



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

10/29/2014

EUROFINS EATON
ANALYTICAL

TDF: Thomas.D.French

Project Manager

Report: 501267

Project: UCMR3

Group: PA1460033/Horsham
W&SA SW/MX

* 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 * | T104704230-14-7 |
| 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

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 (18h) | | 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-CI 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 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 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 | 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 #: 501267
 Project: UCMR3
 Sample Group: PA1460033/Horsham W&SA SW/MX

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 **September 27, 2014** at 1220. 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>201409270174</u> | 00017-EP001-Aqua PA Interconnect Sample Type: EP Sample Event: SE2 Facility ID: 00017 Sample Point ID: EP001 PWSID: PA1460033 @UCMR3 522 C @UCMR3 537 | 09/24/2014 0930 |
| <u>201409270175</u> | FB:00017-EP001-Aqua PA Interconnect @UCMR3 537 FB | 09/24/2014 0800 |

Test Description

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



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 Comments
Report: 501267

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.



Eaton Analytical

UCMR Field Blank
Report: 501267

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)

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

Samples Received on:
09/27/2014 1220

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

| <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 |



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 Hits
Report: 501267**

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

Samples Received on:
09/27/2014 1220

| Analyzed | Analyte | Sample ID | Result | Federal MCL | Units | MRL |
|------------------|-----------------------------|---|--------|-------------|-------|------|
| 10/24/2014 19:01 | 201409270174 1,4-Dioxane | <u>00017-EP001-Aqua PA Interconnect</u> | 0.12 | | ug/L | 0.07 |

SUMMARY OF POSITIVE DATA ONLY

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)

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

Samples Received on:
09/27/2014 1220

| Prepared | Analyzed | QC Ref # | Method | Analyte | Result | Units | MRL | Dilution |
|--|------------|----------|-----------|---|-------------|-----------------------------------|------|----------|
| 00017-EP001-Aqua PA Interconnect (201409270174) | | | | | | Sampled on 09/24/2014 0930 | | |
| Sample Type: EP | | | | | | | | |
| Sample Event: SE2 | | | | | | | | |
| Facility ID: 00017 | | | | | | | | |
| Sample Point ID: EP001 | | | | | | | | |
| PWSID: PA1460033 | | | | | | | | |
| EPA 522 - UCMR3 1,4-Dioxane by EPA 522 | | | | | | | | |
| 10/22/2014 | 10/24/2014 | 19:01 | 800649 | (EPA 522) | 1,4-Dioxane | 0.12 | ug/L | 0.07 1 |
| 10/22/2014 | 10/24/2014 | 19:01 | 800649 | (EPA 522) | Dioxane-d8 | 94 | % | 1 |
| 10/22/2014 | 10/24/2014 | 19:01 | 800649 | (EPA 522) | THF-d8 | 105 | % | 1 |
| EPA 537 - UCMR3 537 | | | | | | | | |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | ND | ug/L | 0.04 | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | Perfluoro-1-butanefulfonic acid -PFBS | ND | ug/L | 0.09 | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | ug/L | 0.03 | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | ND | ug/L | 0.01 | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.02 | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | Perfluorooctanoic acid - PFOA | ND | ug/L | 0.02 | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | 13C-PFDA - Surr#2 | 105 | % | | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | 13C-PFHxA - Surr#1 | 105 | % | | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | 13C-PFOA-- IS#1 | 109 | % | | 1 |
| 10/04/2014 | 1:05 | 796445 | (EPA 537) | 13C-PFOS-- IS#2 | 99 | % | | 1 |

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



Eaton Analytical

Laboratory
QC Summary: 501267

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)

Horsham Water & Sewer Authority

QC Ref # 796445 - UCMR3 537

201409270174 00017-EP001-Aqua PA Interconnect

Analysis Date: 10/04/2014

Analyzed by: 1CL

QC Ref # 800649 - UCMR3 1,4-Dioxane by EPA 522

201409270174 00017-EP001-Aqua PA Interconnect

Analysis Date: 10/24/2014

Analyzed by: CWG

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)

Horsham Water & Sewer Authority

| QC Type | Analyte | Native | Spiked | Recovered | Units | Yield (%) | Limits (%) | RPDLimit (%) | RPD% |
|--|--------------------------------------|--------|--------|-----------|-------|----------------------------------|------------|--------------|------|
| QC Ref# 796445 - UCMR3 537 by EPA 537 | | | | | | Analysis Date: 10/03/2014 | | | |
| CCCH | 13C-PFDA - Surr#2 (S) | | | 104 | % | 104 | (70-130) | | |
| CCCL | 13C-PFDA - Surr#2 (S) | | | 100 | % | 100 | (70-130) | | |
| CCCM | 13C-PFDA - Surr#2 (S) | | | 104 | % | 104 | (70-130) | | |
| MBLK_HI | 13C-PFDA - Surr#2 (S) | | | 96.4 | % | 96 | (70-130) | | |
| MRLHI | 13C-PFDA - Surr#2 (S) | | | 97.7 | % | 98 | (70-130) | | |
| MS1_201409250604 | 13C-PFDA - Surr#2 (S) | | | 90.9 | % | 91 | (70-130) | | |
| MSD1_201409250604 | 13C-PFDA - Surr#2 (S) | | | 87.8 | % | 88 | (70-130) | | |
| QCS | 13C-PFDA - Surr#2 (S) | | | 96.6 | % | 97 | (70-130) | | |
| CCCH | 13C-PFHxA - Surr#1 (S) | | | 106 | % | 106 | (70-130) | | |
| CCCL | 13C-PFHxA - Surr#1 (S) | | | 98.1 | % | 98 | (70-130) | | |
| CCCM | 13C-PFHxA - Surr#1 (S) | | | 104 | % | 104 | (70-130) | | |
| MBLK_HI | 13C-PFHxA - Surr#1 (S) | | | 99.6 | % | 100 | (70-130) | | |
| MRLHI | 13C-PFHxA - Surr#1 (S) | | | 98.6 | % | 99 | (70-130) | | |
| MS1_201409250604 | 13C-PFHxA - Surr#1 (S) | | | 97.4 | % | 97 | (70-130) | | |
| MSD1_201409250604 | 13C-PFHxA - Surr#1 (S) | | | 96.0 | % | 96 | (70-130) | | |
| QCS | 13C-PFHxA - Surr#1 (S) | | | 99.0 | % | 99 | (70-130) | | |
| CCCH | 13C-PFOA- IS#1 (I) | | | 100 | % | 100 | (50-150) | | |
| CCCL | 13C-PFOA- IS#1 (I) | | | 104 | % | 104 | (50-150) | | |
| CCCM | 13C-PFOA- IS#1 (I) | | | 95.3 | % | 95 | (50-150) | | |
| MBLK_HI | 13C-PFOA- IS#1 (I) | | | 112 | % | 113 | (50-150) | | |
| MRLHI | 13C-PFOA- IS#1 (I) | | | 107 | % | 107 | (50-150) | | |
| MS1_201409250604 | 13C-PFOA- IS#1 (I) | | | 107 | % | 107 | (50-150) | | |
| MSD1_201409250604 | 13C-PFOA- IS#1 (I) | | | 111 | % | 111 | (50-150) | | |
| QCS | 13C-PFOA- IS#1 (I) | | | 95.9 | % | 96 | (50-150) | | |
| CCCH | 13C-PFOS- IS#2 (I) | | | 102 | % | 102 | (50-150) | | |
| CCCL | 13C-PFOS- IS#2 (I) | | | 104 | % | 104 | (50-150) | | |
| CCCM | 13C-PFOS- IS#2 (I) | | | 102 | % | 102 | (50-150) | | |
| MBLK_HI | 13C-PFOS- IS#2 (I) | | | 109 | % | 109 | (50-150) | | |
| MRLHI | 13C-PFOS- IS#2 (I) | | | 98.7 | % | 99 | (50-150) | | |
| MS1_201409250604 | 13C-PFOS- IS#2 (I) | | | 103 | % | 103 | (50-150) | | |
| MSD1_201409250604 | 13C-PFOS- IS#2 (I) | | | 101 | % | 101 | (50-150) | | |
| QCS | 13C-PFOS- IS#2 (I) | | | 95.8 | % | 96 | (50-150) | | |
| CCCH | Perfluoro octanesulfonic acid - PFOS | | 0.13 | 0.130 | ug/L | 101 | (70-130) | | |
| CCCL | Perfluoro octanesulfonic acid - PFOS | | 0.032 | 0.0329 | ug/L | 103 | (50-150) | | |
| CCCM | Perfluoro octanesulfonic acid - PFOS | | 0.064 | 0.0641 | ug/L | 100 | (70-130) | | |
| MBLK_HI | Perfluoro octanesulfonic acid - PFOS | ND | | <0.01333 | ug/L | | | | |

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.

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)

Horsham Water & Sewer Authority

| QC Type | Analyte | Native | Spiked | Recovered | Units | Yield (%) | Limits (%) | RPDLimit (%) | RPD% |
|-------------------|---|--------|--------|-----------|-------|-----------|------------|--------------|------|
| MRLHI | Perfluoro octanesulfonic acid - PFOS | | 0.04 | 0.0388 | ug/L | 97 | (50-150) | | |
| MS1_201409250604 | Perfluoro octanesulfonic acid - PFOS | ND | 0.04 | 0.0359 | ug/L | 88 | (50-150) | | |
| MSD1_201409250604 | Perfluoro octanesulfonic acid - PFOS | ND | 0.04 | 0.0394 | ug/L | 97 | (50-150) | 30 | 9.3 |
| QCS | Perfluoro octanesulfonic acid - PFOS | | 0.048 | 0.0409 | ug/L | 85 | (70-130) | | |
| CCCH | Perfluoro-1-butanefulfonic acid -PFBS | | 0.29 | 0.299 | ug/L | 103 | (70-130) | | |
| CCCL | Perfluoro-1-butanefulfonic acid -PFBS | | 0.078 | 0.0820 | ug/L | 105 | (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 | 0.102 | ug/L | 114 | (50-150) | | |
| MS1_201409250604 | Perfluoro-1-butanefulfonic acid -PFBS | ND | 0.091 | 0.0966 | ug/L | 106 | (50-150) | | |
| MSD1_201409250604 | Perfluoro-1-butanefulfonic acid -PFBS | ND | 0.091 | 0.0950 | ug/L | 104 | (50-150) | 30 | 1.8 |
| QCS | Perfluoro-1-butanefulfonic acid -PFBS | | 0.044 | 0.0448 | ug/L | 101 | (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 | 0.0239 | ug/L | 100 | (50-150) | | |
| CCCM | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.048 | 0.0485 | ug/L | 101 | (70-130) | | |
| MBLK_HI | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | | <0.0100 | ug/L | | | | |
| MRLHI | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.03 | 0.0309 | ug/L | 103 | (50-150) | | |
| MS1_201409250604 | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | 0.03 | 0.0304 | ug/L | 99 | (50-150) | | |
| MSD1_201409250604 | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | 0.03 | 0.0308 | ug/L | 101 | (50-150) | 30 | 1.3 |
| QCS | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.048 | 0.0390 | ug/L | 82 | (70-130) | | |
| CCCH | Perfluoroheptanoic acid - PFHpA | | 0.032 | 0.0338 | ug/L | 106 | (70-130) | | |
| CCCL | Perfluoroheptanoic acid - PFHpA | | 0.008 | 0.00824 | ug/L | 103 | (50-150) | | |
| CCCM | Perfluoroheptanoic acid - PFHpA | | 0.016 | 0.0169 | ug/L | 106 | (70-130) | | |
| MBLK_HI | Perfluoroheptanoic acid - PFHpA | ND | | <0.00333 | ug/L | | | | |
| MRLHI | Perfluoroheptanoic acid - PFHpA | | 0.01 | 0.0105 | ug/L | 105 | (50-150) | | |
| MS1_201409250604 | Perfluoroheptanoic acid - PFHpA | ND | 0.01 | 0.0109 | ug/L | 103 | (50-150) | | |
| MSD1_201409250604 | Perfluoroheptanoic acid - PFHpA | ND | 0.01 | 0.0104 | ug/L | 98 | (50-150) | 30 | 4.7 |
| QCS | Perfluoroheptanoic acid - PFHpA | | 0.05 | 0.0631 | ug/L | 126 | (70-130) | | |
| CCCH | Perfluoro-n-nonanoic acid -PFNA | | 0.064 | 0.0653 | ug/L | 102 | (70-130) | | |
| CCCL | Perfluoro-n-nonanoic acid -PFNA | | 0.016 | 0.0179 | ug/L | 112 | (50-150) | | |
| CCCM | Perfluoro-n-nonanoic acid -PFNA | | 0.032 | 0.0337 | ug/L | 105 | (70-130) | | |
| MBLK_HI | Perfluoro-n-nonanoic acid -PFNA | ND | | <0.00666 | ug/L | | | | |
| MRLHI | Perfluoro-n-nonanoic acid -PFNA | | 0.02 | 0.0210 | ug/L | 105 | (50-150) | | |
| MS1_201409250604 | Perfluoro-n-nonanoic acid -PFNA | ND | 0.02 | 0.0200 | ug/L | 100 | (50-150) | | |
| MSD1_201409250604 | Perfluoro-n-nonanoic acid -PFNA | ND | 0.02 | 0.0195 | ug/L | 98 | (50-150) | 30 | 2.5 |
| QCS | Perfluoro-n-nonanoic acid -PFNA | | 0.05 | 0.0565 | ug/L | 113 | (70-130) | | |
| CCCH | Perfluorooctanoic acid - PFOA | | 0.064 | 0.0634 | ug/L | 99 | (70-130) | | |
| CCCL | Perfluorooctanoic acid - PFOA | | 0.016 | 0.0168 | ug/L | 105 | (50-150) | | |

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.

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)

Horsham Water & Sewer Authority

| QC Type | Analyte | Native | Spiked | Recovered | Units | Yield (%) | Limits (%) | RPDLimit (%) | RPD% |
|---|-------------------------------|--------|--------|-----------|-------|----------------------------------|------------|--------------|------|
| CCCM | Perfluorooctanoic acid - PFOA | | 0.032 | 0.0337 | ug/L | 105 | (70-130) | | |
| MBLK_HI | Perfluorooctanoic acid - PFOA | ND | | <0.00666 | ug/L | | | | |
| MRLHI | Perfluorooctanoic acid - PFOA | | 0.02 | 0.0215 | ug/L | 108 | (50-150) | | |
| MS1_201409250604 | Perfluorooctanoic acid - PFOA | ND | 0.02 | 0.0226 | ug/L | 103 | (50-150) | | |
| MSD1_201409250604 | Perfluorooctanoic acid - PFOA | ND | 0.02 | 0.0217 | ug/L | 98 | (50-150) | 30 | 4.1 |
| QCS | Perfluorooctanoic acid - PFOA | | 0.05 | 0.0605 | ug/L | 121 | (70-130) | | |
| QC Ref# 799416 - UCMR3 1,4-Dioxane by EPA 522 by EPA 522 | | | | | | Analysis Date: 10/17/2014 | | | |
| LCS1 | 1,4-Dioxane | | 20 | 17.9 | ug/L | 89 | (70-130) | | |
| MBLK | 1,4-Dioxane | | | <0.023 | ug/L | | | | |
| MRL_CHK | 1,4-Dioxane | | 0.07 | 0.0550 | ug/L | 79 | (50-150) | | |
| LCS1 | Dioxane-d8 | | | 89.1 | % | 89 | (70-130) | | |
| MBLK | Dioxane-d8 | | | 92.3 | % | | | | |
| MRL_CHK | Dioxane-d8 | | | 92.1 | % | 92 | (70-130) | | |
| LCS1 | THF-d8 | | | 108 | % | 108 | (50-150) | | |
| MBLK | THF-d8 | | | 93.0 | % | | | | |
| MRL_CHK | THF-d8 | | | 103 | % | 103 | (50-150) | | |
| QC Ref# 800649 - UCMR3 1,4-Dioxane by EPA 522 by EPA 522 | | | | | | Analysis Date: 10/24/2014 | | | |
| CCCH | 1,4-Dioxane | | 50 | 53.5 | ug/L | 107 | (70-130) | | |
| CCCL | 1,4-Dioxane | | 0.07 | 0.0690 | ug/L | 99 | (50-150) | | |
| CCCM | 1,4-Dioxane | | 20 | 20.5 | ug/L | 102 | (70-130) | | |
| LCS1 | 1,4-Dioxane | | 20 | 17.7 | ug/L | 89 | (70-130) | | |
| MBLK | 1,4-Dioxane | | | <0.023 | ug/L | | | | |
| MRL_CHK | 1,4-Dioxane | | 0.07 | 0.0660 | ug/L | 94 | (50-150) | | |
| MS_201410150184 | 1,4-Dioxane | ND | 20 | 16.9 | ug/L | 84 | (70-130) | | |
| MSD_201410150184 | 1,4-Dioxane | ND | 20 | 18.7 | ug/L | 93 | (70-130) | 20 | 10 |
| CCCH | Dioxane-d8 | | | 102 | % | 102 | (70-130) | | |
| CCCL | Dioxane-d8 | | | 106 | % | 106 | (70-130) | | |
| CCCM | Dioxane-d8 | | | 102 | % | 102 | (70-130) | | |
| LCS1 | Dioxane-d8 | | | 87.1 | % | 87 | (70-130) | | |
| MBLK | Dioxane-d8 | | | 92.2 | % | | | | |
| MRL_CHK | Dioxane-d8 | | | 99.8 | % | 100 | (70-130) | | |
| MS_201410150184 | Dioxane-d8 | 94 | | 83.5 | % | 84 | (70-130) | | |
| MSD_201410150184 | Dioxane-d8 | 94 | | 94.2 | % | 94 | (70-130) | | |
| CCCH | THF-d8 | | | 88.8 | % | 89 | (50-150) | | |
| CCCL | THF-d8 | | | 100 | % | 100 | (50-150) | | |
| CCCM | THF-d8 | | | 100 | % | 101 | (50-150) | | |
| LCS1 | THF-d8 | | | 105 | % | 105 | (50-150) | | |

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.



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)

Horsham Water & Sewer Authority

| QC Type | Analyte | Native | Spiked | Recovered | Units | Yield (%) | Limits (%) | RPDLimit (%) | RPD% |
|------------------|---------|--------|--------|-----------|-------|-----------|------------|--------------|------|
| MBLK | THF-d8 | | | 109 | % | | | | |
| MRL_CHK | THF-d8 | | | 97.7 | % | 98 | (50-150) | | |
| MS_201410150184 | THF-d8 | 95 | | 111 | % | 111 | (50-150) | | |
| MSD_201410150184 | THF-d8 | 95 | | 103 | % | 103 | (50-150) | | |

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.