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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)

NELAP ACCREDITED TNI LABORATORY
ORELAP 4034

ilac-MRA

ACLASS ACCREDITED TESTING
AT-1807

Laboratory Report

for

Horsham Water & Sewer Authority
617 Horsham Road
Horsham, PA 19044
Attention: Tina M. O'Rourke
Fax: (215) 672-8065

Date of Issue
12/22/2014

EUROFINS EATON
ANALYTICAL

TDF: Thomas.D.French

Project Manager

Report: 511349
Project: UCMR3
Group: PA1460033/Horsham
W&SA GW

* 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.

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STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	New Hampshire *	2959
California-Colton- ELAP	2812	New Jersey *	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	New York *	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	Oregon (Primary AB) *	ORELAP 4034
Georgia	947	Pennsylvania *	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	Texas *	T104704230-14-7
Kansas *	E-10268	Utah *	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	Virginia *	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

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

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		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		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	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-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	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	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	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	x	x	
Endothall	EPA 548.1	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
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	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	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	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	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	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	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^3B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	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 F			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	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **Horsham Water & Sewer Authority**
617 Horsham Road
Horsham, PA 19044

Client ID: HORSHAM-PA
Folder #: 511349
Project: UCMR3
Sample Group: PA1460033/Horsham W&SA GW

Attn: Tina M. O'Rourke
Phone: (215) 672-8011

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

The following samples were received from you on **December 09, 2014** at **1421**. 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
201412090620	00113-113-Well # 22	12/08/2014 0830
	Sample Type: EP Sample Event: SE2 Facility ID: 00113 Sample Point ID: 113 PWSID: PA1460033 Static ID: EP	
	@UCMR3 522 C @UCMR3 537	
201412090621	FB::00113-113-Well # 22	12/08/2014 0830
	Static ID: FB	
	@UCMR3 537 FB	

Test Description

@UCMR3 522 C -- UCMR3 1,4-Dioxane by EPA 522

@UCMR3 537 -- UCMR3 537

@UCMR3 537 FB -- UCMR3 537

Reported: 12/22/2014

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UCMR3 CHAIN OF CUSTODY RECORD

511349

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016-3629
Phone: 626 386 1100/ 800 566 LABS (800 566 5227)
Fax: 626 386 1101
Website: www.EatonAnalytical.com

PWSID: PA1460033
Example: (CA1234567)

EUROFINS EATON ANALYTICAL USE ONLY: Folder No:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY: tw

SAMPLE TEMP RECEIVED AT:

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

[ ] Colton / No. California / Arizona _____ °C (Compliance: ≤10°C for the first 48 hours or ≤6°C after 48 hours)

[x] Monrovia 2.8-0.2=2.6 °C (Compliance: ≤10°C for the first 48 hours or ≤6°C after 48 hours)

CONDITION OF BLUE ICE: Frozen x Partially Frozen ____ Thawed ____ Wet Ice ____ No Ice ____

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

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Aqua Pennsylvania, Inc.

PROJECT CODE: UCMR3-PA

EEA CLIENT CODE: HORSHAM-PA

COC ID:

SAMPLE GROUP: PA1460033/ Horsham Water & Sewer Authority

TAT requested: rush by adv notice only STD _x__ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

(check for yes)

COMPLIANCE SAMPLES [x]

- Requires upload to EPA database [x]

Regulation: UCMR3

NOTE: we MUST have PWSID#, Facility ID, Sample Point ID, and Sample Type to be able to upload data to EPA Database

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [ ] (check for yes), OR

list ANALYSES REQUIRED (Mark "X" in all test required for each sample line)

SAMPLE DATE	SAMPLE TIME	FACILITY ID (per EPA Requirement) - 5 characters Max	UNIQUE FIELD SAMPLE ID (per EPA Requirement) - 20 characters max	WATER SOURCE TYPE (1)	SAMPLE EVENT # (2)	SAMLE POINT TYPE ID (3)	DISINFECTANT TYPE (4)	UCMR3 200.8	UCMR3 200.8 - FB *	UCMR3 218.7	UCMR3 Chlorate	UCMR3 524.3	UCMR3 524.3 - TB *	UCMR3 522	UCMR3 537	UCMR3 537 - FB *	UCMR3 539	UCMR3 539 - FB *				SAMPLER COMMENTS
12/08/14	0830	00113-113	Well #22	SW	SE2	EP								X	X	X						

DEC 09 2014 14:12

Victor Elascencia
Eurofins Eaton Analytical

(1) **Water Source Type:** SW: Surface Water GW: Ground Water GU: Ground Water under the direct influence of SW MX: Any Combination of previous three water types

(2) **Sample Event Code:** SE1 (first) SE2 (second) SE3 (third) SE4 (fourth)

(3) **Sampling Point Type ID:** EP: Entry Point to the distribution system MR: Distribution System sample at maximum residence time

(4) **Disinfectant Type:** CLGA: Gaseous Chlorine CLOF: Offsite Generated Hypochlorite (stored as liquid form) CLON: Onsite Generated Hypochlorite (no storage) CAGC: Chloramine (formed from gaseous chlorine) CAOF: Chloroamine (formed from offsite hypochlorite) CAON: Chloroamine (formed from onsite hypochlorite) CLDO: Chlorine Dioxide OZON: Ozone ULVL: Ultraviolet Light OTHD: All Other Types of Disinfectant NODU: No Disinfectant Used

* Field Blank (FB) or Trip Blank (TB) are analyzed only when associated samples have positive results (>MRL)

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
SAMPLED BY:		E. Haupt	Aqua PA	12/08/14	0830
RELINQUISHED BY	A. Nguyen	A. Nguyen	Aqua PA	12/08/14	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

PAGE ____ OF ____

From: (610) 645-1176
Michael Senft
Aqua
762 West Lancaster Avenue

Bryn Mawr, PA 19010

Origin ID: WAYA

FedEx Express

J142214092303uv

Ship Date: 08DEC14
ActWgt: 15.0 LB
CAD: 100061330/INET3550

Dims: 24 X 13 X 14 IN

Delivery Address Bar Code

Ref # UCMR3
Invoice # 15-3031
PO #
Dept # 15-3031

SHIP TO: (626) 386-1100 BILL RECIPIENT

LOGIN
MWH Americas,INC,
750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016

TUE - 09 DEC AA
STANDARD OVERNIGHT

TRK# 0201 7721 3689 7485

NH WHPA

91016
CA-US
BUR

522G2/DC75/8AC9

After printing this label:
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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Laboratory Comments
Report: 511349

Horsham Water & Sewer Authority
Tina M. O'Rourke
617 Horsham Road
Horsham, PA 19044

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

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UCMR Field Blank
Report: 511349

Horsham Water & Sewer Authority
Tina M. O'Rourke
617 Horsham Road
Horsham, PA 19044

Samples Received on:
12/09/2014 1421

The results section will be blank if there are no exceedances of UCMR3 Field Blank criteria. Field Blank Evaluation is required for positive detection in the associated sample for Metals by 200.8, VOCs by 524.3, PFCs by 537, and Hormones by 539 (SS monitoring only). A detection on this report indicates need for re-sample for the associated site and test. Reference: UCMR3 Laboratory Approval Requirements and Information Document V2, May 2012 section 8.1 Field Blanks.

UCMR3 Field Blanks are not required to be analyzed, if the target analytes are not detected in the associated samples. In that event, the Field Blank data are not available (NA) for reporting.

Results Section

Analyzed	Analyte	Sample ID	Result	Units	UCMR Limit

SUMMARY OF POSITIVE DATA ONLY

Method	Method description	Positive Data Limit = UCMR Limit
@UCMR3 200.8 FB	Metals	Any detection Greater than 1/3
@UCMR3 524.3 TB	Volatiles	MRL
@UCMR3 537 FB	Perfluorinated	Any detection Greater than 1/3
@UCMR3 539 FB	Hormones	MRL

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Laboratory Hits
Report: 511349

Horsham Water & Sewer Authority
Tina M. O'Rourke
617 Horsham Road
Horsham, PA 19044

Samples Received on:
12/09/2014 1421

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201412090620	**00113-113-Well # 22**				
12/19/2014 5:10	1,4-Dioxane		0.094		ug/L	0.07

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 511349

Horsham Water & Sewer Authority
Tina M. O'Rourke
617 Horsham Road
Horsham, PA 19044

Samples Received on:
12/09/2014 1421

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
00113-113-Well # 22 (201412090620)						**Sampled on 12/08/2014 0830**		
Sample Type: EP								
Sample Event: SE2								
Facility ID: 00113								
Sample Point ID: 113								
PWSID: PA1460033								
Static ID: EP								
EPA 522 - UCMR3 1,4-Dioxane by EPA 522								
12/16/2014	12/19/2014 5:10	810255	(EPA 522)	1,4-Dioxane	0.094	ug/L	0.07	1
12/16/2014	12/19/2014 5:10	810255	(EPA 522)	Dioxane-d8	87	%		1
12/16/2014	12/19/2014 5:10	810255	(EPA 522)	THF-d8	130	%		1
EPA 537 - UCMR3 537								
	12/15/2014 20:11	809342	(EPA 537)	Perfluoro octanesulfonic acid - PFOS	ND	ug/L	0.04	1
	12/15/2014 20:11	809342	(EPA 537)	Perfluoro-1-butanesulfonic acid -PFBS	ND	ug/L	0.09	1
	12/15/2014 20:11	809342	(EPA 537)	Perfluoro-1-hexanesulfonic acid - PFHxS	ND	ug/L	0.03	1
	12/15/2014 20:11	809342	(EPA 537)	Perfluoroheptanoic acid - PFHpA	ND	ug/L	0.01	1
	12/15/2014 20:11	809342	(EPA 537)	Perfluoro-n-nonanoic acid -PFNA	ND	ug/L	0.02	1
	12/15/2014 20:11	809342	(EPA 537)	Perfluorooctanoic acid - PFOA	ND	ug/L	0.02	1
	12/15/2014 20:11	809342	(EPA 537)	13C-PFDA - Surr#2	88	%		1
	12/15/2014 20:11	809342	(EPA 537)	13C-PFHxA - Surr#1	103	%		1
	12/15/2014 20:11	809342	(EPA 537)	13C-PFOA– IS#1	110	%		1
	12/15/2014 20:11	809342	(EPA 537)	13C-PFOS– IS#2	104	%		1

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

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Laboratory
QC Summary: 511349

Horsham Water & Sewer Authority

QC Ref # 809342 - UCMR3 537
201412090620 00113-113-Well # 22

Analysis Date: 12/15/2014
Analyzed by: 1CL

QC Ref # 810255 - UCMR3 1,4-Dioxane by EPA 522
201412090620 00113-113-Well # 22

Analysis Date: 12/19/2014
Analyzed by: PAC

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Laboratory QC
Report: 511349

Horsham Water & Sewer Authority

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 809342 - UCMR3 537 by EPA 537						**Analysis Date: 12/15/2014**			
CCCH	13C-PFDA - Surr#2 (S)			95.5	%	96	(70-130)		
CCCL	13C-PFDA - Surr#2 (S)			95.9	%	96	(70-130)		
CCCM	13C-PFDA - Surr#2 (S)			97.5	%	98	(70-130)		
MBLK_HI	13C-PFDA - Surr#2 (S)			97.3	%	97	(70-130)		
MRLHI	13C-PFDA - Surr#2 (S)			100	%	100	(70-130)		
MS1_201412090511	13C-PFDA - Surr#2 (S)			101	%	101	(70-130)		
MSD1_201412090511	13C-PFDA - Surr#2 (S)			98.6	%	99	(70-130)		
QCS	13C-PFDA - Surr#2 (S)			95.6	%	96	(70-130)		
CCCH	13C-PFHxA - Surr#1 (S)			100	%	100	(70-130)		
CCCL	13C-PFHxA - Surr#1 (S)			102	%	102	(70-130)		
CCCM	13C-PFHxA - Surr#1 (S)			100	%	100	(70-130)		
MBLK_HI	13C-PFHxA - Surr#1 (S)			104	%	104	(70-130)		
MRLHI	13C-PFHxA - Surr#1 (S)			102	%	103	(70-130)		
MS1_201412090511	13C-PFHxA - Surr#1 (S)			108	%	108	(70-130)		
MSD1_201412090511	13C-PFHxA - Surr#1 (S)			102	%	102	(70-130)		
QCS	13C-PFHxA - Surr#1 (S)			96.8	%	97	(70-130)		
CCCH	13C-PFOA– IS#1 (I)			101	%	101	(50-150)		
CCCL	13C-PFOA– IS#1 (I)			99.9	%	100	(50-150)		
CCCM	13C-PFOA– IS#1 (I)			101	%	101	(50-150)		
MBLK_HI	13C-PFOA– IS#1 (I)			106	%	106	(50-150)		
MRLHI	13C-PFOA– IS#1 (I)			107	%	107	(50-150)		
MS1_201412090511	13C-PFOA– IS#1 (I)			102	%	103	(50-150)		
MSD1_201412090511	13C-PFOA– IS#1 (I)			107	%	107	(50-150)		
QCS	13C-PFOA– IS#1 (I)			98.2	%	98	(50-150)		
CCCH	13C-PFOS– IS#2 (I)			102	%	102	(50-150)		
CCCL	13C-PFOS– IS#2 (I)			96.8	%	97	(50-150)		
CCCM	13C-PFOS– IS#2 (I)			103	%	103	(50-150)		
MBLK_HI	13C-PFOS– IS#2 (I)			100	%	100	(50-150)		
MRLHI	13C-PFOS– IS#2 (I)			105	%	105	(50-150)		
MS1_201412090511	13C-PFOS– IS#2 (I)			102	%	102	(50-150)		
MSD1_201412090511	13C-PFOS– IS#2 (I)			101	%	101	(50-150)		
QCS	13C-PFOS– IS#2 (I)			94.5	%	95	(50-150)		
CCCH	Perfluoro octanesulfonic acid - PFOS		0.13	0.132	ug/L	103	(70-130)		
CCCL	Perfluoro octanesulfonic acid - PFOS		0.032	0.0320	ug/L	100	(50-150)		
CCCM	Perfluoro octanesulfonic acid - PFOS		0.064	0.0633	ug/L	99	(70-130)		
MBLK_HI	Perfluoro octanesulfonic acid - PFOS	ND		<0.01333	ug/L				

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Laboratory QC
Report: 511349

Horsham Water & Sewer Authority

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Perfluoro octanesulfonic acid - PFOS		0.04	0.0409	ug/L	102	(50-150)		
MS1_201412090511	Perfluoro octanesulfonic acid - PFOS	ND	0.04	0.0450	ug/L	110	(50-150)		
MSD1_201412090511	Perfluoro octanesulfonic acid - PFOS	ND	0.04	0.0455	ug/L	112	(50-150)	30	1.1
QCS	Perfluoro octanesulfonic acid - PFOS		0.048	0.0447	ug/L	93	(70-130)		
CCCH	Perfluoro-1-butanesulfonic acid -PFBS		0.29	0.296	ug/L	102	(70-130)		
CCCL	Perfluoro-1-butanesulfonic acid -PFBS		0.078	0.0775	ug/L	99	(50-150)		
CCCM	Perfluoro-1-butanesulfonic acid -PFBS		0.15	0.146	ug/L	100	(70-130)		
MBLK_HI	Perfluoro-1-butanesulfonic acid -PFBS	ND		<0.03033	ug/L				
MRLHI	Perfluoro-1-butanesulfonic acid -PFBS		0.09	0.0982	ug/L	109	(50-150)		
MS1_201412090511	Perfluoro-1-butanesulfonic acid -PFBS	ND	0.091	0.106	ug/L	116	(50-150)		
MSD1_201412090511	Perfluoro-1-butanesulfonic acid -PFBS	ND	0.091	0.103	ug/L	112	(50-150)	30	2.9
QCS	Perfluoro-1-butanesulfonic acid -PFBS		0.044	0.0537	ug/L	121	(70-130)		
CCCH	Perfluoro-1-hexanesulfonic acid - PFHxS		0.096	0.0978	ug/L	102	(70-130)		
CCCL	Perfluoro-1-hexanesulfonic acid - PFHxS		0.024	0.0249	ug/L	104	(50-150)		
CCCM	Perfluoro-1-hexanesulfonic acid - PFHxS		0.048	0.0477	ug/L	99	(70-130)		
MBLK_HI	Perfluoro-1-hexanesulfonic acid - PFHxS	ND		<0.0100	ug/L				
MRLHI	Perfluoro-1-hexanesulfonic acid - PFHxS		0.03	0.0303	ug/L	101	(50-150)		
MS1_201412090511	Perfluoro-1-hexanesulfonic acid - PFHxS	ND	0.03	0.0338	ug/L	111	(50-150)		
MSD1_201412090511	Perfluoro-1-hexanesulfonic acid - PFHxS	ND	0.03	0.0343	ug/L	112	(50-150)	30	1.5
QCS	Perfluoro-1-hexanesulfonic acid - PFHxS		0.048	0.0442	ug/L	93	(70-130)		
CCCH	Perfluoroheptanoic acid - PFHpA		0.032	0.0318	ug/L	99	(70-130)		
CCCL	Perfluoroheptanoic acid - PFHpA		0.008	0.00791	ug/L	99	(50-150)		
CCCM	Perfluoroheptanoic acid - PFHpA		0.016	0.0159	ug/L	99	(70-130)		
MBLK_HI	Perfluoroheptanoic acid - PFHpA	ND		<0.00333	ug/L				
MRLHI	Perfluoroheptanoic acid - PFHpA		0.01	0.0102	ug/L	101	(50-150)		
MS1_201412090511	Perfluoroheptanoic acid - PFHpA	ND	0.01	0.0110	ug/L	110	(50-150)		
MSD1_201412090511	Perfluoroheptanoic acid - PFHpA	ND	0.01	0.0107	ug/L	106	(50-150)	30	3.7
QCS	Perfluoroheptanoic acid - PFHpA		0.05	0.0510	ug/L	102	(70-130)		
CCCH	Perfluoro-n-nonanoic acid -PFNA		0.064	0.0648	ug/L	101	(70-130)		
CCCL	Perfluoro-n-nonanoic acid -PFNA		0.016	0.0166	ug/L	103	(50-150)		
CCCM	Perfluoro-n-nonanoic acid -PFNA		0.032	0.0325	ug/L	102	(70-130)		
MBLK_HI	Perfluoro-n-nonanoic acid -PFNA	ND		<0.00666	ug/L				
MRLHI	Perfluoro-n-nonanoic acid -PFNA		0.02	0.0216	ug/L	108	(50-150)		
MS1_201412090511	Perfluoro-n-nonanoic acid -PFNA	ND	0.02	0.0224	ug/L	112	(50-150)		
MSD1_201412090511	Perfluoro-n-nonanoic acid -PFNA	ND	0.02	0.0215	ug/L	107	(50-150)	30	4.1
QCS	Perfluoro-n-nonanoic acid -PFNA		0.05	0.0448	ug/L	90	(70-130)		
CCCH	Perfluorooctanoic acid - PFOA		0.064	0.0624	ug/L	98	(70-130)		
CCCL	Perfluorooctanoic acid - PFOA		0.016	0.0162	ug/L	101	(50-150)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCM	Perfluorooctanoic acid - PFOA		0.032	0.0319	ug/L	100	(70-130)		
MBLK_HI	Perfluorooctanoic acid - PFOA	ND		<0.00666	ug/L				
MRLHI	Perfluorooctanoic acid - PFOA		0.02	0.0217	ug/L	109	(50-150)		
MS1_201412090511	Perfluorooctanoic acid - PFOA	ND	0.02	0.0231	ug/L	113	(50-150)		
MSD1_201412090511	Perfluorooctanoic acid - PFOA	ND	0.02	0.0221	ug/L	107	(50-150)	30	4.4
QCS	Perfluorooctanoic acid - PFOA		0.05	0.0486	ug/L	97	(70-130)		
QC Ref# 810255 - UCMR3 1,4-Dioxane by EPA 522 by EPA 522						**Analysis Date: 12/18/2014**			
CCCH	1,4-Dioxane		50	51.0	ug/L	102	(70-130)		
CCCL	1,4-Dioxane		0.07	0.0610	ug/L	87	(50-150)		
CCCM	1,4-Dioxane		20	19.2	ug/L	96	(70-130)		
LCS1	1,4-Dioxane		20	19.7	ug/L	98	(70-130)		
LCS2	1,4-Dioxane		20	19.0	ug/L	95	(70-130)	20	3.1
MBLK	1,4-Dioxane			<0.023	ug/L				
MRL_CHK	1,4-Dioxane		0.07	0.0580	ug/L	83	(50-150)		
MS1_201412100733	1,4-Dioxane	ND	0.07	0.0530	ug/L	76	(50-150)		
MSD1_201412100733	1,4-Dioxane	ND	0.07	0.0590	ug/L	84	(50-150)	20	11
CCCH	Dioxane-d8			105	%	105	(70-130)		
CCCL	Dioxane-d8			92.5	%	93	(70-130)		
CCCM	Dioxane-d8			99.1	%	99	(70-130)		
LCS1	Dioxane-d8			95.7	%	96	(70-130)		
LCS2	Dioxane-d8			95.9	%	96	(70-130)		
MBLK	Dioxane-d8			89.7	%				
MRL_CHK	Dioxane-d8			95.8	%	96	(70-130)		
MS1_201412100733	Dioxane-d8	88		91.8	%	92	(70-130)		
MSD1_201412100733	Dioxane-d8	88		96.2	%	96	(70-130)		
CCCH	THF-d8			101	%	101	(50-150)		
CCCL	THF-d8			110	%	110	(50-150)		
CCCM	THF-d8			130	%	130	(50-150)		
LCS1	THF-d8			122	%	122	(50-150)		
LCS2	THF-d8			115	%	115	(50-150)		
MBLK	THF-d8			125	%				
MRL_CHK	THF-d8			130	%	130	(50-150)		
MS1_201412100733	THF-d8	133		124	%	124	(50-150)		
MSD1_201412100733	THF-d8	133		115	%	115	(50-150)		

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