

Serialized: 08/14/2017 04:21pm 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:**

**L6855561**



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

**P.O. No:**

**Inv. No:** EOM-08/17  
**PWSID No:** 1090070

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6855561-1	EP104 WELL 5 SINK	07/27/17 02:15pm NA C	Suzanne E. Hughes, Eurofins QC, Inc.
<b>Received Date/Time/Temp</b> 07/27/17 03:10pm 7.2 C <b>Iced (Y/N):</b> Y <b>Exceeds recommended temperature for chemical testing.(T)</b>			

--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
L6855561-2	EP105 WELL 8 SINK	07/27/17 01:23pm NA C	Suzanne E. Hughes, Eurofins QC, Inc.
<b>Received Date/Time/Temp</b> 07/27/17 03:10pm 7.2 C <b>Iced (Y/N):</b> Y <b>Exceeds recommended temperature for chemical testing.(T)</b>			

--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
L6855561-3	EP107 WELL 11 SINK	07/27/17 01:04pm NA C	Suzanne E. Hughes, Eurofins QC, Inc.
<b>Received Date/Time/Temp</b> 07/27/17 03:10pm 7.2 C <b>Iced (Y/N):</b> Y <b>Exceeds recommended temperature for chemical testing.(T)</b>			

--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: 6360233

**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

L6855561-1 :

T: Samples for chemical testing were received at the laboratory outside of the allowed temperature range of just above 0 to 6 degrees C. Because ice is present and the chilling process begun, the sample storage criteria is considered acceptable.

L6855561-2 :

T: Samples for chemical testing were received at the laboratory outside of the allowed temperature range of just above 0 to 6 degrees C. Because ice is present and the chilling process begun, the sample storage criteria is considered acceptable.

L6855561-3 :

T: Samples for chemical testing were received at the laboratory outside of the allowed temperature range of just above 0 to 6 degrees C. Because ice is present and the chilling process begun, the sample storage criteria is considered acceptable.



## 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:
	NELAP IDs: PA 09-00131; NJ PA166; NY 11223		PA: 46-05499
	State IDs: DE PA-018;		NJ: PA093
	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: P6855561  
Eurofins QC, Inc Cust: W00674 BRISTOL EPA  
Schd: 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 07/03/17 - 07/31/17  
Project Name: WARRINGTON TOWNSHIP WATER & SEWER  
Start Date: 11/17/16 Stop Date:  
Comments/Schedule Details:  
GF 267218

## LAB USE ONLY

## Bottle Type

# \_\_\_\_\_ Ascorbic/HCL Vials # \_\_\_\_\_ HCL Vials  
# \_\_\_\_\_ NA2S2O3  
# \_\_\_\_\_ NaOH/Zn acetate pH \_\_\_\_\_  
# \_\_\_\_\_ HNO3 pH \_\_\_\_\_  
# \_\_\_\_\_ H2SO4 pH \_\_\_\_\_  
# \_\_\_\_\_ NaOH pH \_\_\_\_\_  
# \_\_\_\_\_ Unpreserved  
# \_\_\_\_\_ HCL  
# \_\_\_\_\_ NH4CL  
# \_\_\_\_\_ MEOH  
# \_\_\_\_\_ Na2SO3/HCL  
# \_\_\_\_\_ DI Water

Field Tests By: /Time:

6855561-1 PFOA EP104 WELL 5 SINK  
PFOA

SUB TO ELLE \* SPECIAL PURPOSE

6855561-2 EP105 WELL 8 SINK  
PFOA

6855561-3 EP107 WELL 11 SINK  
PFOA

Collection Date Collection Time Total  
(Military) # Bottles

Free Cl2 mg/L pH/TempC BR2 mg/L Total CL2 mg/L

7-27-17 1415 1

7-27-17 1323 1

7-27-17 1304 1

Cooler ID:

Sample Collected By	Circle One	Initials
	Client <input checked="" type="radio"/> EQC	SEH
Relinquished By	Time	Date
<i>Sue Hughes</i>	1510	7-27-17
Received By		
<i>CR</i>		

Required TAT: Standard /Rush # Days

Time	Date	Temp	Iced Y/N	Site	Initials
1510	7/27/17	7.2C	Y	EQC	SEH

Comments (reporting, methods, etc)

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 St:  
M: - T: - W: - Th: - F: - St: - Sn:

- Sn:

Printed: 06/14/17

GPS X: -75.14407 Y: 40.27073

PM: DOUG

Hazardous Y/N

## ANALYTICAL RESULTS

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 08, 2017

**Project: L6855561**

Submittal Date: 07/27/2017

Group Number: 1830983

PO Number: L6855561

State of Sample Origin: PA

Client Sample Description

L6855561-1 Drinking Water

L6855561-2 Drinking Water

L6855561-3 Drinking Water

Lancaster Labs

(ELLE) #

9125519

9125520

9125521

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

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

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Project Name: L6855561  
LL Group #: 1830983

**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:**

No additional comments are necessary.

Sample Description: L6855561-1 Drinking Water  
EP104 Well 5 Sink  
EP104 WELL 5 SINK

ELLE Sample # PW 9125519  
ELLE Group # 1830983  
Account # 25996

Project Name: L6855561

Collected: 07/27/2017 14:15 by SEH

Eurofins QC Labs  
702 Electronic Drive  
Horsham PA 19044

Submitted: 07/27/2017 18:40

Reported: 08/08/2017 15:37

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1 Modified</b>	<b>ng/l</b>	<b>ng/l</b>	
10954	NETFOSAA	2991-50-6	N.D.	3	1
	NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
10954	NMeFOSAA	2355-31-9	N.D.	3	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
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	4	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	16	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	17215001	08/04/2017 21:17	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	17215001	08/03/2017 06:50	Pamela Rothharpt	1

Sample Description: L6855561-2 Drinking Water  
EP105 Well 8 Sink  
EP105 WELL 8 SINK

ELLE Sample # PW 9125520  
ELLE Group # 1830983  
Account # 25996

Project Name: L6855561

Collected: 07/27/2017 13:23 by SEH

Eurofins QC Labs



Sample Description: L6855561-2 Drinking Water  
EP105 Well 8 Sink  
EP105 WELL 8 SINK

ELLE Sample # PW 9125520  
ELLE Group # 1830983  
Account # 25996

Project Name: L6855561

702 Electronic Drive  
Horsham PA 19044

Submitted: 07/27/2017 18:40

Reported: 08/08/2017 15:37

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1 Modified</b>	<b>ng/l</b>	<b>ng/l</b>	
10954	NETFOSAA	2991-50-6	N.D.	3	1
	NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
10954	NMeFOSAA	2355-31-9	N.D.	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	4	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	17215001	08/04/2017 21:38	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	17215001	08/03/2017 06:50	Pamela Rothharpt	1

Sample Description: L6855561-3 Drinking Water  
EP107 Well 11 Sink  
EP107 WELL 11 SINK

ELLE Sample # PW 9125521  
ELLE Group # 1830983  
Account # 25996

Project Name: L6855561

Collected: 07/27/2017 13:04 by SEH

Eurofins QC Labs  
702 Electronic Drive  
Horsham PA 19044

Submitted: 07/27/2017 18:40

Reported: 08/08/2017 15:37

Sample Description: L6855561-3 Drinking Water  
EP107 Well 11 Sink  
EP107 WELL 11 SINK

ELLE Sample # PW 9125521  
ELLE Group # 1830983  
Account # 25996

Project Name: L6855561

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1 Modified</b>	<b>ng/l</b>	<b>ng/l</b>	
10954	NETFOSAA	2991-50-6	N.D.	3	1
	NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
10954	NMeFOSAA	2355-31-9	N.D.	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	5	2	1
10954	Perfluorohexanesulfonate	355-46-4	N.D.	3	1
10954	Perfluorohexanoic acid	307-24-4	6	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	16	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	17215001	08/04/2017 21:58	Devon M Whooley	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	17215001	08/03/2017 06:50	Pamela Rothharpt	1

## Quality Control Summary

Client Name: Eurofins QC Labs  
Reported: 08/08/2017 15:37

Group Number: 1830983

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: 17215001	Sample number(s): 9125519-9125521	
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: 17215001	Sample number(s): 9125519-9125521								
NEtFOSAA	200	235.7	200	237.43	118	119	70-130	1	30
NMeFOSAA	200	191.06	200	213.05	96	107	70-130	11	30
Perfluorobutanesulfonate	176.8	185.13	176.8	178.71	105	101	70-130	4	30
Perfluorodecanoic acid	200	204.09	200	221.04	102	111	70-130	8	30
Perfluorododecanoic acid	200	213.7	200	204.39	107	102	70-130	4	30
Perfluoroheptanoic acid	200	200.72	200	221.31	100	111	70-130	10	30
Perfluorohexanesulfonate	189.2	180.05	189.2	191.53	95	101	70-130	6	30
Perfluorohexanoic acid	200	198.81	200	203.63	99	102	70-130	2	30
Perfluorononanoic acid	200	200.68	200	200.67	100	100	70-130	0	30
Perfluoro-octanesulfonate	191.2	216.75	191.2	199.89	113	105	70-130	8	30
Perfluorooctanoic acid	200	198.98	200	199.85	99	100	70-130	0	30
Perfluorotetradecanoic acid	200	209.02	200	212.27	105	106	70-130	2	30
Perfluorotridecanoic acid	200	219.33	200	210.03	110	105	70-130	4	30
Perfluoroundecanoic acid	200	214.48	200	209.71	107	105	70-130	2	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: 08/08/2017 15:37

Group Number: 1830983

### 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: 17215001	Sample number(s): 9125519-9125521 UNSPK: 9125519									
NEtFOSAA	N.D.	199.76	216.94			109		70-130		
NMeFOSAA	N.D.	199.76	242.43			121		70-130		
Perfluorobutanesulfonate	5.42	176.59	187.41			103		70-130		
Perfluorodecanoic acid	N.D.	199.76	202.38			101		70-130		
Perfluorododecanoic acid	N.D.	199.76	214.15			107		70-130		
Perfluoroheptanoic acid	3.69	199.76	219.64			108		70-130		
Perfluorohexanesulfonate	4.26	188.97	195.2			101		70-130		
Perfluorohexanoic acid	4.88	199.76	207.27			101		70-130		
Perfluorononanoic acid	1.91	199.76	193.26			96		70-130		
Perfluoro-octanesulfonate	15.87	190.97	210.08			102		70-130		
Perfluorooctanoic acid	13.01	199.76	204.28			96		70-130		
Perfluorotetradecanoic acid	N.D.	199.76	213.48			107		70-130		
Perfluorotridecanoic acid	N.D.	199.76	196.67			98		70-130		
Perfluoroundecanoic acid	N.D.	199.76	208.04			104		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: 17215001

	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA	13C8-PFOA	13C8-PFOS
9125519	74	53	54	61	61	69
9125520	81	72	73	71	66	74
9125521	72	75	65	64	70	68
Blank	58	60	64	55	59	63
LCS	62	57	61	56	64	63
LCSD	56	50	53	48	59	61
MS	68	61	57	58	65	63
Limits:	26-148	31-128	34-126	35-126	43-112	43-115
	13C9-PFNA	13C6-PFDA	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA
9125519	79	64	63	64	77	65
9125520	76	65	66	71	75	66
9125521	74	71	71	68	78	71
Blank	74	59	58	62	67	59

\*- 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: 08/08/2017 15:37

Group Number: 1830983

### 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: 17215001

	13C9-PFNA	13C6-PFDA	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA
LCS	70	57	63	63	65	59
LCSD	59	55	61	58	57	60
MS	67	60	58	61	64	57
Limits:	32-134	40-115	17-120	30-128	21-135	28-127

	13C2-PFTeDA
9125519	67
9125520	63
9125521	68
Blank	57
LCS	62
LCSD	55
MS	58
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.

3 TRISMAS PL

Picksheet: P6855561  
Cust: W00674 BRISTOL EPA  
Schd: 50081

Expected: MONDAY 07/03/17 - 07/31/17  
Project Name: WARRINGTON TOWNSHIP WATER & SEWER  
Start Date: 11/17/16 Stop Date:  
Comments/Schedule Details:  
GF 267218

LAB USE ONLY

Bottle Type

#	Ascorbic/HCL Vials	#	HCL Vials
#	NA2S2O3		
#	NaOH/Zn acetate pH		
#	HNO3 pH		
#	H2SO4 pH		
#	NaOH pH		
#	Unpreserved		
#	HCL		
#	NH4CL		
#	MEOH		
#	Na2SO3/HCL		
#	DI Water		

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

Pseudocolic

6855561-1 PFOA) EP104 WELL 5 SINK  
PFOA

SUB TO ELLE \* SPECIAL PURPOSE

6855561-2 EP105 WELL 8 SINK  
PFOA

6855561-3 EP107 WELL 11 SINK  
PFOA

Collection	Collection Time Total
Date_____	(Military) _____ # Bottles

Field Tests By: \_\_\_\_\_/Time: \_\_\_\_\_

Free Cl2 mg/L	pH/TempC	BR2 mg/L	Total CL2 mg/L
------------------	----------	----------	-------------------

7-27-17	1415
7-27-17	1323
7-27-17	1304

Cooler ID:

Sample Collected By	Circle One	Initials
	Client	EQC 507
Relinquished By	Time	Date
Signature	1510	7-27-17

Required TAT: Standard /Rush # Days

Time	Date	Temp	Iced Y/N	Site	Initials
1510	7/27/17	7.2 C	Y	EDC	SCM
848	7-27-17	34.0 C	Y	ELCC	ES

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 St:  
M: - T: - W: - Th: - F: - St: -  
PM: DOUG

- Sn: - Printed: 06/14/17 GPS X: -75.14407 Y: 40.27073

Sample Administration  
Receipt Documentation Log

Doc Log ID: 190031



Group Number(s): 1830283

Client: EQCL

## Delivery and Receipt Information

Delivery Method: EQCL Drop Off Arrival Timestamp: 07/27/2017 18:40  
Number of Packages: 1 Number of Projects: 10

## 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 $\geq$ 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 Melvin Sanchez (8943) at 19:57 on 07/27/2017

## 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	DT131	3.4	DT	Wet	Y	Bagged	N

# Explanation of Symbols and Abbreviations

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

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