eurofins | QC

# Analytical Report

Serialized: 06/07/2016 02:07am QC36

RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD

WARRINGTON,PA 18976

Regarding:

WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD
WARRINGTON, PA 18976

**PROJECT ID:**

**W00674 BRISTOL EPA**

**LABORATORY REPORT NUMBER:**

**L6265293**

Authorized by: Raphael C. Fratti, Laboratory Director

QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
Delaware Division: State ID's: DE 00011, MD 138
Vineland Division: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
Wind Gap Division: State ID's: PA 48-01334, NJ PA001
E. Rutherford Division: State ID: NJ 02015

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 · Phone: 215-355-3900 · Toll Free: 800-289-8378 · Fax: 215-355-7231 · www.qclaboratories.com

# Eurofins QC, Inc.

# Analytical Report

Printed 06/07/16 02:07 QC36

RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD
WARRINGTON, PA 18976

Regarding:
RICK ZEITLER
WARRINGTON TOWNSHIP WATER & SEWER
852 EASTON ROAD
WARRINGTON, PA 18976

**Account No:** W00674, WARRINGTON TWP WATER & SEWER **P.O. No:** **Inv. No:** EOM-06/16
**Project No:** W00674 BRISTOL EPA, WARRINGTON TOWNSHIP WATER & SEWER **PWSID No:** 1090070

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-1 | WELL 4 EP103 TAP | 05/24/16 12:50pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-2 | WELL 3 EP102 TAP | 05/24/16 01:05pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-3 | WELL 5 SINK | 05/24/16 01:15pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

PIN: 85448 Serial Number: 5561848

**Account No:** W00674, WARRINGTON TWP WATER & SEWER **P.O. No:** **Inv. No:** EOM-06/16
**Project No:** W00674 BRISTOL EPA, WARRINGTON TOWNSHIP WATER & SEWER **PWSID No:** 1090070

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-4 | WELL 11 SINK | 05/24/16 10:27am NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-5 | WELL 9 TAP | 05/24/16 01:40pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-6 | WELL 8 TAP | 05/24/16 01:50pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-7 | WELL 4 FB | 05/24/16 12:50pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

# Eurofins QC, Inc.

# Analytical Report

Printed 06/07/16 02:07

**Account No:** W00674, WARRINGTON TWP WATER & SEWER **P.O. No:** **Inv. No:** EOM-06/16
**Project No:** W00674 BRISTOL EPA, WARRINGTON TOWNSHIP WATER & SEWER **PWSID No:** 1090070

| Sample ID | Sample Description | Samp. Date/Time/Temp | Sampled by |
|---|---|---|---|
| L6265293-8 | WELL 4 TB | 05/24/16 12:50pm NA C | Suzanne E. Hughes, Eurofins QC, Inc. |

**Received Date/Time/Temp** 05/24/16 02:45pm 6.0 C **Iced (Y/N):** Y

| Parameter | Result | Qual | Units | Method | DF | RL | Test Date, Time, Analyst |
|---|---|---|---|---|---|---|---|
| **SUBCONTRACT** | | | | | | | |
| PFOA | ATTACHED | | | | | | |

PIN: 85448 Serial Number: 5561848

# DEFINITIONS

***Eurofins QC, Inc. (EQC)*** ***The following terms or abbreviations are used in this report:***

| | | | |
|---|---|---|---|
| MPN | Most probable number | PL | Customer-specific limit |
| CFU | Colony forming unit | DF | Dilution Factor (For Microbiology, DF = volume of sample tested) |
| POS | Positive / Present | QUAL | Qualifier (Q) |
| NEG | Negative / Absent | NTU | Nephelometric turbidity units |
| PRES | Presumptive | RL | Laboratory reporting limit or Limit of Quantitation (LOQ) |
| MF | Membrane Filtration | MCL | EPA recommended "Maximum Contaminant Level" |
| TNTC | Too numerous to count | MDL | Method Detection Limit |
| DRY | The result was reported on a dry weight basis. | ND | Analyte concentration not detected greater than the RL / MDL |

| | |
|---|---|
| TIC | Tentatively Identified Compounds (Library Search Compounds); concentrations are estimated values only. |
| ppm (mg/l) | Parts per million: equivalent to 1 milligram per kilogram (mg/Kg) for solids or one milligram per liter (mg/L) for aqueous samples. |
| ppb (ug/L) | Parts per billion: equivalent to 1 microgram per kilogram (ug/Kg) for solids or one microgram per liter (ug/L) for aqueous samples. |
| < | Less than: In conjunction with a numerical value, indicates a concentration less than RL / MDL. |
| > | Greater than: In conjunction with a numerical value, indicates a concentration greater than RL / MDL. |

***Data Qualifiers (EPA CLP Convention)***

| | | | |
|---|---|---|---|
| J | Estimated value ≥ MDL but < RL. | E | **Metals**: Estimated value due to presence of interference |
| B | Analyte was detected in the method blank | E | **Organics:** Concentration exceeds calibration range. |
| U | Analyte not detected above RL or MDL, when MDL reported. | E | **Microbiology**: estimated CFU count |
| N | Presumptive evidence of compound in library search | M | **Metals**: Duplicate precision for an element outside control limit |
| P1 or P | Column precision criteria not met, report lower value | N | **Metals**: Spike recovery for an element outside control limits |
| P2 | Column precision criteria not met, report higher value | C | Result confirmed by reanalysis |
| | | Q | Defined in report or case narrative or data package |
| T | Temperature receipt exceedance, refer to Sample Comments/ Results Qualifiers section. | V | Analyte concentration >100% between columns; reporting limit elevated |

***Warranties, Terms, and Conditions***

- Unless otherwise specified in the Parameter field, analyses (excluding "Field Parameters") were performed at the EQC Southampton facility (1205 Industrial Boulevard, Southampton, PA 18966). Pharmaceutical testing is performed the EQC facility in Horsham (702 Electronic Drive, Horsham, PA 19044).
- The test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.
- The report shall not be reproduced, except in full, without the written consent of the laboratory.
- All samples are collected as "grab" samples unless otherwise identified.
- The reported results relate only to the sample as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.
- EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance. EQC's internet program "LIVE ACCESS" will provide you with real-time access to collection dates and testing results. Please contact Customer Service for further information.
- The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry), Amanda Berd (Pharmaceutical), Sue Abbott (EQC Delaware).

***EQC Accreditations***

| | | | | | |
|---|---|---|---|---|---|
| Southampton | EPA ID: | PA00018 | **Eurofins, Lancaster**: Lab IDs: | | PA 36-00037 |
| | NELAP IDs: | PA 09-00131; NJ PA166; NY 11223 | | | NJ: PA011 |
| | State IDs: | CT PH-0768; DE PA-018; MD 206 | | | NY: 10670 |
| | FDA Reg #: | 2515238 | | | MD: 100 |
| Delaware | State IDs: | DE 00011; MD 138 | Reading | State ID: | PA 06-03543 |
| Wind Gap | State IDs: | PA 48-01334; NJ PA001 | Vineland | State ID: | NJ 06005 |
| East Rutherford | State ID: | NJ 02015 | | | |

# CHAIN OF CUSTODY RECORD

iced 6.0°C SEH EQC

eurofins | Eaton Analytical

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

EUROFINS EATON ANALYTICAL USE ONLY: L 6265293

LOGIN COMMENTS: _____ SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLE TEMP RECEIVED AT: SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

☐ _____ (Other) IR Gun ID = _____ (Observation= _____ °C) (Corr.Factor _____ °C) (Final = _____ °C)

☐ Monrovia IR Gun ID = _____ (Observation= _____ °C) (Corr.Factor _____ °C) (Final = _____ °C)

Compliance Acceptance Criteria: (Chemistry: 4 ± 2 °C ) (Microbiology: < 10°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: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Warrington Twp Water + Sewer

PROJECT CODE:

COMPLIANCE SAMPLES ☐ (check for yes) NON-COMPLIANCE SAMPLES ☐ (check for yes)

- Requires state forms ☐ REGULATION INVOLVED: _____

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, NPDES, etc.)

EEA CLIENT CODE: COC ID: SAMPLE GROUP:

SEE ATTACHED KIT ORDER FOR ANALYSES ☐ (check for yes), OR

List ALL ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

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

| SAMPLE DATE | SAMPLE TIME | SAMPLE ID | CLIENT LAB ID | MATRIX * | FIELD DATA | FIELD DATA | VOAIRS31 | | | | | | | | | | | | | SAMPLER COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-24-16 | 1250 | Well #4 E.P. 103 | tap | DW | | | ✓ | | | | | | | | | | | | | |
| 5-24-16 | 1305 | Well #3 E.P. 102 | tap | DW | | | ✓ | | | | | | | | | | | | | |
| 5-24-16 | 1315 | Well #5 | Sink | DW | | | ✓ | | | | | | | | | | | | | |
| 5-24-16 | 1327 | Well #11 | Sink | DW | | | ✓ | | | | | | | | | | | | | |
| 5-24-16 | 1340 | Well #9 | tap | DW | | | ✓ | | | | | | | | | | | | | |
| 5-24-16 | 1350 | Well #8 | tap | DW | | | ✓ | | | | | | | | | | | | | |
| 5-24-16 | 1750 | Well #4 | | FB | | | ✓ | | | | | | | | | | | | | Rec'd 20 Containers |
| 5-24-16 | 1750 | Well #4 | | TB | | | ✓ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

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

| | SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---|---|---|---|---|---|
| SAMPLED BY: | Suzanne Hughes | Suzanne Hughes | Field Service TECH | 5-24-16 | 1445 |
| RELINQUISHED BY: | Suzanne Hughes | " " | " " | " | " |
| RECEIVED BY: | Erin Dougherty | Erin Dougherty | Mgr SC | 5/24/16 | 1445 |
| RELINQUISHED BY: | | | | | |
| RECEIVED BY: | | | | | |

EPA

**UCMR3: Safe Drinking Water Accession and Review System (SDWARS)**

Logged in as NORLAKELAB

# Inventory/Schedule Report

PWS: PA1090070 / Warrington Township Water & Sewer Department

| Facility ID | Facility Name | Facility Type | Water Type | Sample Point ID | Sample Point Name | Sample Point Type | Monitoring Requirement | SE1 | SE2 | SE3 | SE4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 00001 | Distribution System - SW | DS | SW | 009 | DSMRT for NWWA | MR | AM | Nov, 2014 | Feb, 2015 | May, 2015 | Aug, 2015 |
| 00101 | Wells 1, 2 & 8 | SS | GW | 101 | Wells 1, 2 & 6 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00102 | Well 3 | SS | GW | 102 | Well 3 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00103 | Well 4 | SS | GW | 103 | Well 4 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00104 | Well 5 | SS | GW | 104 | Well 5 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00105 | Well 8 | SS | GW | 105 | Well 8 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00106 | Well 9 | SS | GW | 106 | Well 9 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00107 | Well 11 | SS | GW | 107 | Well 11 EP | EP | AM | Nov, 2014 | May, 2015 | | |
| 00108 | NWWA Intertie | CC | SW | 108 | NWWA Stump Road | EP | AM | Nov, 2014 | Feb, 2015 | May, 2015 | Aug, 2015 |
| 99001 | Distribution System - GW | DS | GW | 007 | DSMRT for Wells | MR | AM | Nov, 2014 | May, 2015 | | |

Last updated on August 14, 2013.
URL: https://cdx.epa.gov/SSL/UCMR3/Lab/PwsSchedule.aspx?pwsId=PA1090070&pws=PA1090070&state= (SS-3320)

*CDX Help Desk: (888) 890-1995 | (970) 494-5500 for callers from Puerto Rico and Guam*

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# Kit Order for QC Laboratories

Debbie.L.Frank is your Eurofins Eaton Analytical Service Manager

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

**Note: Sampler Please return this paper with your samples**

**Kit #:** 138523

**Created By:** Debbie.L.Frank - [DEB]
**Deliver By:** 05/23/2016
**STG:** Bottle Orders
**Ice Type:** W
**Pre Registered**

**Client ID:** QCLABSHAMPTONPA
**Project Code:** SUBCONTRACT Bottle Orders
**Group Name:** Warrington UCMR3 537
**PO#/JOB#:**

| Ship Sample Kits to | Send Report to | Billing Address |
|---|---|---|
| QC Laboratories<br>1205 Industrial Blvd.<br>P.O. Box 514<br>Southhampton, PA 18966<br><br>Attn: Ron Neu<br>Phone: 215.355.3900<br>Fax: 215.355.7231 | QC Laboratories<br>1205 Industrial Blvd.<br>P.O. Box 514<br>Southampton, PA 18966<br><br>Attn: Nicki Smith - South Hampton-PA<br>Phone: 215.355.3900x3360<br>Fax: 215.355.7231 | QC Laboratories<br>1205 Industrial Blvd.<br>P.O. Box 514<br>Southampton, PA 18966<br><br>Attn: Nicki Smith - South Hampton-PA<br>Phone: 215.355.3900x3360<br>Fax: 215.355.7231 |

| # of Sample | Tests | Bottle Qty - Type [ preservative Information ] | UN DOT # |
|---|---|---|---|
| 6 | @UCMR3 537 | 3 - 275 ml polypro w polypro cap [ 1.4 g Trisma ] | |
| 1 | @UCMR3 537 TB | 1 - 275 ml polypro w polypro cap [ 1.4g Trisma + H2O ] | |
| 1 | @UCMR3 537 FB | 1 - 275 ml polypro w polypro cap [ no preservative ] | |

## Comments

RUSH Kit billable

eurofins | 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)

ilac-MRA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
AT-1807

# Laboratory Report

for

QC Laboratories
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966
Attention: Nicki Smith - South Hampton-PA
Fax: 215.355.7231

Date of Issue
06/05/2016
EUROFINS EATON
ANALYTICAL

NELAP ACCREDITED TNI LABORATORY
ORELAP 4034

Report: 591356
Project: SUBCONTRACT
Group: Warrington UCMR3 537

DEB: Debbie.L.Frank
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.

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# 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 | **Puerto Rico** | Certified |
| **Guam** | 16-003r | **Rhode Island** | LAO00326 |
| **Hawaii** | Certified | **South Carolina** | 87016 |
| **Idaho** | Certified | **South Dakota** | Certified |
| **Illinois *** | 200033 | **Tennessee** | TN02839 |
| **Indiana** | C-CA-01 | **Texas *** | T104704230-15-9 |
| **Kansas *** | E-10268 | **Utah *** | CA000062016-10 |
| **Kentucky** | 90107 | **Vermont** | VT0114 |
| **Louisiana *** | LA16003 | **Virginia *** | 460260 |
| **Maine** | CA0006 | **Washington** | C838 |
| **Maryland** | 224 | ---------- | ---------- |
| **Commonwealth of Northern Marianas Is.** | MP0004 | ---------- | ---------- |
| **Massachusetts** | M-CA006 | **EPA Region 5** | Certified |
| **Michigan** | 9906 | **Los Angeles County Sanitation Districts** | 10264 |

* NELAP/TNI Recognized Accreditation Bodies

Eurofins Eaton Analytical, Inc.
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629
T | 626-386-1100
F | 626-386-1101
www.EatonAnalytical.com

# 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 | Environ-mental (Drinking Water) | Environ-mental (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 Residua | 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 |
| 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 | Environ-mental (Drinking Water) | Environ-mental (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-$S^{=}$ 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 (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 |

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## Acknowledgement of Samples Received

Addr: **QC Laboratories**
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966

Attn: Nicki Smith - South Hampton-PA
Phone: 215.355.3900x3360

Client ID: QCLABSHAMPTONPA
Folder #: 591356
Project: SUBCONTRACT
Sample Group: Warrington UCMR3 537

Project Manager: Debbie.L.Frank
Phone: (626) 386-1149

The following samples were received from you on **May 26, 2016** at **1245**. 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 |
|---|---|---|
| 201605200077 | EP013 Well 4 | 05/24/2016 1250 |
| | @UCMR3 537 | |
| 201605200076 | EP102 Well 3 | 05/24/2016 1305 |
| | @UCMR3 537 | |
| 201605200078 | EP104 Well 5 | 05/24/2016 1315 |
| | @UCMR3 537 | |
| 201605200081 | EP107 Well 11 | 05/24/2016 1027 |
| | @UCMR3 537 | |
| 201605200080 | EP106 Well 9 | 05/24/2016 1340 |
| | @UCMR3 537 | |
| 201605200079 | EP105 Well 8 | 05/24/2016 1350 |
| | @UCMR3 537 | |
| 201605200075 | Field Blank - UCMR3 Mod | 05/24/2016 1350 |
| | @UCMR3 537 FB | |

### Test Description

@UCMR3 537 -- UCMR3 537

@UCMR3 537 FB -- UCMR3 537

591356

EUROFINS QC, INC.
1205 Industrial Blvd.
Southampton, PA 18966-0514
Contact: Nicki Smith x3360
Phone: 215-355-3900
FAX: 215-355-7231

Bill to:
P.O.Box 514
Southampton, PA 18966-0514

EUROFINS QC, INC.
SUBCONTRACT CHAIN OF CUSTODY
May 24 2016, 04:37 pm

| Sample ID | Number of Containers | | | | | | | | | | | Sampled Date and Time | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-1 WELL 4 EP103 TAP | | | | | | | | | | | | 05/24/16 12:50 PM | |
| COMM: UCMR EPA 537 PFC 14 COMPOUNDS TO BE SUBBED TO MONROVIA | | | | | | | | | | | | | |
| 06/05/16 WATER PFOA | | | | | | | | | | | | | |
| | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-2 WELL 3 EP102 TAP | | | | | | | | | | | | 05/24/16 01:05 PM | |
| 06/05/16 WATER PFOA | | | | | | | | | | | | | |
| | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-3 WELL 5 SINK | | | | | | | | | | | | 05/24/16 01:15 PM | |
| 06/05/16 WATER PFOA | | | | | | | | | | | | | |
| | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-4 WELL 11 SINK | | | | | | | | | | | | 05/24/16 10:27 AM | |
| 06/05/16 WATER PFOA | | | | | | | | | | | | | |

Package Type: _____

FINAL REPORT DUE: _____

| Relinquished By | Date | Time |
|---|---|---|
| [signature] | 5/25/16 | 1630 |
| | | |
| | | |
| | | |
| | | |

| Received By | Date | Time |
|---|---|---|
| [signature] | 5/25/16 | 1630 |
| [signature] EEA-Mon | 5-26-16 | 12:45 |
| | | |
| | | |
| | | |

Comments:
5.4 c°

COC SEAL
received intact

EUROFINS QC, INC.
1205 Industrial Blvd.
Southampton, PA 18966-0514
Contact: Nicki Smith x3360
Phone: 215-355-3900
FAX: 215-355-7231

Bill to:
P.O.Box 514
Southampton, PA 18966-0514

EUROFINS QC, INC.
SUBCONTRACT CHAIN OF CUSTODY
May 24 2016, 04:37 pm

| Sample ID | | Number of Containers | | | | | | | | | | | Sampled Date and Time | Tier |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-5 WELL 9 TAP | | 1 | | | | | | | | | | | 05/24/16 01:40 PM | |
| 06/05/16 WATER | PFOA | | | | | | | | | | | | | |
| | | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-6 WELL 8 TAP | | 1 | | | | | | | | | | | 05/24/16 01:50 PM | |
| 06/05/16 WATER | PFOA | | | | | | | | | | | | | |
| | | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-7 WELL 4 FB | | 1 | | | | | | | | | | | 05/24/16 12:50 PM | |
| 06/05/16 WATER | PFOA | | | | | | | | | | | | | |
| | | Total | H2SO4 | HCl | AscAc | HNO3 | NaOH | ZnAc | Unpre | Bact | NaThio | Other | | |
| L6265293-8 WELL 4 TB | | 1 | | | | | | | | | | | 05/24/16 12:50 PM | |
| 06/05/16 WATER | PFOA | | | | | | | | | | | | | |

Package Type: _____

FINAL REPORT DUE: _____

| Relinquished By | Date | Time |
|---|---|---|
| [signature] | 5/25/16 | 1630 |
| | | |
| | | |
| | | |
| | | |

| Received By | Date | Time |
|---|---|---|
| [signature] | 5/25/16 | 1630 |
| [signature] GEA-MON | 5-26-16 | 17:45 |
| | | |
| | | |
| | | |

Comments:

5.4 C°

COC SEAL
received intact

eurofins | Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

| COMPANY NAME / EEA CLIENT CODE: | PROJECT CODE: |
|---|---|
| | |

SAMPLES REC'D DAY OF COLLECTION? ☐

SAMPLE TEMP. RECEIVED:

IR Gun ID = 464A (Observation= 5.8 °C) (Corr.Factor -.4 °C) (Final = 5.4 °C)

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

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

Compliance Acceptance Criteria:

1) Chemistry: >0, ≤ 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 out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

| | |
|---|---|
| 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 : (non-GLEC) 524.3: (Observation= ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)

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 out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

| | SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---|---|---|---|---|---|
| RECEIVED BY: | MAV | MAV | Eurofins Eaton Analytical | 5-26-16 | 12:45 |

Page ___ of ___

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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)

**Laboratory Comments**
**Report: 591356**

QC Laboratories
Nicki Smith - South Hampton-PA
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966

---

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

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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)

**Laboratory Data**
**Report: 591356**

**QC Laboratories**
Nicki Smith - South Hampton-PA
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966

Samples Received on:
05/26/2016 1245

| Prepared | Analyzed | QC Ref # | Method | Analyte | Result | Units | MDL | MRL | Dilution |
|---|---|---|---|---|---|---|---|---|---|
| **Field Blank - UCMR3 Mod (201605200075)** | | | | | | | **Sampled on 05/24/2016 1350** | | |
| | | | | **EPA 537 - UCMR3 537** | | | | | |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | ND | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | ND | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | ND | ug/L | 0.0031 | 0.01 | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 126 | % | | | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 92 | % | | | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 114 | % | | | 1 |
| 5/27/2016 | 06/01/2016 09:29 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 108 | % | | | 1 |
| **EP102 Well 3 (201605200076)** | | | | | | | **Sampled on 05/24/2016 1305** | | |
| | | | | **EPA 537 - UCMR3 537** | | | | | |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | 0.034J | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | 0.0092J | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | 0.021J | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | 0.0058J | ug/L | 0.0031 | 0.01 | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | 0.022 | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 91 | % | | | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 80 | % | | | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 113 | % | | | 1 |
| 5/27/2016 | 06/01/2016 09:08 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 113 | % | | | 1 |
| **EP013 Well 4 (201605200077)** | | | | | | | **Sampled on 05/24/2016 1250** | | |
| | | | | **EPA 537 - UCMR3 537** | | | | | |
| 5/27/2016 | 06/01/2016 09:49 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | 0.016J | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 09:49 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | 0.0050J | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 09:49 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | 0.0071J | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 09:49 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | 0.0043J | ug/L | 0.0031 | 0.01 | 1 |

Rounding on totals after summation.
(c) - Indicates calculated results.
ND - Analyte was not detected at the calculated MDL.
J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

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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)

**Laboratory Data**
**Report: 591356**

**QC Laboratories**
Nicki Smith - South Hampton-PA
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966

Samples Received on:
05/26/2016 1245

| Prepared | Analyzed | | QC Ref # | Method | Analyte | Result | Units | MDL | MRL | Dilution |
|---|---|---|---|---|---|---|---|---|---|---|
| 5/27/2016 | 06/01/2016 | 09:49 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | 0.0022J | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 | 09:49 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | 0.014J | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 | 09:49 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 96 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 09:49 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 86 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 09:49 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 107 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 09:49 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 107 | % | | | 1 |
| **EP104 Well 5 (201605200078)** | | | | | | | | **Sampled on 05/24/2016 1315** | | |
| | | | | **EPA 537 - UCMR3 537** | | | | | | |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | 0.010J | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | 0.0044J | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | 0.0033J | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | ND | ug/L | 0.0031 | 0.01 | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | 0.0096J | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 101 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 84 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 111 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 10:10 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 110 | % | | | 1 |
| **EP105 Well 8 (201605200079)** | | | | | | | | **Sampled on 05/24/2016 1350** | | |
| | | | | **EPA 537 - UCMR3 537** | | | | | | |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | 0.011J | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | 0.0046J | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | 0.0066J | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | 0.0031J | ug/L | 0.0031 | 0.01 | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | 0.0099J | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 105 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 84 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 107 | % | | | 1 |
| 5/27/2016 | 06/01/2016 | 10:30 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 108 | % | | | 1 |
| **EP106 Well 9 (201605200080)** | | | | | | | | **Sampled on 05/24/2016 1340** | | |

Rounding on totals after summation.
(c) - Indicates calculated results.
ND - Analyte was not detected at the calculated MDL.
J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

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750 Royal Oaks Drive, Suite 100
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**Laboratory Data**
**Report: 591356**

**QC Laboratories**
Nicki Smith - South Hampton-PA
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966

Samples Received on:
05/26/2016 1245

| Prepared | Analyzed | QC Ref # | Method | Analyte | Result | Units | MDL | MRL | Dilution |
|---|---|---|---|---|---|---|---|---|---|
| | | **EPA 537 - UCMR3 537** | | | | | | | |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | 0.021J | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | 0.0049J | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | 0.012J | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | ND | ug/L | 0.0031 | 0.01 | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | 0.011J | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 94 | % | | | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 85 | % | | | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 109 | % | | | 1 |
| 5/27/2016 | 06/01/2016 10:51 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 111 | % | | | 1 |
| **EP107 Well 11 (201605200081)** | | | | | | **Sampled on 05/24/2016 1027** | | | |
| | | **EPA 537 - UCMR3 537** | | | | | | | |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | Perfluoro octanesulfonic acid - PFOS | 0.0095J | ug/L | 0.0023 | 0.04 | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | Perfluoro-1-butanesulfonic acid -PFBS | 0.0075J | ug/L | 0.0018 | 0.09 | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | Perfluoro-1-hexanesulfonic acid - PFHxS | 0.0021J | ug/L | 0.0020 | 0.03 | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | Perfluoroheptanoic acid - PFHpA | ND | ug/L | 0.0031 | 0.01 | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | Perfluoro-n-nonanoic acid -PFNA | ND | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | Perfluorooctanoic acid - PFOA | 0.0095J | ug/L | 0.0022 | 0.02 | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | 13C-PFDA - Surr#2 | 97 | % | | | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | 13C-PFHxA - Surr#1 | 87 | % | | | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | 13C-PFOA– IS#1 | 106 | % | | | 1 |
| 5/27/2016 | 06/01/2016 11:12 | 913903 | (EPA 537) | 13C-PFOS– IS#2 | 109 | % | | | 1 |

Rounding on totals after summation.
(c) - Indicates calculated results.
ND - Analyte was not detected at the calculated MDL.
J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

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QC Laboratories

**UCMR3 537**

**Prep Batch: 912552** **Analytical Batch: 913903** **Analysis Date: 06/01/2016**

| | | |
|---|---|---|
| 201605200075 | Field Blank - UCMR3 Mod | Analyzed by: LHZ |
| 201605200076 | EP102 Well 3 | Analyzed by: LHZ |
| 201605200077 | EP013 Well 4 | Analyzed by: LHZ |
| 201605200078 | EP104 Well 5 | Analyzed by: LHZ |
| 201605200079 | EP105 Well 8 | Analyzed by: LHZ |
| 201605200080 | EP106 Well 9 | Analyzed by: LHZ |
| 201605200081 | EP107 Well 11 | Analyzed by: LHZ |

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**Laboratory QC**
**Report: 591356**

QC Laboratories

| QC Type | Analyte | Native | Spiked | Recovered | Units | Yield (%) | Limits (%) | RPDLimit (%) | RPD% |
|---|---|---|---|---|---|---|---|---|---|
| **UCMR3 537 by EPA 537** | | | | | | | | | |
| **Analytical Batch: 913903** | | | | | | | **Analysis Date: 06/01/2016** | | |
| CCCL | 13C-PFDA - Surr#2 (S) | | | 99.5 | % | 100 | (70-130) | | |
| CCCM | 13C-PFDA - Surr#2 (S) | | | 99.9 | % | 100 | (70-130) | | |
| MBLK_HI | 13C-PFDA - Surr#2 (S) | | | 93.7 | % | 94 | (70-130) | | |
| MRLHI | 13C-PFDA - Surr#2 (S) | | | 99.5 | % | 100 | (70-130) | | |
| MS2_201605200076 | 13C-PFDA - Surr#2 (S) | | | 105 | % | 105 | (70-130) | | |
| MSD2_201605200076 | 13C-PFDA - Surr#2 (S) | | | 104 | % | 104 | (70-130) | | |
| QCS | 13C-PFDA - Surr#2 (S) | | | 101 | % | 101 | (70-130) | | |
| CCCL | 13C-PFHxA - Surr#1 (S) | | | 100 | % | 100 | (70-130) | | |
| CCCM | 13C-PFHxA - Surr#1 (S) | | | 97.9 | % | 98 | (70-130) | | |
| MBLK_HI | 13C-PFHxA - Surr#1 (S) | | | 85.4 | % | 85 | (70-130) | | |
| MRLHI | 13C-PFHxA - Surr#1 (S) | | | 92.3 | % | 92 | (70-130) | | |
| MS2_201605200076 | 13C-PFHxA - Surr#1 (S) | | | 92.4 | % | 92 | (70-130) | | |
| MSD2_201605200076 | 13C-PFHxA - Surr#1 (S) | | | 87.1 | % | 87 | (70-130) | | |
| QCS | 13C-PFHxA - Surr#1 (S) | | | 93.2 | % | 93 | (70-130) | | |
| CCCL | 13C-PFOA- IS#1 (I) | | | 101 | % | 101 | (50-150) | | |
| CCCM | 13C-PFOA- IS#1 (I) | | | 104 | % | 104 | (50-150) | | |
| MBLK_HI | 13C-PFOA- IS#1 (I) | | | 110 | % | 110 | (50-150) | | |
| MRLHI | 13C-PFOA- IS#1 (I) | | | 111 | % | 111 | (50-150) | | |
| MS2_201605200076 | 13C-PFOA- IS#1 (I) | | | 100 | % | 100 | (50-150) | | |
| MSD2_201605200076 | 13C-PFOA- IS#1 (I) | | | 105 | % | 105 | (50-150) | | |
| QCS | 13C-PFOA- IS#1 (I) | | | 100 | % | 100 | (50-150) | | |
| CCCL | 13C-PFOS- IS#2 (I) | | | 100 | % | 100 | (50-150) | | |
| CCCM | 13C-PFOS- IS#2 (I) | | | 102 | % | 102 | (50-150) | | |
| MBLK_HI | 13C-PFOS- IS#2 (I) | | | 110 | % | 110 | (50-150) | | |
| MRLHI | 13C-PFOS- IS#2 (I) | | | 108 | % | 108 | (50-150) | | |
| MS2_201605200076 | 13C-PFOS- IS#2 (I) | | | 104 | % | 104 | (50-150) | | |
| MSD2_201605200076 | 13C-PFOS- IS#2 (I) | | | 103 | % | 103 | (50-150) | | |
| QCS | 13C-PFOS- IS#2 (I) | | | 98.6 | % | 99 | (50-150) | | |
| CCCL | Perfluoro octanesulfonic acid - PFOS | | 0.032 | 0.0355 | ug/L | 111 | (50-150) | | |
| CCCM | Perfluoro octanesulfonic acid - PFOS | | 0.064 | 0.0714 | ug/L | 112 | (70-130) | | |
| MBLK_HI | Perfluoro octanesulfonic acid - PFOS | ND | | <0.01333 | ug/L | | | | |
| MRLHI | Perfluoro octanesulfonic acid - PFOS | | 0.04 | 0.0424 | ug/L | 106 | (50-150) | | |
| MS2_201605200076 | Perfluoro octanesulfonic acid - PFOS | ND | 0.08 | 0.117 | ug/L | 103 | (70-130) | | |
| MSD2_201605200076 | Perfluoro octanesulfonic acid - PFOS | ND | 0.08 | 0.110 | ug/L | 95 | (70-130) | 30 | 6.2 |
| QCS | Perfluoro octanesulfonic acid - PFOS | | 0.048 | 0.0580 | ug/L | 121 | (70-130) | | |

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.

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**Laboratory QC**
**Report: 591356**

## QC Laboratories

| QC Type | Analyte | Native | Spiked | Recovered | Units | Yield (%) | Limits (%) | RPDLimit (%) | RPD% |
|---|---|---|---|---|---|---|---|---|---|
| CCCL | Perfluoro-1-butanesulfonic acid -PFBS | | 0.073 | 0.0810 | ug/L | 111 | (50-150) | | |
| CCCM | Perfluoro-1-butanesulfonic acid -PFBS | | 0.15 | 0.166 | ug/L | 114 | (70-130) | | |
| MBLK_HI | Perfluoro-1-butanesulfonic acid -PFBS | ND | | <0.03033 | ug/L | | | | |
| MRLHI | Perfluoro-1-butanesulfonic acid -PFBS | | 0.09 | 0.0970 | ug/L | 108 | (50-150) | | |
| MS2_201605200076 | Perfluoro-1-butanesulfonic acid -PFBS | ND | 0.18 | 0.200 | ug/L | 105 | (70-130) | | |
| MSD2_201605200076 | Perfluoro-1-butanesulfonic acid -PFBS | ND | 0.18 | 0.202 | ug/L | 106 | (70-130) | 30 | 1 |
| QCS | Perfluoro-1-butanesulfonic acid -PFBS | | 0.044 | 0.0525 | ug/L | 118 | (70-130) | | |
| CCCL | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.024 | 0.0270 | ug/L | 112 | (50-150) | | |
| CCCM | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.048 | 0.0547 | ug/L | 114 | (70-130) | | |
| MBLK_HI | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | | <0.0100 | ug/L | | | | |
| MRLHI | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.03 | 0.0331 | ug/L | 110 | (50-150) | | |
| MS2_201605200076 | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | 0.06 | 0.0850 | ug/L | 107 | (70-130) | | |
| MSD2_201605200076 | Perfluoro-1-hexanesulfonic acid - PFHxS | ND | 0.06 | 0.0820 | ug/L | 102 | (70-130) | 30 | 3.6 |
| QCS | Perfluoro-1-hexanesulfonic acid - PFHxS | | 0.048 | 0.0572 | ug/L | 120 | (70-130) | | |
| CCCL | Perfluoroheptanoic acid - PFHpA | | 0.008 | 0.00811 | ug/L | 101 | (50-150) | | |
| CCCM | Perfluoroheptanoic acid - PFHpA | | 0.016 | 0.0166 | ug/L | 104 | (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) | | |
| MS2_201605200076 | Perfluoroheptanoic acid - PFHpA | ND | 0.02 | 0.0268 | ug/L | 105 | (70-130) | | |
| MSD2_201605200076 | Perfluoroheptanoic acid - PFHpA | ND | 0.02 | 0.0246 | ug/L | 94 | (70-130) | 30 | 8.6 |
| QCS | Perfluoroheptanoic acid - PFHpA | | 0.05 | 0.0502 | ug/L | 100 | (70-130) | | |
| CCCL | Perfluoro-n-nonanoic acid -PFNA | | 0.016 | 0.0189 | ug/L | 118 | (50-150) | | |
| CCCM | Perfluoro-n-nonanoic acid -PFNA | | 0.032 | 0.0378 | ug/L | 118 | (70-130) | | |
| MBLK_HI | Perfluoro-n-nonanoic acid -PFNA | ND | | <0.00666 | ug/L | | | | |
| MRLHI | Perfluoro-n-nonanoic acid -PFNA | | 0.02 | 0.0226 | ug/L | 113 | (50-150) | | |
| MS2_201605200076 | Perfluoro-n-nonanoic acid -PFNA | ND | 0.04 | 0.0448 | ug/L | 108 | (70-130) | | |
| MSD2_201605200076 | Perfluoro-n-nonanoic acid -PFNA | ND | 0.04 | 0.0461 | ug/L | 111 | (70-130) | 30 | 2.9 |
| QCS | Perfluoro-n-nonanoic acid -PFNA | | 0.05 | 0.0488 | ug/L | 98 | (70-130) | | |
| CCCL | Perfluorooctanoic acid - PFOA | | 0.016 | 0.0172 | ug/L | 108 | (50-150) | | |
| CCCM | Perfluorooctanoic acid - PFOA | | 0.032 | 0.0350 | ug/L | 109 | (70-130) | | |
| MBLK_HI | Perfluorooctanoic acid - PFOA | ND | | <0.00666 | ug/L | | | | |
| MRLHI | Perfluorooctanoic acid - PFOA | | 0.02 | 0.0216 | ug/L | 108 | (50-150) | | |
| MS2_201605200076 | Perfluorooctanoic acid - PFOA | 0.022 | 0.04 | 0.0593 | ug/L | 94 | (70-130) | | |
| MSD2_201605200076 | Perfluorooctanoic acid - PFOA | 0.022 | 0.04 | 0.0614 | ug/L | 100 | (70-130) | 30 | 3.5 |
| QCS | Perfluorooctanoic acid - PFOA | | 0.05 | 0.0476 | ug/L | 95 | (70-130) | | |

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.