date:
Comments/Schedule Details:
GF 287218

LAB USE ONLY
_____ Ascorbic/HCL Vials # _____ HCL Vials
_____ NA2S2O3
_____ NaOH/Zn acetate pH _____
_____ HNO3 pH _____
_____ H2SO4 pH _____
_____ NaOH pH _____
3 TRISMA PL DT
_____ HCL
_____ NH4CL
_____ MECH
_____ Na2SO3/HCL
_____ DI Water

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Collection Date	Collection Time (Military)	Total # Bottles	Field Tests By:			Total CL2 mg/L
			Free Cl2 mg/L	pH/Temp C	BR2 mg/L	
8-9-17	1442	1				
8-9-17	1504	1				
8-9-17	1418	1				

6913753-1 PFOA) EP104 WELL 5 SINK
PFOA
SUB TO ELLE * SPECIAL PURPOSE

6913753-2 EP105 WELL 8 SINK
PFOA

6913753-3 EP107 WELL 11 SINK
PFOA

Cooler ID:

Sample Collected By _____ Circle One EQC Initials SEIT
Client _____

Required TAT: Standard ___/Rush ___ # Days ___

Relinquished By	Time	Date	Received By	Time	Date	Temp	Icod Y/N	Site	Initials
<u>Sue Hughes</u>	<u>1605</u>	<u>8-9-17</u>	<u>EQC</u>	<u>1605</u>	<u>8/9/17</u>	<u>6.0°C</u>	<u>Y</u>	<u>EQC</u>	<u>SEIT</u>

Comments (reporting, methods, etc)

Hazardous Y/N

M: 08:00-14:30 T: 08:00-14:30 W: 08:00-14:30 Th: 08:00-14:30 F: 08:00-14:30 S: - Sn: - Printed: 08/01/17 GPS X: -75.14407 Y: 40.27073
M: - T: - W: - Th: - F: - S: - St: - Sn: -
PM: DOUG

ANALYSIS REPORT

Prepared by:

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

Prepared for:

Eurofins QC Labs
702 Electronic Drive
Horsham PA 19044

Report Date: August 24, 2017

Project: L6913753

Account #: 25996
Group Number: 1836424
PO Number: L6913753
State of Sample Origin: PA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Eurofins QC Labs

Attn: Nicki Smith

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Collection Information</u>	<u>ELLE#</u>
L6913753-1 Drinking Water	08/09/2017 14:42	9148959
L6913753-2 Drinking Water	08/09/2017 15:04	9148960
L6913753-3 Drinking Water	08/09/2017 14:18	9148961

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

Project Name: L6913753
LL Group #: 1836424

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.

For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

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

Analysis Specific Comments:**EPA 537 Version 1.1 Modified, Misc. Organics**

Batch #: 17230005 (Sample number(s): 9148959-9148961 UNSPK: P145984)

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: NETFOSAA, NMeFOSAA

Sample Description: L6913753-1 Drinking Water
EP104 Well 5 Sink

ELLE Sample # PW 9148959
ELLE Group # 1836424
Account # 25996

Project Name: L6913753

Collected: 08/09/2017 14:42 by SEH

Eurofins QC Labs
702 Electronic Drive
Horsham PA 19044

Submitted: 08/10/2017 05:55

Reported: 08/24/2017 18:08

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
10954	NETFOSAA NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	N.D. Q4	3	1
10954	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	N.D. Q4	3	1
10954	Perfluorobutanesulfonate	375-73-5	5	3	1
10954	Perfluorodecanoic acid	335-76-2	N.D.	2	1
10954	Perfluorododecanoic acid	307-55-1	N.D.	2	1
10954	Perfluoroheptanoic acid	375-85-9	3	2	1
10954	Perfluorohexanesulfonate	355-46-4	4	3	1
10954	Perfluorohexanoic acid	307-24-4	5	2	1
10954	Perfluorononanoic acid	375-95-1	N.D.	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	14	6	1
10954	Perfluorooctanoic acid	335-67-1	13	2	1
10954	Perfluorotetradecanoic acid	376-06-7	N.D.	2	1
10954	Perfluorotridecanoic acid	72629-94-8	N.D.	2	1
10954	Perfluoroundecanoic acid	2058-94-8	N.D.	3	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	17230005	08/23/2017 02:36	Jason W Knight	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	17230005	08/18/2017 09:00	Robert Brown	1

Sample Description: L6913753-2 Drinking Water
EP105 Well 8 Sink

ELLE Sample # PW 9148960
ELLE Group # 1836424
Account # 25996

Project Name: L6913753

Collected: 08/09/2017 15:04 by SEH

Eurofins QC Labs
702 Electronic Drive
Horsham PA 19044

Submitted: 08/10/2017 05:55

Reported: 08/24/2017 18:08

Sample Description: L6913753-2 Drinking Water
EP105 Well 8 Sink

ELLE Sample # PW 9148960
ELLE Group # 1836424
Account # 25996

Project Name: L6913753

Collected: 08/09/2017 15:04 by SEH

Eurofins QC Labs
702 Electronic Drive
Horsham PA 19044

Submitted: 08/10/2017 05:55

Reported: 08/24/2017 18:08

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
10954	NETFOSAA	2991-50-6	N.D. Q4	3	1
	NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
10954	NMeFOSAA	2355-31-9	N.D. Q4	3	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
10954	Perfluorobutanesulfonate	375-73-5	N.D.	3	1
10954	Perfluorodecanoic acid	335-76-2	N.D.	2	1
10954	Perfluorododecanoic acid	307-55-1	N.D.	2	1
10954	Perfluoroheptanoic acid	375-85-9	N.D.	2	1
10954	Perfluorohexanesulfonate	355-46-4	N.D.	3	1
10954	Perfluorohexanoic acid	307-24-4	2	2	1
10954	Perfluorononanoic acid	375-95-1	N.D.	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	N.D.	6	1
10954	Perfluorooctanoic acid	335-67-1	3	2	1
10954	Perfluorotetradecanoic acid	376-06-7	N.D.	2	1
10954	Perfluorotridecanoic acid	72629-94-8	N.D.	2	1
10954	Perfluoroundecanoic acid	2058-94-8	N.D.	3	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	17230005	08/23/2017 02:56	Jason W Knight	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	17230005	08/18/2017 09:00	Robert Brown	1

Sample Description: L6913753-3 Drinking Water
EP107 Well 11 Sink

ELLE Sample # PW 9148961
ELLE Group # 1836424
Account # 25996

Project Name: L6913753

Collected: 08/09/2017 14:18 by SEH

Eurofins QC Labs
702 Electronic Drive
Horsham PA 19044

Submitted: 08/10/2017 05:55

Reported: 08/24/2017 18:08

Sample Description: L6913753-3 Drinking Water
EP107 Well 11 Sink

ELLE Sample # PW 9148961
ELLE Group # 1836424
Account # 25996

Project Name: L6913753

Collected: 08/09/2017 14:18 by SEH

Eurofins QC Labs
702 Electronic Drive
Horsham PA 19044

Submitted: 08/10/2017 05:55

Reported: 08/24/2017 18:08

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics					
EPA 537 Version 1.1 Modified					
10954	NETFOSAA	2991-50-6	N.D. Q4	3	1
NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
10954	NMeFOSAA	2355-31-9	N.D. Q4	3	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
10954	Perfluorobutanesulfonate	375-73-5	9	3	1
10954	Perfluorodecanoic acid	335-76-2	N.D.	2	1
10954	Perfluorododecanoic acid	307-55-1	N.D.	2	1
10954	Perfluoroheptanoic acid	375-85-9	4	2	1
10954	Perfluorohexanesulfonate	355-46-4	N.D.	3	1
10954	Perfluorohexanoic acid	307-24-4	7	2	1
10954	Perfluorononanoic acid	375-95-1	N.D.	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	15	6	1
10954	Perfluorooctanoic acid	335-67-1	15	2	1
10954	Perfluorotetradecanoic acid	376-06-7	N.D.	2	1
10954	Perfluorotridecanoic acid	72629-94-8	N.D.	2	1
10954	Perfluoroundecanoic acid	2058-94-8	N.D.	3	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFAS in Water by LC/MS/MS	EPA 537 Version 1.1 Modified	1	17230005	08/23/2017 03:17	Jason W Knight	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	17230005	08/18/2017 09:00	Robert Brown	1

Quality Control Summary

Client Name: Eurofins QC Labs
Reported: 08/24/2017 18:08

Group Number: 1836424

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	LOQ
	ng/l	ng/l
Batch number: 17230005	Sample number(s): 9148959-9148961	
NEtFOSAA	N.D.	3
NMeFOSAA	N.D.	3
Perfluorobutanesulfonate	N.D.	3
Perfluorodecanoic acid	N.D.	2
Perfluorododecanoic acid	N.D.	2
Perfluoroheptanoic acid	N.D.	2
Perfluorohexanesulfonate	N.D.	3
Perfluorohexanoic acid	N.D.	2
Perfluorononanoic acid	N.D.	2
Perfluoro-octanesulfonate	N.D.	6
Perfluorooctanoic acid	N.D.	2
Perfluorotetradecanoic acid	N.D.	2
Perfluorotridecanoic acid	N.D.	2
Perfluoroundecanoic acid	N.D.	3

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ng/l	ng/l	ng/l	ng/l					
Batch number: 17230005	Sample number(s): 9148959-9148961								
NEtFOSAA	200	231.23	200	224.31	116	112	70-130	3	30
NMeFOSAA	200	259.13	200	232.69	130	116	70-130	11	30
Perfluorobutanesulfonate	176.8	166.54	176.8	175.16	94	99	70-130	5	30
Perfluorodecanoic acid	200	188.07	200	189.14	94	95	70-130	1	30
Perfluorododecanoic acid	200	182.32	200	199.61	91	100	70-130	9	30
Perfluoroheptanoic acid	200	191.12	200	193.76	96	97	70-130	1	30
Perfluorohexanesulfonate	189.2	174.89	189.2	185.14	92	98	70-130	6	30
Perfluorohexanoic acid	200	199.05	200	202.3	100	101	70-130	2	30
Perfluorononanoic acid	200	213.47	200	208.91	107	104	70-130	2	30
Perfluoro-octanesulfonate	191.2	165.71	191.2	183.22	87	96	70-130	10	30
Perfluorooctanoic acid	200	190.84	200	200.88	95	100	70-130	5	30
Perfluorotetradecanoic acid	200	188.02	200	194.13	94	97	70-130	3	30
Perfluorotridecanoic acid	200	217.88	200	216.5	109	108	70-130	1	30
Perfluoroundecanoic acid	200	204.93	200	205.07	102	103	70-130	0	30

*- Outside of specification

(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.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Eurofins QC Labs
Reported: 08/24/2017 18:08

Group Number: 1836424

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ng/l	MS Spike Added ng/l	MS Conc ng/l	MSD Spike Added ng/l	MSD Conc ng/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 17230005	Sample number(s): 9148959-9148961 UNSPK: P145984									
NETFOSAA	N.D.	200.6	269.74			134*		70-130		
NMeFOSAA	1.11	200.6	267.04			133*		70-130		
Perfluorobutanesulfonate	7.72	177.33	173.05			93		70-130		
Perfluorodecanoic acid	2.38	200.6	195.64			96		70-130		
Perfluorododecanoic acid	N.D.	200.6	187.71			94		70-130		
Perfluoroheptanoic acid	4.94	200.6	178.02			86		70-130		
Perfluorohexanesulfonate	6.76	189.77	184.37			94		70-130		
Perfluorohexanoic acid	22.32	200.6	223.55			100		70-130		
Perfluorononanoic acid	2.18	200.6	189.61			93		70-130		
Perfluoro-octanesulfonate	12.88	191.78	212.5			104		70-130		
Perfluorooctanoic acid	14.18	200.6	195.1			90		70-130		
Perfluorotetradecanoic acid	N.D.	200.6	184.22			92		70-130		
Perfluorotridecanoic acid	N.D.	200.6	175.4			87		70-130		
Perfluoroundecanoic acid	N.D.	200.6	194.31			97		70-130		

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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 17230005

	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA	13C8-PFOA	
9148959	85	70	76	80	76	13C3
9148960	85	77	80	73	74	81
9148961	76	67	70	75	69	75
Blank	81	81	72	75	88	77
LCS	71	71	73	76	70	84
LCSD	82	79	76	76	79	78
MS	119	73	76	89	79	79
Limits:	26-148	31-128	34-126	35-126	43-112	84
						43-
	13C9-PFNA	13C6-PFDA	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	
9148959	100	78	72	82	74	13C2
9148960	98	73	54	67	56	80
9148961	101	76	67	78	74	61
Blank	75	81	70	71	74	71

*- Outside of specification

- (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.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Eurofins QC Labs
Reported: 08/24/2017 18:08

Group Number: 1836424

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 17230005

	13C9-PFNA	13C6-PFDA	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA
LCS	67	82	81	83	75
LCSD	88	77	67	69	66
MS	109	81	67	82	65
Limits:	32-134	40-115	17-120	30-128	21-135

	13C2-PFTeDA
9148959	84
9148960	66
9148961	78
Blank	80
LCS	90
LCSD	77
MS	76
Limits:	26-119

*- Outside of specification

- (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.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

1896424

EQC P/cksheet: P6913753
Eurofins QC, Inc Cust: W00674 BRISTOL EPA
Schd: 50081

Expected: MONDAY 08/07/17 - 08/31/17
Project Name: WARRINGTON TOWNSHIP WATER & SEWER
Start Date: 11/17/16 Stop Date:
Comments/Schedule Details:
GF 287218

RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD

WARRINGTON, PA 18976
(215)343-1800
(215)768-6109 SAM-CELL
(215)768-6103 RICK ZEITLER-CELL

Route: 6 SUE HUGHES

PWSID: 1090070

LAB USE ONLY
Bottle Type
..... Ascorbic/HCL Vials # HCL Vials
..... NA2S2O3
..... NaOH/Zn acetate pH
..... HNO3 pH
..... H2SO4 pH
..... NaOH pH
3 Unpreserved TRISMA PL DT
..... HCL
..... NH4CL
..... MEOH
..... Na2SO3/HCL
..... DI Water

6913753-1 PFOA) EP104 WELL 5 SINK PFOA SUB TO ELLE * SPECIAL PURPOSE.
6913753-2 EP105 WELL 8 SINK PFOA
6913753-3 EP107 WELL 11 SINK PFOA

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Collection Date	Collection Time (Military)	Total # Bottles
8-9-17	1442	1
8-9-17	1504	1
8-9-17	1418	1

Field Tests By:		/Time:	
Free Cl2 mg/L	pH/TempC	BR2 mg/L	Total CL2 mg/L

Sample Collected By	Circle One	Initials
	Client	SETH

Required TAT: Standard ___/Rush ___ # Days ___

Relinquished By	Time	Date	Received By
	1605	8-9-17	

Time	Date	Temp	Iced Y/N	Site	Initials
1605	8/9/17	6.0C	Y	EQC	SETH

Comments (reporting, methods, etc)

Hazardous Y/N

M: 08:00-14:30 T: 08:00-14:30 W: 08:00-14:30 Th: 08:00-14:30 F: 08:00-14:30 S: - Sn: - Printed: 08/01/17 GPS X: -75 14407 Y: 1024073



Lancaster Laboratories
Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 191247



Group Number(s): 1836424

Client: QC

Delivery and Receipt Information

Delivery Method: QC Labs Arrival Timestamp: 08/10/2017 5:55
Number of Packages: 2 Number of Projects: 13

Arrival Condition Summary

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

Unpacked by Wendy Wakeley (1669) at 08:38 on 08/10/2017

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	DT42-01	1.6	DT	Wet	Y	Bagged	N
2	DT42-01	0.8	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	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.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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
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.
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
Q4	MS/MSD Out of Range
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.