

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)



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
07/09/2014


EUROFINS EATON
ANALYTICAL

TDF: Thomas.D.French
Project Manager

Report: 487572
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.

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 *	T104704230-14-6
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

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/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/DCBP 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 9221 C, 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 ⁻² D)				x
Sulfite (SM 4500-SO ³⁻ B)		x	x	x
Surfactants (SM 5540C)		x	x	x
Taste and Odor Analytes (SM 6040E)		x	x	
Total Coliform (SM 9221 A, B, C)		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	

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

Version 002. Issued: 06/03/2014

Acknowledgement of Samples Received

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

Client ID: HORSHAM-PA
 Folder #: 487572
 Project: UCMR3
 Sample Group: PA1460033/Horsham W&SA GW

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

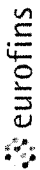
Project Manager: Thomas.D.French
 Phone: (480) 778-1558

The following samples were received from you on **June 27, 2014**. 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
<u>201406270329</u>	00108-108-Well # 9 Sample Type: EP Sample Event: SE1 Facility ID: 00108 Sample Point ID: 108 PWSID: PA1460033 Static ID: EP @UCMR3 522 C @UCMR3 537	06/25/2014 1000
<u>201406270330</u>	FB::00108-108-Well # 9 Static ID: FB @UCMR3 537 FB	06/25/2014 1000

Test Description

- @UCMR3 522 C -- UCMR3 1,4-Dioxane by EPA 522
- @UCMR3 537 -- UCMR3 537
- @UCMR3 537 FB -- UCMR3 537



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Fax: 626 386 1101

Website: www.EatonAnalytical.com

PWSID: PA1460033

Example: (CA1234567)

UCMR3 CHAIN OF CUSTODY RECORD

487572

EUROFINS EATON ANALYTICAL USE ONLY:

Folder No:

LOGIN COMMENTS: SAMPLES CHECKED AGAINST COC BY: VP

SAMPLES LOGGED IN BY: DS

SAMPLE TEMP RECEIVED AT: Colton / No. California / Arizona 27 °C (Compliance: ≤10°C for the first 48 hours or ≤6°C after 48 hours) (check for yes)

Monrovia 27 °C (Compliance: ≤10°C for the first 48 hours or ≤6°C after 48 hours)

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

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

TO BE COMPLETED BY SAMPLER: (check for yes)

COMPANY/AGENCY NAME: Aqua Pennsylvania, Inc. PROJECT CODE: UCMR3-PA Regulation: UCMR3

EPA CLIENT CODE: PHLLYSUB COC ID: PA1460033/ Horsham Water & Sewer Authority

TAT requested: rush by adv notice only STD_x_ 1 wk 3 day 2 day 1 day

SEE ATTACHED BOTTLE ORDER FOR ANALYSES 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	SAMPLE EVENT	SAMPLE POINT TYPE ID	DISINFECTANT TYPE ID	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	
06/25/14	10:00	00108-108	Well #9	GW	SE1	EP		X					X							

(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: Chloramine (formed from onsite hypochlorite) CAON: Chloramine (formed from onsite hypochlorite) CAOZ: Chlorine Dioxide 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)

SAMPLED BY: SIGNATURE: M. Bunting PRINT NAME: M. Bunting COMPANY: Aqua PA DATE: 06/25/14 TIME: 10:00

RELINQUISHED BY:

RECEIVED BY: A. Nguyen SIGNATURE: A. Nguyen PRINT NAME: A. Nguyen COMPANY: Aqua PA DATE: 06/26/14 TIME: 16:00

RECEIVED BY: V. PLASCENCIA SIGNATURE: V. PLASCENCIA PRINT NAME: V. PLASCENCIA COMPANY: AQUA PA DATE: 6/27/14 TIME: 11:43

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

Origin ID: WAYA



J14101402070326

Ship Date: 26JUN14
ActWgt: 15.0 LB
CAD: 100061330/INET3490

Dims: 24 X 13 X 14 IN

Bryn Mawr, PA 19010

Delivery Address Bar Code



SHIP TO: (626) 386-1100
LOGIN
MWH Americas, INC,
750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016

BILL RECIPIENT

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

1 of 7

FRI - 27 JUN AA
STANDARD OVERNIGHT

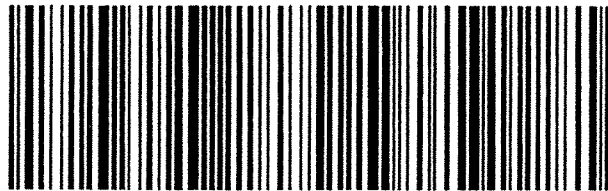
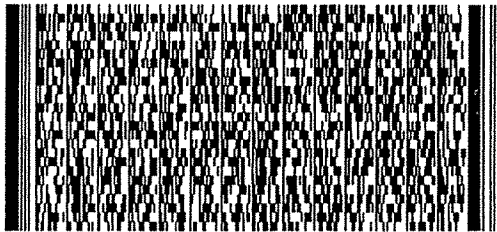
TRK# 7704 3360 2800

0201

MASTER

NC WHPA

91016
CA-US
BUR



522GS/BBCA/F220

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Laboratory Comments
Report: 487572

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: 487572

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

Samples Received on:
06/27/2014

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
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SUMMARY OF POSITIVE DATA ONLY

<u>Method</u>	<u>Method description</u>	<u>Positive Data Limit = UCMR Limit</u>
@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: 487572

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

Samples Received on:
06/27/2014

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
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SUMMARY OF POSITIVE DATA ONLY



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Laboratory Data
Report: 487572

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

Samples Received on:
06/27/2014

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution	
00108-108-Well # 9 (201406270329)						Sampled on 06/25/2014 1000			
Sample Type: EP									
Sample Event: SE1									
Facility ID: 00108									
Sample Point ID: 108									
PWSID: PA1460033									
Static ID: EP									
EPA 522 - UCMR3 1,4-Dioxane by EPA 522									
7/1/2014	07/08/2014	5:36	779540	(EPA 522)	1,4-Dioxane	ND	ug/L	0.07	1
7/1/2014	07/08/2014	5:36	779540	(EPA 522)	Dioxane-d8	95	%		1
7/1/2014	07/08/2014	5:36	779540	(EPA 522)	THF-d8	85	%		1
EPA 537 - UCMR3 537									
	07/02/2014	8:44	778869	(EPA 537)	Perfluoro octanesulfonic acid - PFOS	ND	ug/L	0.04	1
	07/02/2014	8:44	778869	(EPA 537)	Perfluoro-1-butanesulfonic acid -PFBS	ND	ug/L	0.09	1
	07/02/2014	8:44	778869	(EPA 537)	Perfluoro-1-hexanesulfonic acid - PFHxS	ND	ug/L	0.03	1
	07/02/2014	8:44	778869	(EPA 537)	Perfluoroheptanoic acid - PFHpA	ND	ug/L	0.01	1
	07/02/2014	8:44	778869	(EPA 537)	Perfluoro-n-nonanoic acid -PFNA	ND	ug/L	0.02	1
	07/02/2014	8:44	778869	(EPA 537)	Perfluorooctanoic acid - PFOA	ND	ug/L	0.02	1
	07/02/2014	8:44	778869	(EPA 537)	13C-PFDA - Surr#2	97	%		1
	07/02/2014	8:44	778869	(EPA 537)	13C-PFHxA - Surr#1	94	%		1
	07/02/2014	8:44	778869	(EPA 537)	13C-PFOA- IS#1	108	%		1
	07/02/2014	8:44	778869	(EPA 537)	13C-PFOS- IS#2	104	%		1

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



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Laboratory
QC Summary: 487572

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Horsham Water & Sewer Authority

QC Ref # 778869 - UCMR3 537

201406270329 00108-108-Well # 9

Analysis Date: 07/02/2014

Analyzed by: 1CL

QC Ref # 779540 - UCMR3 1,4-Dioxane by EPA 522

201406270329 00108-108-Well # 9

Analysis Date: 07/08/2014

Analyzed by: CRW

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Horsham Water & Sewer Authority

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 778869 - UCMR3 537 by EPA 537						Analysis Date: 07/02/2014			
CCCH	13C-PFDA - Surr#2 (S)			100	%	101	(70-130)		
CCCL	13C-PFDA - Surr#2 (S)			97.1	%	97	(70-130)		
CCCM	13C-PFDA - Surr#2 (S)			97.9	%	98	(70-130)		
MBLK_HI	13C-PFDA - Surr#2 (S)			105	%	105	(70-130)		
MRLHI	13C-PFDA - Surr#2 (S)			107	%	107	(70-130)		
MS1_201406260488	13C-PFDA - Surr#2 (S)			104	%	104	(70-130)		
MSD1_201406260488	13C-PFDA - Surr#2 (S)			102	%	102	(70-130)		
QCS	13C-PFDA - Surr#2 (S)			98.8	%	99	(70-130)		
CCCH	13C-PFHxA - Surr#1 (S)			97.0	%	97	(70-130)		
CCCL	13C-PFHxA - Surr#1 (S)			98.1	%	98	(70-130)		
CCCM	13C-PFHxA - Surr#1 (S)			96.5	%	96	(70-130)		
MBLK_HI	13C-PFHxA - Surr#1 (S)			101	%	101	(70-130)		
MRLHI	13C-PFHxA - Surr#1 (S)			101	%	101	(70-130)		
MS1_201406260488	13C-PFHxA - Surr#1 (S)			96.9	%	97	(70-130)		
MSD1_201406260488	13C-PFHxA - Surr#1 (S)			97.7	%	98	(70-130)		
QCS	13C-PFHxA - Surr#1 (S)			98.0	%	98	(70-130)		
CCCH	13C-PFOA- IS#1 (I)			104	%	104	(50-150)		
CCCL	13C-PFOA- IS#1 (I)			105	%	105	(50-150)		
CCCM	13C-PFOA- IS#1 (I)			103	%	103	(50-150)		
MBLK_HI	13C-PFOA- IS#1 (I)			104	%	104	(50-150)		
MRLHI	13C-PFOA- IS#1 (I)			107	%	107	(50-150)		
MS1_201406260488	13C-PFOA- IS#1 (I)			99.7	%	100	(50-150)		
MSD1_201406260488	13C-PFOA- IS#1 (I)			99.3	%	99	(50-150)		
QCS	13C-PFOA- IS#1 (I)			101	%	101	(50-150)		
CCCH	13C-PFOS- IS#2 (I)			104	%	104	(50-150)		
CCCL	13C-PFOS- IS#2 (I)			104	%	104	(50-150)		
CCCM	13C-PFOS- IS#2 (I)			104	%	104	(50-150)		
MBLK_HI	13C-PFOS- IS#2 (I)			97.6	%	98	(50-150)		
MRLHI	13C-PFOS- IS#2 (I)			102	%	102	(50-150)		
MS1_201406260488	13C-PFOS- IS#2 (I)			101	%	101	(50-150)		
MSD1_201406260488	13C-PFOS- IS#2 (I)			100	%	100	(50-150)		
QCS	13C-PFOS- IS#2 (I)			105	%	105	(50-150)		
CCCH	Perfluoro octanesulfonic acid - PFOS		0.13	0.127	ug/L	99	(70-130)		
CCCL	Perfluoro octanesulfonic acid - PFOS		0.032	0.0309	ug/L	97	(50-150)		
CCCM	Perfluoro octanesulfonic acid - PFOS		0.064	0.0644	ug/L	101	(70-130)		
MBLK_HI	Perfluoro octanesulfonic acid - PFOS	ND		<0.01333	ug/L				

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Perfluoro octanesulfonic acid - PFOS		0.04	0.0423	ug/L	106	(50-150)		
MS1_201406260488	Perfluoro octanesulfonic acid - PFOS	ND	0.04	0.0489	ug/L	104	(50-150)		
MSD1_201406260488	Perfluoro octanesulfonic acid - PFOS	ND	0.04	0.0486	ug/L	103	(50-150)	30	0.62
QCS	Perfluoro octanesulfonic acid - PFOS		0.048	0.0471	ug/L	98	(70-130)		
CCCH	Perfluoro-1-butanefulfonic acid -PFBS		0.29	0.289	ug/L	99	(70-130)		
CCCL	Perfluoro-1-butanefulfonic acid -PFBS		0.078	0.0770	ug/L	99	(50-150)		
CCCM	Perfluoro-1-butanefulfonic acid -PFBS		0.15	0.150	ug/L	103	(70-130)		
MBLK_HI	Perfluoro-1-butanefulfonic acid -PFBS	ND		<0.03033	ug/L				
MRLHI	Perfluoro-1-butanefulfonic acid -PFBS		0.09	0.107	ug/L	119	(50-150)		
MS1_201406260488	Perfluoro-1-butanefulfonic acid -PFBS	ND	0.091	0.108	ug/L	117	(50-150)		
MSD1_201406260488	Perfluoro-1-butanefulfonic acid -PFBS	ND	0.091	0.109	ug/L	117	(50-150)	30	0.92
QCS	Perfluoro-1-butanefulfonic acid -PFBS		0.044	0.0485	ug/L	109	(70-130)		
CCCH	Perfluoro-1-hexanesulfonic acid - PFHxS		0.096	0.0973	ug/L	101	(70-130)		
CCCL	Perfluoro-1-hexanesulfonic acid - PFHxS		0.024	0.0232	ug/L	97	(50-150)		
CCCM	Perfluoro-1-hexanesulfonic acid - PFHxS		0.048	0.0468	ug/L	98	(70-130)		
MBLK_HI	Perfluoro-1-hexanesulfonic acid - PFHxS	ND		<0.0100	ug/L				
MRLHI	Perfluoro-1-hexanesulfonic acid - PFHxS		0.03	0.0324	ug/L	108	(50-150)		
MS1_201406260488	Perfluoro-1-hexanesulfonic acid - PFHxS	ND	0.03	0.0364	ug/L	109	(50-150)		
MSD1_201406260488	Perfluoro-1-hexanesulfonic acid - PFHxS	ND	0.03	0.0365	ug/L	109	(50-150)	30	0.27
QCS	Perfluoro-1-hexanesulfonic acid - PFHxS		0.048	0.0445	ug/L	93	(70-130)		
CCCH	Perfluoroheptanoic acid - PFHpA		0.032	0.0320	ug/L	100	(70-130)		
CCCL	Perfluoroheptanoic acid - PFHpA		0.008	0.00781	ug/L	98	(50-150)		
CCCM	Perfluoroheptanoic acid - PFHpA		0.016	0.0161	ug/L	100	(70-130)		
MBLK_HI	Perfluoroheptanoic acid - PFHpA	ND		<0.00333	ug/L				
MRLHI	Perfluoroheptanoic acid - PFHpA		0.01	0.0102	ug/L	102	(50-150)		
MS1_201406260488	Perfluoroheptanoic acid - PFHpA	ND	0.01	0.0136	ug/L	100	(50-150)		
MSD1_201406260488	Perfluoroheptanoic acid - PFHpA	ND	0.01	0.0140	ug/L	104	(50-150)	30	2.9
QCS	Perfluoroheptanoic acid - PFHpA		0.05	0.0534	ug/L	107	(70-130)		
CCCH	Perfluoro-n-nonanoic acid -PFNA		0.064	0.0634	ug/L	99	(70-130)		
CCCL	Perfluoro-n-nonanoic acid -PFNA		0.016	0.0170	ug/L	106	(50-150)		
CCCM	Perfluoro-n-nonanoic acid -PFNA		0.032	0.0342	ug/L	107	(70-130)		
MBLK_HI	Perfluoro-n-nonanoic acid -PFNA	ND		<0.00666	ug/L				
MRLHI	Perfluoro-n-nonanoic acid -PFNA		0.02	0.0234	ug/L	117	(50-150)		
MS1_201406260488	Perfluoro-n-nonanoic acid -PFNA	ND	0.02	0.0237	ug/L	117	(50-150)		
MSD1_201406260488	Perfluoro-n-nonanoic acid -PFNA	ND	0.02	0.0235	ug/L	115	(50-150)	30	0.85
QCS	Perfluoro-n-nonanoic acid -PFNA		0.05	0.0487	ug/L	98	(70-130)		
CCCH	Perfluorooctanoic acid - PFOA		0.064	0.0635	ug/L	99	(70-130)		
CCCL	Perfluorooctanoic acid - PFOA		0.016	0.0156	ug/L	98	(50-150)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCM	Perfluorooctanoic acid - PFOA		0.032	0.0325	ug/L	101	(70-130)		
MBLK_HI	Perfluorooctanoic acid - PFOA	ND		<0.00666	ug/L				
MRLHI	Perfluorooctanoic acid - PFOA		0.02	0.0220	ug/L	110	(50-150)		
MS1_201406260488	Perfluorooctanoic acid - PFOA	ND	0.02	0.0391	ug/L	113	(50-150)		
MSD1_201406260488	Perfluorooctanoic acid - PFOA	ND	0.02	0.0385	ug/L	110	(50-150)	30	1.6
QCS	Perfluorooctanoic acid - PFOA		0.05	0.0504	ug/L	101	(70-130)		

QC Ref# 779540 - UCMR3 1,4-Dioxane by EPA 522 by EPA 522

Analysis Date: 07/07/2014

CCCH	1,4-Dioxane		50	54.8	ug/L	110	(70-130)		
CCCL	1,4-Dioxane		0.07	0.0700	ug/L	100	(50-150)		
CCCM	1,4-Dioxane		20	21.1	ug/L	106	(70-130)		
LCS1	1,4-Dioxane		20	16.2	ug/L	81	(70-130)		
MBLK	1,4-Dioxane			<0.023	ug/L				
MRL_CHK	1,4-Dioxane		0.07	0.0630	ug/L	90	(50-150)		
MS1_201406270399	1,4-Dioxane	0.16	0.07	0.239	ug/L	111	(50-150)		
MSD1_201406270399	1,4-Dioxane	0.16	0.07	0.246	ug/L	121	(50-150)	20	2.9
CCCH	Dioxane-d8			116	%	116	(70-130)		
CCCL	Dioxane-d8			108	%	108	(70-130)		
CCCM	Dioxane-d8			115	%	115	(70-130)		
LCS1	Dioxane-d8			90.3	%	90	(70-130)		
MBLK	Dioxane-d8			96.0	%				
MRL_CHK	Dioxane-d8			91.7	%	92	(70-130)		
MS1_201406270399	Dioxane-d8	93		93.1	%	93	(70-130)		
MSD1_201406270399	Dioxane-d8	93		91.9	%	92	(70-130)		
CCCH	THF-d8			81.2	%	81	(50-150)		
CCCL	THF-d8			82.8	%	83	(50-150)		
CCCM	THF-d8			78.9	%	79	(50-150)		
LCS1	THF-d8			78.5	%	79	(50-150)		
MBLK	THF-d8			67.6	%				
MRL_CHK	THF-d8			75.9	%	76	(50-150)		
MS1_201406270399	THF-d8	85		79.8	%	80	(50-150)		
MSD1_201406270399	THF-d8	85		63.0	%	63	(50-150)		

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