



Eaton Analytical

750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3629  
Tel: (626) 386-1100  
Fax: (626) 386-1101  
1 800 566 LABS (1 800 566 5227)

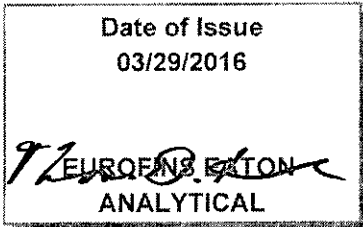


AT-1807

### Laboratory Report

for

Aqua Pennsylvania, Inc.  
762 Lancaster Avenue  
Bryn Mawr, PA 19010-3489  
Attention: Chuck Hertz  
Fax: (610) 645-1164



Report: 574641  
Project: PFC  
Group: PFC Monitoring Horsham

TDF: Thomas.D.French  
Project Manager

- \* Accredited in accordance with TNi 2009 and ISO/IEC 17025:2005.
- \* Laboratory certifies that the test results meet all **TNi 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
- \* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
- \* Test results relate only to the sample(s) tested.
- \* This report shall not be reproduced except in full, without the written approval of the laboratory.

**STATE CERTIFICATION LIST**

State	Certification Number	State	Certification Number
Alabama	41060	Mississippi	Certified
-----	-----	Montana	Cert 0035
Arizona	AZ0778	Nebraska	Certified
Arkansas	Certified	Nevada	CA00006-2016
California-Monrovia-ELAP	2813	New Hampshire *	2959
California-Colton- ELAP	2812	New Jersey *	CA 008
California-Folsom- ELAP	2820	New Mexico	Certified
California-Fresno- ELAP	2966	New York *	11320
Colorado	Certified	North Carolina	06701
Connecticut	PH-0107	North Dakota	R-009
Delaware	CA 006	Oregon (Primary AB) *	ORELAP 4034
Florida *	E871024	Pennsylvania *	68-565
Georgia	947	Rhode Island	LAO00326
Guam	15-003r	South Carolina	87016
Hawaii	Certified	South Dakota	Certified
Idaho	Certified	Tennessee	TN02839
Illinois *	200033	Texas *	T104704230-14-7
Indiana	C-CA-01	Utah *	CA000062015-8
Kansas *	E-10268	Vermont	VT0114
Kentucky	90107	Virginia *	460260
Louisiana *	LA16003	Washington	C838
Maine	CA0006	West Virginia	9943 C
Maryland	224	-----	-----
Commonwealth of Northern Marianas Is.	MP0004	Wyoming	8TMS-L
Massachusetts	M-CA006	EPA Region 5	Certified
Michigan	9906	Los Angeles County Sanitation Districts	10264

\* NELAP/TNI Recognized Accreditation Bodies

ISO 17025 Accredited Method List

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ANAB.  
Refer to Certificate and scope of accreditation (AT 1807) found at: <http://www.eatonanalytical.com>

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Environmental (Drinking Water)	Environmental (Waste Water)	Water as a Component of Food and Bev/Bev/ Bottled Water
1,4-Dioxane	EPA 522	x		x
2,3,7,8-TCDD	Modified EPA 1613B	x		x
Acrylamide	In House Method (2440)	x		x
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x		x
Asbestos	EPA 100.2	x	x	
Bicarbonate Alkalinity as HCO3	SM 2320B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method (2447)	x		x
Carbamates	EPA 531.2	x		x
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x		x
COD	EPA 410.4 / SM 5220D		x	
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x		x
Chlorinated Acids	EPA 555	x		x
Chlorine Dioxide	SM 4500-CLO2 D	x		x
Chlorine -Total/Free/ Combined Residual	SM 4500-CI G	x	x	x
Conductivity	EPA 120.1		x	
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x		x
Cryptosporidium	EPA 1622, 1623	x		x
Cyanide, Amenable	SM 4500-CN G	x	x	
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method (2470)	x		x
Diquat and Paraquat	EPA 549.2	x		x
DBP/HAA	SM 6251B	x		x
Dissolved Oxygen	SM 4500-O G		x	x
DOC	SM 5310C	x		x
E. Coli (MTF/EC+MUG)		x		x
E. Coli (CFR 141.21(f)(6)(i))		x		x
E. Coli	SM 9223		x	
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x		x
E. Coli (Enumeration)	SM 9223B	x		x
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x		x
EDTA and NTA	In House Method (2454)	x		x
Endothall	EPA 548.1	x		x
Endothall	In-house Method (2445)	x		x
Enterococci	SM 9230B	x	x	
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)		x	
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x		x
Fecal Coliform with Chlorine Present	SM 9221E		x	
Fecal Streptococci	SM 9230B	x	x	
Fluoride	SM 4500-F C	x	x	x
Giardia	EPA 1623	x		x
Glyphosate	EPA 547	x		x
Gross Alpha/Beta	EPA 900.0	x	x	x
Gross Alpha Coprecipitation	SM 7110 C	x	x	x
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method (2439)	x		x
Heterotrophic Bacteria	SM 9215 B	x		x
Hexavalent Chromium	EPA 218.6	x	x	x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Environmental (Drinking Water)	Environmental (Waste Water)	Water as a Component of Food and Bev/Bev/ Bottled Water
Hexavalent Chromium	EPA 218.7	x		x
Hexavalent Chromium	SM 3500-Cr B		x	
Hormones	EPA 539	x		x
Hydroxide as OH Calc.	SM 2330B	x		x
Kjeldahl Nitrogen	EPA 351.2		x	
Legionella	CDC Legionella	x		x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA (2360)	x		x
NDMA	EPA 521	x		x
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x		x
Ortho Phosphate	EPA 365.1	x	x	x
Ortho Phosphate	SM 4500P E			x
Ortho Phosphorous	SM 4500P E	x		
Oxyhalides Disinfection Byproducts	EPA 317.0	x		x
Perchlorate	EPA 331.0	x		x
Perchlorate (low and high)	EPA 314.0	x		x
Perfluorinated Alkyl Acids	EPA 537	x		x
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method, based on EPA 532 (2448)	x		x
Pseudomonas	IDEXX Pseudalert (2461)	x		x
Radium-226	GA Institute of Tech	x		x
Radium-228	GA Institute of Tech	x		x
Radon-222	SM 7500RN	x		x
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D		x	
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4		x	
Semi-VOC	EPA 525.2	x		x
Semi-VOC	EPA 625		x	x
Silica	SM 4500-Si D	x	x	
Silica	SM 4500-SiO2 C	x	x	
Sulfide	SM 4500-S <sup>2-</sup> D		x	
Sulfite	SM 4500-SO <sup>3-</sup> B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x		x
Total Coliform (P/A)	SM 9221 A, B	x		x
Total Coliform (Enumeration)	SM 9221 A, B, C	x		x
Total Coliform / E. coli	Colisure (2346)	x		x
Total Coliform	SM 9221B		x	
Total Coliform with Chlorine Present	SM 9221B		x	
Total Coliform / E.coli (P/A and Enumeration)	SM 9223	x		x
TOC	SM 5310C	x	x	x
TOX	SM 5320B		x	
Total Phenols	EPA 420.1		x	
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P E		x	
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x	x	
Uranium by ICP/MS	EPA 200.8	x		x
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x		x
VOC	EPA 624		x	x
VOC	EPA SW 846 8260	x		x
VOC	In House Method (2411)	x		x
Yeast and Mold	SM 9610	x		x

750 Royal Oaks Dr., Ste 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (626) 386-1101 <http://www.EatonAnalytical.com>



Eaton Analytical

### Acknowledgement of Samples Received

Addr: Aqua Pennsylvania, Inc.  
762 Lancaster Avenue  
Bryn Mawr, PA 19010-3489

Client ID: PHILLYSUB  
Folder #: 574641  
Project: PFC  
Sample Group: PFC Monitoring Horsham

Attn: Chuck Hertz  
Phone: (610) 645-1145

Project Manager: Thomas.D.French  
Phone: (480) 778-1558

The following samples were received from you on **March 18, 2016 at 10:59**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201602060106	Horsham Well # 17	03/16/2016 1115
	@537	
201602060105	Horsham Well # 10	03/16/2016 1200
	@537	
201602060107	Horsham Well # 21	03/16/2016 1030
	@537	

#### Test Description

@537 -- Perfluorinated Alkyl Acids



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Fax: 626 386 1101

800 566 LABS (800 566 5227)

# CHAIN OF CUSTODY RECORD

574641

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: \_\_\_\_\_

SAMPLES CHECKED AGAINST COC BY: MSV

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP RECEIVED AT:

Colton / No. California / Arizona \_\_\_\_\_ °C (Compliance: 4 ± 2 °C)

Monrovia 5.6 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen \_\_\_\_\_ Partially Frozen  Thawed \_\_\_\_\_ Wet Ice \_\_\_\_\_ No Ice \_\_\_\_\_

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: \_\_\_\_\_

SAMPLES REC'D DAY OF COLLECTION?  (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Aqua Pennsylvania, Inc.		PROJECT CODE:		COMPLIANCE SAMPLES <input type="checkbox"/> (check for yes)		NON-COMPLIANCE SAMPLES <input checked="" type="checkbox"/> (check for yes)	
EEA CLIENT CODE:		COC ID:		- Requires state forms <input type="checkbox"/>		REGULATION INVOLVED:	
SAMPLE GROUP: Aqua pennsylvania, Inc.		Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA, ...)					
SEE ATTACHED BOTTLE ORDER FOR ANALYSES <input type="checkbox"/> (check for yes), OR		list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)					
TAT requested: rush by adv notice only		STD <u>X</u> 1 wk ___ 3 day ___ 2 day ___ 1 day ___					
SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
3/16/16	1115	Horsham Well #17		RGW			Raw Water
3/16/16	1200	Horsham Well #10		RGW			Raw Water
3/16/16	1030	Horsham Well #21		RGW			Raw Water
							Not for UCMR3

\* MATRIX TYPES: RSW = Raw Surface Water    CFW = Chlor(am)inated Finished Water    SEAW = Sea Water    BW = Bottled Water    SO = Soil    O = Other - Please Identify  
 RGW = Raw Ground Water    FW = Other Finished Water    WW = Waste Water    SW = Storm Water    SL = Sludge

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	BP	Aqua Pennsylvania, Inc.	3/16/16	
RELINQUISHED BY:	BP	Aqua Pennsylvania, Inc.	3/16/16	1500
RECEIVED BY:	Michael Senft	Aqua Pennsylvania, Inc.	3/17/16	1500
RELINQUISHED BY:	Michael Senft	Aqua Pennsylvania, Inc.	3/17/16	1630
RECEIVED BY:				

*Handwritten signatures and initials*

COUran

200

3/16/16

# INTERNAL CHAIN OF CUSTODY RECORD

COMPANY NAME / EEA CLIENT CODE: <u>aqua</u>	PROJECT CODE:
--	---------------

SAMPLE TEMP RECEIVED:

SAMPLES REC'D DAY OF COLLECTION?

IR Gun ID = 518A (Observation = 5.9 °C) (Corr. Factor -0.3 °C) (Final = 5.6 °C)

TYPE OF ICE: Real  Synthetic  No Ice  CONDITION OF ICE: Frozen  Partially Frozen  Thawed  N/A

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: \_\_\_\_\_

Compliance Acceptance Criteria:

- 1) Chemistry: ≤ 6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥ 10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

If over temp is not confirmed, then record each temperature of each quadrant

1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)

- 4) UCMR3 : 524.3: (Observation = \_\_\_\_\_ °C) (Corr. Factor \_\_\_\_\_ °C) (Final = \_\_\_\_\_ °C)  
(non-GLEC) 522: (Observation = \_\_\_\_\_ °C) (Corr. Factor \_\_\_\_\_ °C) (Final = \_\_\_\_\_ °C)

≤ 10°C if received within 48 hours of sample collection (not the same business day); ≤ 6°C if received after 48 hours of sample collection. Measure temperature for each method above.

- 5) LT2: Giardia /Cryptosporidium: <20 °C, not frozen (received after 8 hours of sample collection )

E. Coli: < 10°C, not frozen (if received after 2 hours of sample collection)

Giardia/Crypto: (Observation = \_\_\_\_\_ °C) (Corr. Factor \_\_\_\_\_ °C) (Final = \_\_\_\_\_ °C)

E. Coli: (Observation = \_\_\_\_\_ °C) (Corr. Factor \_\_\_\_\_ °C) (Final = \_\_\_\_\_ °C)

- 6) Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

Note: If samples are over temp, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		Eurofins Eaton Analytical		

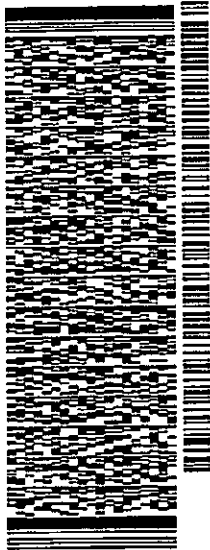
ORIGIN ID: WAWA (810) 845-1176  
MICHAEL SENFT  
AQUA  
782 WEST LANCASTER AVENUE  
BRYN MAWR, PA 19010  
UNITED STATES US

SHIP DATE: 17MAR16  
ACT WT: 19.00 LB  
CAD: 1000613300N1E13730  
DIMS: 24x3x14 IN  
BILL RECIPIENT

TO LOGIN

MWH AMERICAS, INC.  
750 ROYAL OAKS DRIVE  
SUITE 100  
MONROVIA CA 91016  
(626) 386-1100 REF: UOAR3  
NV: 15-3031 PO. DEPT: 15-3031

540J1ACF34/727F



15181682828511v

TRK# 7759 0242 5948  
0201

FRI - 18 MAR 3:00P  
STANDARD OVERNIGHT

NH WHPA

91016  
CA-US BUR



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Eaton Analytical

Laboratory Comments  
Report: 574641

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Chuck Hertz  
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The Comments Report may be blank if there are no comments for this report.





Eaton Analytical

Laboratory Hits  
Report: 574641

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Aqua Pennsylvania, Inc.  
Chuck Hertz  
762 Lancaster Avenue  
Bryn Mawr, PA 19010-3489

Samples Received on:  
03/18/2016 10:59

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
<b>201602060105      <u>Horsham Well # 10</u></b>						
03/23/2016 02:34	Perfluorobutanesulfonic acid		0.0043		ug/L	0.0025
03/23/2016 02:34	Perfluoroheptanoic acid		0.016		ug/L	0.0025
03/23/2016 02:34	Perfluorohexanesulfonic acid		0.0069		ug/L	0.0025
03/23/2016 02:34	Perfluorohexanoic acid		0.026		ug/L	0.0025
03/23/2016 02:34	Perfluorononanoic acid		0.042		ug/L	0.0025
03/23/2016 02:34	Perfluorooctanesulfonic acid		0.020		ug/L	0.0025
03/23/2016 02:34	Perfluorooctanoic acid		0.048		ug/L	0.0025
<b>201602060106      <u>Horsham Well # 17</u></b>						
03/23/2016 02:59	Perfluorobutanesulfonic acid		0.0087		ug/L	0.0025
03/23/2016 02:59	Perfluoroheptanoic acid		0.0085		ug/L	0.0025
03/23/2016 02:59	Perfluorohexanesulfonic acid		0.041		ug/L	0.0025
03/23/2016 02:59	Perfluorohexanoic acid		0.016		ug/L	0.0025
03/23/2016 02:59	Perfluorononanoic acid		0.0026		ug/L	0.0025
03/23/2016 02:59	Perfluorooctanesulfonic acid		0.078		ug/L	0.0025
03/23/2016 02:59	Perfluorooctanoic acid		0.024		ug/L	0.0025
<b>201602060107      <u>Horsham Well # 21</u></b>						
03/23/2016 03:25	Perfluorobutanesulfonic acid		0.0056		ug/L	0.0025
03/23/2016 03:25	Perfluoroheptanoic acid		0.0033		ug/L	0.0025
03/23/2016 03:25	Perfluorohexanesulfonic acid		0.0053		ug/L	0.0025
03/23/2016 03:25	Perfluorohexanoic acid		0.0048		ug/L	0.0025
03/23/2016 03:25	Perfluorooctanesulfonic acid		0.011		ug/L	0.0025
03/23/2016 03:25	Perfluorooctanoic acid		0.013		ug/L	0.0025

SUMMARY OF POSITIVE DATA ONLY



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Laboratory Data  
Report: 574641

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Chuck Hertz  
762 Lancaster Avenue  
Bryn Mawr, PA 19010-3489

Samples Received on:  
03/18/2016 10:59

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
<b>Horsham Well # 10 (201602060105)</b>					<b>Sampled on 03/16/2016 1200</b>			
<b>EPA 537 - Perfluorinated Alkyl Acids</b>								
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorobutanesulfonic acid	0.0043	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorodecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorododecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluoroheptanoic acid	0.016	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorohexanesulfonic acid	0.0069	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorohexanoic acid	0.026	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorononanoic acid	0.042	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorooctanesulfonic acid	0.020	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorooctanoic acid	0.048	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorotetradecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluorotridecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) Perfluoroundecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) 13C-PFDA	107	%		1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) 13C-PFHxA	109	%		1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) 13C-PFOA	94	%		1
3/21/2016	03/23/2016	02:34	899775	(EPA 537) 13C-PFOS	95	%		1
<b>Horsham Well # 17 (201602060106)</b>					<b>Sampled on 03/16/2016 1115</b>			
<b>EPA 537 - Perfluorinated Alkyl Acids</b>								
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorobutanesulfonic acid	0.0087	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorodecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorododecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluoroheptanoic acid	0.0085	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorohexanesulfonic acid	0.041	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorohexanoic acid	0.016	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorononanoic acid	0.0026	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorooctanesulfonic acid	0.078	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorooctanoic acid	0.024	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorotetradecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluorotridecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) Perfluoroundecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) 13C-PFDA	98	%		1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) 13C-PFHxA	103	%		1
3/21/2016	03/23/2016	02:59	899775	(EPA 537) 13C-PFOA	103	%		1

Rounding on totals after summation.  
(c) - indicates calculated results



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Laboratory Data  
Report: 574641

Aqua Pennsylvania, Inc.  
Chuck Hertz  
762 Lancaster Avenue  
Bryn Mawr, PA 19010-3489

Samples Received on:  
03/18/2016 10:59

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/21/2016	03/23/2016	02:59 899775	(EPA 537)	13C-PFOS	104	%		1

**Horsham Well # 21 (201602060107)**

Sampled on 03/16/2016 1030

**EPA 537 - Perfluorinated Alkyl Acids**

3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorobutanesulfonic acid	0.0056	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorodecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorododecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluoroheptanoic acid	0.0033	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorohexanesulfonic acid	0.0053	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorohexanoic acid	0.0048	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorononanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorooctanesulfonic acid	0.011	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorooctanoic acid	0.013	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorotetradecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluorotridecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	Perfluoroundecanoic acid	ND	ug/L	0.0025	1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	13C-PFDA	92	%		1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	13C-PFHxA	89	%		1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	13C-PFOA	109	%		1
3/21/2016	03/23/2016	03:25 899775	(EPA 537)	13C-PFOS	107	%		1

Rounding on totals after summation.  
(c) - indicates calculated results



Eaton Analytical

Laboratory  
QC Summary: 574641

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Aqua Pennsylvania, Inc.

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**QC Ref # 899775 - Perfluorinated Alkyl Acids**

**Analysis Date: 03/23/2016**

201602060105	Horsham Well # 10
201602060106	Horsham Well # 17
201602060107	Horsham Well # 21

Analyzed by: LHZ
Analyzed by: LHZ
Analyzed by: LHZ



Eaton Analytical

Laboratory QC  
Report: 574641

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
<b>QC Ref# 899775 - Perfluorinated Alkyl Acids by EPA 537</b>					<b>Analysis Date: 03/22/2016</b>				
LCS1	13C-PFDA (S)			93.8	%	94	(70-130)		
LCS2	13C-PFDA (S)			92.0	%	92	(70-130)		
MBLK	13C-PFDA (S)			91.4	%	91	(70-130)		
MRL_CHK	13C-PFDA (S)			94.2	%	94	(70-130)		
MS_201603170285	13C-PFDA (S)			98.8	%	99	(70-130)		
MSD_201603170285	13C-PFDA (S)			93.2	%	93	(70-130)		
LCS1	13C-PFHxA (S)			94.8	%	95	(70-130)		
LCS2	13C-PFHxA (S)			96.0	%	96	(70-130)		
MBLK	13C-PFHxA (S)			93.1	%	93	(70-130)		
MRL_CHK	13C-PFHxA (S)			94.1	%	94	(70-130)		
MS_201603170285	13C-PFHxA (S)			103	%	103	(70-130)		
MSD_201603170285	13C-PFHxA (S)			96.4	%	96	(70-130)		
LCS1	13C-PFOA (I)			106	%	106	(50-150)		
LCS2	13C-PFOA (I)			106	%	107	(50-150)		
MBLK	13C-PFOA (I)			107	%	107	(50-150)		
MRL_CHK	13C-PFOA (I)			110	%	110	(50-150)		
MS_201603170285	13C-PFOA (I)			101	%	101	(50-150)		
MSD_201603170285	13C-PFOA (I)			104	%	104	(50-150)		
LCS1	13C-PFOS (I)			99.6	%	100	(50-150)		
LCS2	13C-PFOS (I)			104	%	104	(50-150)		
MBLK	13C-PFOS (I)			99.8	%	100	(50-150)		
MRL_CHK	13C-PFOS (I)			105	%	105	(50-150)		
MS_201603170285	13C-PFOS (I)			101	%	101	(50-150)		
MSD_201603170285	13C-PFOS (I)			103	%	103	(50-150)		
LCS1	Perfluorobutanesulfonic acid		0.022	0.0210	ug/L	95	(70-130)		
LCS2	Perfluorobutanesulfonic acid		0.022	0.0224	ug/L	101	(70-130)	30	6.5
MBLK	Perfluorobutanesulfonic acid			<0.00074	ug/L				
MRL_CHK	Perfluorobutanesulfonic acid		0.0022	0.00272	ug/L	123	(50-150)		
MS_201603170285	Perfluorobutanesulfonic acid	ND	0.0022	0.00235	ug/L	103	(50-150)		
MSD_201603170285	Perfluorobutanesulfonic acid	ND	0.0022	0.00244	ug/L	107	(50-150)	50	3.8
LCS1	Perfluorodecanoic acid		0.025	0.0244	ug/L	98	(70-130)		
LCS2	Perfluorodecanoic acid		0.025	0.0250	ug/L	100	(70-130)	30	2.4
MBLK	Perfluorodecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorodecanoic acid		0.0025	0.00274	ug/L	109	(50-150)		
MS_201603170285	Perfluorodecanoic acid	ND	0.0025	0.00266	ug/L	104	(50-150)		
MSD_201603170285	Perfluorodecanoic acid	ND	0.0025	0.00253	ug/L	99	(50-150)	50	5.0

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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Aqua Pennsylvania, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluorododecanoic acid		0.025	0.0245	ug/L	98	(70-130)		
LCS2	Perfluorododecanoic acid		0.025	0.0266	ug/L	107	(70-130)	30	8.2
MBLK	Perfluorododecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorododecanoic acid		0.0025	0.00268	ug/L	107	(50-150)		
MS_201603170285	Perfluorododecanoic acid	ND	0.0025	0.00294	ug/L	115	(50-150)		
MSD_201603170285	Perfluorododecanoic acid	ND	0.0025	0.00262	ug/L	102	(50-150)	50	12
LCS1	Perfluoroheptanoic acid		0.025	0.0251	ug/L	100	(70-130)		
LCS2	Perfluoroheptanoic acid		0.025	0.0283	ug/L	113	(70-130)	30	12
MBLK	Perfluoroheptanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluoroheptanoic acid		0.0025	0.00300	ug/L	120	(50-150)		
MS_201603170285	Perfluoroheptanoic acid	0.0029	0.0025	0.00580	ug/L	114	(50-150)		
MSD_201603170285	Perfluoroheptanoic acid	0.0029	0.0025	0.00599	ug/L	122	(50-150)	50	3.2
LCS1	Perfluorohexanesulfonic acid		0.024	0.0223	ug/L	94	(70-130)		
LCS2	Perfluorohexanesulfonic acid		0.024	0.0234	ug/L	99	(70-130)	30	4.8
MBLK	Perfluorohexanesulfonic acid			<0.00079	ug/L				
MRL_CHK	Perfluorohexanesulfonic acid		0.0024	0.00181	ug/L	76	(50-150)		
MS_201603170285	Perfluorohexanesulfonic acid	ND	0.0024	0.00279	ug/L	118	(50-150)		
MSD_201603170285	Perfluorohexanesulfonic acid	ND	0.0024	0.00214	ug/L	90	(50-150)	50	26
LCS1	Perfluorohexanoic acid		0.025	0.0252	ug/L	101	(70-130)		
LCS2	Perfluorohexanoic acid		0.025	0.0269	ug/L	107	(70-130)	30	6.5
MBLK	Perfluorohexanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorohexanoic acid		0.0025	0.00261	ug/L	104	(50-150)		
MS_201603170285	Perfluorohexanoic acid	0.0032	0.0025	0.00564	ug/L	99	(50-150)		
MSD_201603170285	Perfluorohexanoic acid	0.0032	0.0025	0.00595	ug/L	111	(50-150)	50	5.3
LCS1	Perfluorononanoic acid		0.025	0.0231	ug/L	92	(70-130)		
LCS2	Perfluorononanoic acid		0.025	0.0251	ug/L	101	(70-130)	30	8.3
MBLK	Perfluorononanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorononanoic acid		0.0025	0.00248	ug/L	99	(50-150)		
MS_201603170285	Perfluorononanoic acid	0.076	0.0025	0.0787	ug/L	108	(50-150)		
MSD_201603170285	Perfluorononanoic acid	0.076	0.0025	0.0791	ug/L	122	(50-150)	50	0.51
LCS1	Perfluorooctanesulfonic acid		0.024	0.0247	ug/L	103	(70-130)		
LCS2	Perfluorooctanesulfonic acid		0.024	0.0240	ug/L	100	(70-130)	30	2.9
MBLK	Perfluorooctanesulfonic acid			<0.0008	ug/L				
MRL_CHK	Perfluorooctanesulfonic acid		0.0024	0.00278	ug/L	116	(50-150)		
MS_201603170285	Perfluorooctanesulfonic acid	ND	0.0024	0.00234	ug/L	96	(50-150)		
MSD_201603170285	Perfluorooctanesulfonic acid	ND	0.0024	0.00242	ug/L	100	(50-150)	50	3.4
LCS1	Perfluorooctanoic acid		0.025	0.0242	ug/L	97	(70-130)		
LCS2	Perfluorooctanoic acid		0.025	0.0258	ug/L	103	(70-130)	30	6.4

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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## Aqua Pennsylvania, Inc.

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Perfluorooctanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorooctanoic acid		0.0025	0.00353	ug/L	141	(50-150)		
MS_201603170285	Perfluorooctanoic acid	0.073	0.0025	0.0747	ug/L	75	(50-150)		
MSD_201603170285	Perfluorooctanoic acid	0.073	0.0025	0.0760	ug/L	127	(50-150)	50	1.7
LCS1	Perfluorotetradecanoic acid		0.025	0.0223	ug/L	89	(70-130)		
LCS2	Perfluorotetradecanoic acid		0.025	0.0205	ug/L	82	(70-130)	30	8.4
MBLK	Perfluorotetradecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorotetradecanoic acid		0.0025	0.00258	ug/L	103	(50-150)		
MS_201603170285	Perfluorotetradecanoic acid	ND	0.0025	0.00213	ug/L	62	(50-150)		
MSD_201603170285	Perfluorotetradecanoic acid	ND	0.0025	0.00238	ug/L	71	(50-150)	50	11
LCS1	Perfluorotridecanoic acid		0.025	0.0205	ug/L	82	(70-130)		
LCS2	Perfluorotridecanoic acid		0.025	0.0218	ug/L	87	(70-130)	30	6.2
MBLK	Perfluorotridecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluorotridecanoic acid		0.0025	0.00231	ug/L	93	(50-150)		
MS_201603170285	Perfluorotridecanoic acid	ND	0.0025	0.00257	ug/L	102	(50-150)		
MSD_201603170285	Perfluorotridecanoic acid	ND	0.0025	0.00238	ug/L	95	(50-150)	50	7.7
LCS1	Perfluoroundecanoic acid		0.025	0.0253	ug/L	101	(70-130)		
LCS2	Perfluoroundecanoic acid		0.025	0.0268	ug/L	107	(70-130)	30	5.8
MBLK	Perfluoroundecanoic acid			<0.00083	ug/L				
MRL_CHK	Perfluoroundecanoic acid		0.0025	0.00308	ug/L	123	(50-150)		
MS_201603170285	Perfluoroundecanoic acid	ND	0.0025	0.00319	ug/L	125	(50-150)		
MSD_201603170285	Perfluoroundecanoic acid	ND	0.0025	0.00315	ug/L	123	(50-150)	50	1.3

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.