



**Groundwater Sample Results,
Data Validation Report, and the Sample Location Report,
SDG 280-22864-1**

*Naval Construction Battalion Center Davisville
Davisville, Rhode Island*

August 2019



Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO: L. SINAGOGA **DATE:** JANUARY 9, 2012
FROM: TERRI L. SOLOMON **COPIES:** DV FILE
SUBJECT: ORGANIC DATA VALIDATION – PFOA, PFOS
CTO WE51 NCBC DAVISVILLE
SAMPLE DELIVERY GROUP (SDG) – 280-22864-1
SAMPLES: 5/Aqueous
MW16-45I-111511 MW16-45S-111511
MW16-46I-111511 MW16-46S-111511
~ MW16-DUP01-111511

Overview

The sample set for NCBC Davisville, CTO WE51, SDG 280-22864-1, consists of five (5) aqueous environmental samples. One (1) field duplicate pair (MW16-46S-111511 / MW16-DUP01-111511) is included within this SDG.

The samples were analyzed for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). The samples were collected by Tetra Tech on November 15, 2011 and were analyzed by Test America under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA/QC) criteria. PFOA and PFOS analyses were conducted using Test America SOP DV-LC-0012 (solid phase extraction (SPE) Sw-846 method 3535 with liquid chromatography / mass spectroscopy) methodology.

These data were evaluated based on the following parameters:

- * • Data Completeness
- * • Holding Times
- * • Initial and Continuing Calibrations
- * • Laboratory Blank Analyses
- * • Surrogate Recoveries
- * • Laboratory Control Sample / Laboratory Control Sample Duplicate Results
- Internal Standard Recoveries
- * • Field Duplicate Precision
- * • Detection Limits
- * • Compound Quantitation

* - All quality control criteria were met for this parameter.

Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains the documentation to support the findings as discussed in this validation report.

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DATE: JANUARY 9, 2012

Internal Standard Recoveries

The internal standard recoveries for sample MW16-DUP01-111511 were below the laboratory quality control limits for 13C4 PFOA and 13C4 PFOS. The positive results reported for PFOA and PFOS in the affected sample were qualified as estimated, "J".

Notes

Nondetected results are reported to the limit of detection (LOD).

Positive results reported below the limit of quantitation (LOQ) but above the detection limit (DL) were qualified as estimated, "J".

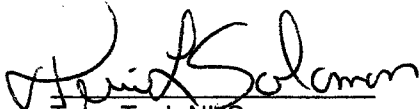
Executive Summary


Laboratory Performance: The internal standard recoveries for sample MW16-DUP01-111511 were below the laboratory quality control limits for 13C4 PFOA and 13C4 PFOS.

Other Factors Affecting Data Quality: Positive results reported below the LOQ but above the DL were qualified as estimated.

The data for these analyses were reviewed with reference to the EPA Region I Validation Functional Guidelines (12/1996) where applicable, laboratory method control criteria and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", April 2009.

The text of this report has been formulated to address only those problem areas affecting data quality.


Tetra Tech NUS
Terri L. Solomon
Environmental Scientist


Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e. chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors $>40\%$ for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids $<30\%$
- Z = Uncertainty at 2 sigma deviation is less than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 02584	NSAMPLE	MW16-DUP01-111511	
SDG: 280-22864-1	LAB_ID	280-22864-5	
FRACTION: MISC	SAMP_DATE	11/15/2011	
MEDIA: WATER	QC_TYPE	NM	
	UNITS	UG/L	
	PCT_SOLIDS	0.0	
	DUP_OF	MW16-46S-111511	
PARAMETER	RESULT	VQL	QLCD
PENTADEC AFLUORO OCTANOIC ACID	0.0081 J	J	NP
PERFLUORO OCTANE SULFONIC ACID	0.015 J	J	NP

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: MW16-45I-111511 Lab Sample ID: 280-22864-4
 Matrix: Water Lab File ID: PC511K20042.d
 Analysis Method: PFOA/PFOS Date Collected: 11/15/2011 14:00
 Extraction Method: 3535 Date Extracted: 11/17/2011 18:50
 Sample wt/vol: 247.4 (mL) Date Analyzed: 11/20/2011 23:12
 Con. Extract Vol.: 5 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0081	U	0.020	0.0081	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.0077	U	0.030	0.0077	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	109		60-155
STL01054	13C8 PFOS	106		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: MW16-45S-111511 Lab Sample ID: 280-22864-3
 Matrix: Water Lab File ID: PC511K20041.d
 Analysis Method: PFOA/PFOS Date Collected: 11/15/2011 13:00
 Extraction Method: 3535 Date Extracted: 11/17/2011 18:50
 Sample wt/vol: 245 (mL) Date Analyzed: 11/20/2011 23:04
 Con. Extract Vol.: 5 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0013	J	0.020	0.0082	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.0078	U	0.031	0.0078	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	110		60-155
STL01054	13C8 PFOS	106		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: MW16-46I-111511 Lab Sample ID: 280-22864-1
 Matrix: Water Lab File ID: PC511K20039.d
 Analysis Method: PFOA/PFOS Date Collected: 11/15/2011 11:20
 Extraction Method: 3535 Date Extracted: 11/17/2011 18:50
 Sample wt/vol: 252.3 (mL) Date Analyzed: 11/20/2011 22:48
 Con. Extract Vol.: 5 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0021	J	0.020	0.0079	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.0075	U	0.030	0.0075	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	109		60-155
STL01054	13C8 PFOS	103		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: MW16-46S-111511 Lab Sample ID: 280-22864-2
 Matrix: Water Lab File ID: PC511K20040.d
 Analysis Method: PFOA/PFOS Date Collected: 11/15/2011 10:05
 Extraction Method: 3535 Date Extracted: 11/17/2011 18:50
 Sample wt/vol: 246.5 (mL) Date Analyzed: 11/20/2011 22:56
 Con. Extract Vol.: 5 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0051	J	0.020	0.0081	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.0080	J	0.030	0.0077	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	108		60-155
STL01054	13C8 PFOS	104		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: MW16-DUP01-111511 Lab Sample ID: 280-22864-5
 Matrix: Water Lab File ID: PC511K20043.d
 Analysis Method: PFOA/PFOS Date Collected: 11/15/2011 00:00
 Extraction Method: 3535 Date Extracted: 11/17/2011 18:50
 Sample wt/vol: 251.7 (mL) Date Analyzed: 11/20/2011 23:19
 Con. Extract Vol.: 5 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0081	J M	0.020	0.0079	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.015	J	0.030	0.0075	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	110		60-155
STL01054	13C8 PFOS	105		45-130

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech NUS, Inc.

Project: Davisville Site 16 North Kingstown, RI

Contract Task Order: WE51 / N62470-08-D-1001

Project Manager: Tobrena Sedlmyer

Report Number: 280-22864-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

The PFC method DV-LC-0012 is an isotope dilution method; therefore, the internal standards are added prior to the extraction process. This technique inherently corrects for variability in the extraction efficiency due to sample matrix. Dilution of samples beyond the ability of the instrument to detect the internal standards is not recommended. Analyses performed at a dilution level requiring additional internal standard to be added after the extraction step in order to quantitate results has been shown to yield results with a significant low bias. As a result, data have been reported that exceed the calibration range and are qualified as estimated.

The PFC method is an isotope dilution method where the internal standards are added prior to extraction and used to quantitate results; therefore, the use of dilution factors is inappropriate. Application of dilution factors would yield results that are artificially high. Reporting limits and method detection limits are not adjusted for dilutions unless samples are fortified with additional internal standard, which is not recommended.

Internal standard abundances may vary depending upon both recovery and the dilution at which the analysis is performed. This is an inherent feature of the isotope dilution technique and is not indicative of bias to the reported results.

RECEIPT

The following report contains the analytical results for five samples received at TestAmerica Denver on November 16, 2011, according to documented sample acceptance procedures. The samples were received in good condition at a temperature of 2.0°C. No anomalies were encountered during sample receipt.

PFOA & PFOS

Samples MW16-46I-111511 (280-22864-1), MW16-46S-111511 (280-22864-2), MW16-45S-111511 (280-22864-3), MW16-45I-111511 (280-22864-4) and MW16-DUP01-111511 (280-22864-5) were analyzed for PFC in accordance with SOP DV-LC-0012. The samples were prepared on 11/17/2011 and analyzed on 11/20/2011.

The method required MS/MSD analyses could not be performed for prep batch 280-96832, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable LCS/LCSD analyses data.

Internal standard responses were outside the control limits for sample MW16-DUP01-111511 (280-22864-5) in analytical batch 280-97141. The sample shows evidence of matrix interference. The internal standards were in control for the Method Blank, LCS and LCSD, indicating that the sample matrix may be causing the internal standard outages.

No other difficulties were encountered during the PFC analyses.

All quality control parameters were within the acceptance limits.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sampler ID _____
 Temperature on Receipt 2.6 ^{°F}
 Drinking Water? Yes No

Chain of Custody Record

TAL-4124-280 (05/08)

Client: Testatech NUS
 Address: 850 Andover St Suite 300
 City: Wilmington State: MA Zip Code: 01887
 Project Name and Location (State): DANVILLE STEEL North Kingstown RI
 Contract/Purchase Order/Quote No. _____

Project Manager: Lee Ann Sinagra
 Telephone Number (Area Code)/Fax Number: 417 921 8887
 Site Contact: _____ Lab Contact: _____

Date: 11/15/11 Chain of Custody Number: 148123
 Lab Number: _____ Page: 1 of 1

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives					Special Instructions/ Conditions of Receipt		
			Air	Sed	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH		ZnAc/NaOH	
MW16-46F-111S11	11/15/11	1120	✓			✓							
MW16-46S-111S11	11/15/11	1005	✓			✓							
MW16-46S-111S11	11/15/11	1300	✓			✓							
MW16-46F-111S11	11/15/11	1400	✓			✓							
MW16-DUPOL-111S11	11/15/11	0000	✓			✓							

Special Instructions: PFOS

Possible Hazard Identification:
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months
 (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required:
 24 Hours 48 Hours 7 Days 14 Days 21 Days Other _____

QC Requirements (Specify):

1. Relinquished By: Rollach Date: 11/15/11 Time: 1600
 2. Relinquished By: _____ Date: _____ Time: _____
 3. Relinquished By: _____ Date: _____ Time: _____

1. Received By: M. Papp Date: 11/14/11 Time: 1000
 2. Received By: _____ Date: _____ Time: _____
 3. Received By: _____ Date: _____ Time: _____

Comments: Top Blank included in shipment

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

NCBC DAVISVILLE

WATER DATA

280-22864-1

FRACTION	CHEMICAL	MW16-46S-111511	UNITS	MW16-DUP01-111511	RPD	D
MISC	PENTADEC AFLUORO OCTANOIC ACID	0.0051 J	UG/L	0.0081 J	45.45	0.00
MISC	PERFLUORO OCTANE SULFONIC ACID	0.008 J	UG/L	0.015 J	60.87	0.01

Current RPD Quality Control Limit: 30 %.
 Shaded cells indicate RPDs that exceed the applicable quality control limit.

HOLDTIME

PROJ_NO

02584

SDG	SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
280-22864-1	ACID	UG/L	MW16-DUP01-111511	280-22864-5	NM	11/15/2011	11/17/2011	11/20/2011	2	3	5
280-22864-1	ACID	UG/L	MW16-46S-111511	280-22864-2	NM	11/15/2011	11/17/2011	11/20/2011	2	3	5
280-22864-1	ACID	UG/L	MW16-46I-111511	280-22864-1	NM	11/15/2011	11/17/2011	11/20/2011	2	3	5
280-22864-1	ACID	UG/L	MW16-45S-111511	280-22864-3	NM	11/15/2011	11/17/2011	11/20/2011	2	3	5
280-22864-1	ACID	UG/L	MW16-45I-111511	280-22864-4	NM	11/15/2011	11/17/2011	11/20/2011	2	3	5

SAMPLE SUMMARY

Client: Tetra Tech, Inc.

Job Number: 280-22864-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-22864-1	MW16-46I-111511	Water	11/15/2011 1120	11/16/2011 1000
280-22864-2	MW16-46S-111511	Water	11/15/2011 1005	11/16/2011 1000
280-22864-3	MW16-45S-111511	Water	11/15/2011 1300	11/16/2011 1000
280-22864-4	MW16-45I-111511	Water	11/15/2011 1400	11/16/2011 1000
280-22864-5FD	MW16-DUP01-111511	Water	11/15/2011 0000	11/16/2011 1000

METHOD SUMMARY

Client: Tetra Tech, Inc.

Job Number: 280-22864-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
PFOA/PFOS LC/MS/MS Solid-Phase Extraction (SPE)	TAL DEN	TestAmerica SOP	PFOA/PFOS SW846 3535

Lab References:

TAL DEN = TestAmerica Denver

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

DATA REPORTING QUALIFIERS

Client: Tetra Tech, Inc.

Job Number: 280-22864-1

Lab Section	Qualifier	Description
LCMS		
	J	Estimated: The analyte was positively identified; the quantitation is an estimation
	M	Manual integrated compound.
	U	Undetected at the Limit of Detection.

Quality Control Results

Client: Tetra Tech, Inc.

Job Number: 280-22864-1

Detection Limit Check Standard - Batch: 280-97141

Method: PFOA/PFOS

Preparation: N/A

Lab Sample ID:	DLCK 280-97141/13	Analysis Batch:	280-97141	Instrument ID:	LC_LCMS5
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	PC511K20033.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 mL
Analysis Date:	11/20/2011 2202	Units:	ug/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A			Injection Volume:	20 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Perfluorooctanoic acid (PFOA)	0.500	0.538	108	70 - 130	J
Perfluorooctane Sulfonate (PFOS)	0.478	0.513	107	70 - 130	
Surrogate		% Rec		Acceptance Limits	
13C8 PFOA		112		60 - 155	
13C8 PFOS		107		45 - 130	

Quality Control Results

Client: Tetra Tech, Inc.

Job Number: 280-22864-1

Laboratory Chronicle

Lab ID: 280-22864-1

Client ID: MW16-46I-111511

Sample Date/Time: 11/15/2011 11:20

Received Date/Time: 11/16/2011 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	280-22864-B-1-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	280-22864-B-1-A		280-97141	280-96832	11/20/2011 22:48	1	TAL DEN	JCB

Lab ID: 280-22864-2

Client ID: MW16-46S-111511

Sample Date/Time: 11/15/2011 10:05

Received Date/Time: 11/16/2011 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	280-22864-B-2-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	280-22864-B-2-A		280-97141	280-96832	11/20/2011 22:56	1	TAL DEN	JCB

Lab ID: 280-22864-3

Client ID: MW16-45S-111511

Sample Date/Time: 11/15/2011 13:00

Received Date/Time: 11/16/2011 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	280-22864-A-3-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	280-22864-A-3-A		280-97141	280-96832	11/20/2011 23:04	1	TAL DEN	JCB

Lab ID: 280-22864-4

Client ID: MW16-45I-111511

Sample Date/Time: 11/15/2011 14:00

Received Date/Time: 11/16/2011 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	280-22864-B-4-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	280-22864-B-4-A		280-97141	280-96832	11/20/2011 23:12	1	TAL DEN	JCB

Lab ID: 280-22864-5

Client ID: MW16-DUP01-111511

Sample Date/Time: 11/15/2011 00:00

Received Date/Time: 11/16/2011 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	280-22864-A-5-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	280-22864-A-5-A		280-97141	280-96832	11/20/2011 23:19	1	TAL DEN	JCB

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	MB 280-96832/1-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	MB 280-96832/1-A		280-97141	280-96832	11/20/2011 22:10	1	TAL DEN	JCB

Quality Control Results

Client: Tetra Tech, Inc.

Job Number: 280-22864-1

Laboratory Chronicle

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	LCS 280-96832/2-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	LCS 280-96832/2-A		280-97141	280-96832	11/20/2011 22:17	1	TAL DEN	JCB

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3535	LCSD 280-96832/3-A		280-97141	280-96832	11/17/2011 18:50	1	TAL DEN	KS
A:PFOA/PFOS	LCSD 280-96832/3-A		280-97141	280-96832	11/20/2011 22:25	1	TAL DEN	JCB

Lab ID: DLCK

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:PFOA/PFOS	DLCK 280-97141/13		280-97141		11/20/2011 22:02	1	TAL DEN	JCB

Lab References:

TAL DEN = TestAmerica Denver

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver

Job No.: 280-22864-1

SDG No.:

Instrument ID: LC_LCMS5

Start Date: 11/20/2011 20:29

Analysis Batch Number: 97141

End Date: 11/20/2011 23:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICB 280-97141/1		11/20/2011 20:29	1		Gemini-NX
STD0002 280-97141/2 IC		11/20/2011 20:37	1	PC511K20022.d	Gemini-NX
STD0005 280-97141/3 IC		11/20/2011 20:44	1	PC511K20023.d	Gemini-NX
STD0010 280-97141/4 IC		11/20/2011 20:52	1	PC511K20024.d	Gemini-NX
ICISAV 280-97141/5		11/20/2011 21:00	1	PC511K20025.d	Gemini-NX
STD0050 280-97141/6 IC		11/20/2011 21:08	1	PC511K20026.d	Gemini-NX
STD0100 280-97141/7 IC		11/20/2011 21:15	1	PC511K20027.d	Gemini-NX
STD0200 280-97141/8 IC		11/20/2011 21:23	1	PC511K20028.d	Gemini-NX
STD0500 280-97141/9 IC		11/20/2011 21:31	1	PC511K20029.d	Gemini-NX
STD1250 280-97141/10 IC		11/20/2011 21:39	1	PC511K20030.d	Gemini-NX
CCB 280-97141/11		11/20/2011 21:46	1	PC511K20031.d	Gemini-NX
ICV 280-97141/12		11/20/2011 21:54	1	PC511K20032.d	Gemini-NX
DLCK 280-97141/13		11/20/2011 22:02	1	PC511K20033.d	Gemini-NX
MB 280-96832/1-A		11/20/2011 22:10	1	PC511K20034.d	Gemini-NX
LCS 280-96832/2-A		11/20/2011 22:17	1	PC511K20035.d	Gemini-NX
LCSD 280-96832/3-A		11/20/2011 22:25	1	PC511K20036.d	Gemini-NX
ZZZZZ		11/20/2011 22:33	1		Gemini-NX
ZZZZZ		11/20/2011 22:41	1		Gemini-NX
280-22864-1	MW16-46I-111511	11/20/2011 22:48	1	PC511K20039.d	Gemini-NX
280-22864-2	MW16-46S-111511	11/20/2011 22:56	1	PC511K20040.d	Gemini-NX
280-22864-3	MW16-45S-111511	11/20/2011 23:04	1	PC511K20041.d	Gemini-NX
280-22864-4	MW16-45I-111511	11/20/2011 23:12	1	PC511K20042.d	Gemini-NX
280-22864-5	MW16-DUP01-111511	11/20/2011 23:19	1	PC511K20043.d	Gemini-NX
CCV 280-97141/24		11/20/2011 23:27	1	PC511K20044.d	Gemini-NX

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-22864-1 Analy Batch No.: 97141

SDG No.:

Instrument ID: LC_LCMS5 GC Column: Gemini-NX ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/20/2011 20:37 Calibration End Date: 11/20/2011 21:39 Calibration ID: 7840

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0002 280-97141/2	PC511K20022.d
Level 2	STD0005 280-97141/3	PC511K20023.d
Level 3	STD0010 280-97141/4	PC511K20024.d
Level 4	ICISAV 280-97141/5	PC511K20025.d
Level 5	STD0050 280-97141/6	PC511K20026.d
Level 6	STD0100 280-97141/7	PC511K20027.d
Level 7	STD0200 280-97141/8	PC511K20028.d
Level 8	STD0500 280-97141/9	PC511K20029.d
Level 9	STD1250 280-97141/10	PC511K20030.d

ANALYTE	RRF										CURVE TYPE	COEFFICIENT			MIN RRF	%RSD	#	R ² OR COD	MAX %RSD	#	R ² OR COD	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10		B	M1	M2								
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Ammonium Perfluorooctanoate (APFO)	1.1051	1.0901	0.9699	0.9778	0.9317	0.8522	0.8808	0.8357	0.7473	0.9317	0.0592	0.8761							0.9920		0.9800	
Perfluorooctanoic acid (PFOR)	1.1883	1.1374	1.0330	1.0218	0.9739	0.8876	0.9166	0.8715	0.7776	0.9739	0.0661	0.9134							0.9920		0.9800	
Perfluorooctane Sulfonate (PFOS)	1.2358	1.2275	1.2655	1.1785	1.1711	1.0692	1.1277	1.0732	0.9586	1.1711	0.0332	1.1110							0.9940		0.9800	
13C8 PFOA	0.9145	0.9287	0.9221	0.9103	0.8792	0.8178	0.8338	0.8051	0.7203	0.8792	0.0233	0.8361							0.9940		0.9800	
13C8 PFOS	1.0004	0.9801	0.9561	0.9322	0.9027	0.8396	0.8606	0.8306	0.7420	0.9027	0.0346	0.8582							0.9940		0.9800	

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-22864-1 Analy Batch No.: 97141
 SDG No.:
 Instrument ID: LC_LCMS5 GC Column: Gemini-NX ID: Heated Purge: (Y/N) N
 Calibration Start Date: 11/20/2011 20:37 Calibration End Date: 11/20/2011 21:39 Calibration ID: 7840

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0002 280-97141/2	PC511K20022.d
Level 2	STD0005 280-97141/3	PC511K20023.d
Level 3	STD0010 280-97141/4	PC511K20024.d
Level 4	ICISAV 280-97141/5	PC511K20025.d
Level 5	STD0050 280-97141/6	PC511K20026.d
Level 6	STD0100 280-97141/7	PC511K20027.d
Level 7	STD0200 280-97141/8	PC511K20028.d
Level 8	STD0500 280-97141/9	PC511K20029.d
Level 9	STD1250 280-97141/10	PC511K20030.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		
Ammonium Perfluorooctanoate (APFO)	OA	Lin2	445289 19092423	1090103 35130064	2047734 77601371	3992307 159035596	9605554	0.208 10.4	0.520 20.8	1.04 52.0	2.08 130	5.20		
Perfluorooctanoic acid (PFOA)	OA	Lin2	460155 19108867	1093062 35134099	2095842 77768203	4009196 159035596	9648950	0.200 10.0	0.500 20.0	1.00 50.0	2.00 125	5.00		
Perfluorooctane Sulfonate (PFOS)	PFOS	Lin2	127070 6193948	312377 11462597	676834 24831539	1255575 49229165	3083888	0.191 9.56	0.478 19.1	0.956 47.8	1.91 120	4.78		
13C8 PFOA	OA	Lin2	354123 17605665	892474 31957961	1870948 71842503	3571638 147302203	8711216	0.200 10.0	0.500 20.0	1.00 50.0	2.00 125	5.00		
13C8 PFOS	PFOS	Lin2	102871 4863932	249409 8748361	511369 19218936	993136 38109406	2377223	0.191 9.56	0.478 19.1	0.956 47.8	1.91 120	4.78		

Curve Type Legend:
 Lin2 = Linear 1/conc^2 ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Lab Sample ID: ICV 280-97141/12 Calibration Date: 11/20/2011 21:54
 Instrument ID: LC_LCMS5 Calib Start Date: 11/20/2011 20:37
 GC Column: Gemini-NX ID: _____ Calib End Date: 11/20/2011 21:39
 Lab File ID: PC511K20032.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9948		2.30	2.08	10.5	30.0
Perfluorooctanoic acid (PFOA)	Lin2		1.045		2.22	2.00	11.0	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.323		2.38	2.02	17.8	30.0
13C8 PFOA	Lin2		0.8973		2.12	2.00	6.0	30.0
13C8 PFOS	Lin2		0.9236		2.02	1.91	5.6	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Lab Sample ID: CCV 280-97141/24 Calibration Date: 11/20/2011 23:27
 Instrument ID: LC_LCMS5 Calib Start Date: 11/20/2011 20:37
 GC Column: Gemini-NX ID: _____ Calib End Date: 11/20/2011 21:39
 Lab File ID: PC511K20044.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ammonium Perfluorooctanoate (APFO)	Lin2		0.9209		5.40	5.20	3.8	30.0
Perfluorooctanoic acid (PFOA)	Lin2		0.9632		5.20	5.00	4.0	30.0
Perfluorooctane Sulfonate (PFOS)	Lin2		1.148		4.91	4.78	2.7	30.0
13C8 PFOA	Lin2		0.8946		5.32	5.00	6.4	30.0
13C8 PFOS	Lin2		0.8695		4.80	4.78	0.4	30.0

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Lab File ID: PC511K20034.d Lab Sample ID: MB 280-96832/1-A
 Matrix: Water Date Extracted: 11/17/2011 18:50
 Instrument ID: LC_LCMS5 Date Analyzed: 11/20/2011 22:10
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-96832/2-A	PC511K20035 .d	11/20/2011 22:17
	LCSD 280-96832/3-A	PC511K20036 .d	11/20/2011 22:25
MW16-46I-111511	280-22864-1	PC511K20039 .d	11/20/2011 22:48
MW16-46S-111511	280-22864-2	PC511K20040 .d	11/20/2011 22:56
MW16-45S-111511	280-22864-3	PC511K20041 .d	11/20/2011 23:04
MW16-45I-111511	280-22864-4	PC511K20042 .d	11/20/2011 23:12
MW16-DUP01-111511	280-22864-5	PC511K20043 .d	11/20/2011 23:19

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 280-96832/1-A ✓
 Matrix: Water Lab File ID: PC511K20034.d
 Analysis Method: PFOA/PFOS Date Collected: _____
 Extraction Method: 3535 Date Extracted: 11/17/2011 18:50
 Sample wt/vol: 250 (mL) Date Analyzed: 11/20/2011 22:10
 Con. Extract Vol.: 5 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0080	U	0.020	0.0080	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.0076	U	0.030	0.0076	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA	110		60-155
STL01054	13C8 PFOS	103		45-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: CCB 280-97141/11 ✓
 Matrix: Water Lab File ID: PC511K20031.d
 Analysis Method: PFOA/PFOS Date Collected: _____
 Extraction Method: _____ Date Extracted: _____
 Sample wt/vol: 1 (mL) Date Analyzed: 11/20/2011 21:46
 Con. Extract Vol.: 1.0 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Gemini-NX ID: _____
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 97141 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
335-67-1	Perfluorooctanoic acid (PFOA)	0.0080	U	0.55	0.0080	0.0012
1763-23-1	Perfluorooctane Sulfonate (PFOS)	0.0076	U	0.15	0.0076	0.0016

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL01052	13C8 PFOA			
STL01054	13C8 PFOS			

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-22864-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): Gemini-NX ID: _____

Client Sample ID	Lab Sample ID	PFOA #	PFOS #
MW16-46I-111511	280-22864-1	109	103
MW16-46S-111511	280-22864-2	108	104
MW16-45S-111511	280-22864-3	110	106
MW16-45I-111511	280-22864-4	109	106
MW16-DUP01-111511	280-22864-5	110	105
	MB 280-96832/1-A	110	103
	LCS 280-96832/2-A	110	105
	LCSD 280-96832/3-A	110	106
	DLCK 280-97141/13	112	107

PFOA = 13C8 PFOA
PFOS = 13C8 PFOS

QC LIMITS
60-155
45-130

Column to be used to flag recovery values

FORM II PFOA/PFOS

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-22864-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: PC511K20035.d

Lab ID: LCS 280-96832/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perfluorooctanoic acid (PFOA)	0.200	0.214	107	70-130	
Perfluorooctane Sulfonate (PFOS)	0.191	0.198	103	60-128	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: PC511K20036.d
 Lab ID: LCSD 280-96832/3-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perfluorooctanoic acid (PFOA)	0.200	0.220	110	3	20	70-130	
Perfluorooctane Sulfonate (PFOS)	0.191	0.210	110	6	20	60-128	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: PC511K20033.d
 Lab ID: DLCK 280-97141/13 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
Perfluorooctanoic acid (PFOA)	0.500	0.538 J	108	70-130	
Perfluorooctane Sulfonate (PFOS)	0.478	0.513	107	70-130	

Column to be used to flag recovery and RPD values

FORM III PFOA/PFOS

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-22864-1
 SDG No.: _____
 Instrument ID: LC_LCMS5 Calibration Start Date: 11/20/2011 20:37
 GC Column: Gemini-NX ID: _____ Calibration End Date: 11/20/2011 21:39
 Calibration ID: 7840

	OA		PFOS		AREA #	RT #
	AREA #	RT #	AREA #	RT #		
INITIAL CALIBRATION MEAN AREA AND MEAN RT	19245294	4.11	5087130	4.25		
UPPER LIMIT	29830206	4.61	6613269	4.75		
LOWER LIMIT	11547176	3.61	2289209	3.75		
LAB SAMPLE ID	CLIENT SAMPLE ID					
CCB 280-97141/11		22339514	4.11	5475113	4.25	
ICV 280-97141/12		21011593	4.12	5220719	4.25	
DLCK 280-97141/13		20215469	4.11	5223694	4.24	
MB 280-96832/1-A		18578099	4.08	4163618	4.21	
LCS 280-96832/2-A		18560552	4.07	4322730	4.20	
LCS D 280-96832/3-A		18239552	4.06	3984725	4.19	
280-22864-1	MW16-46I-111511	17017973	4.06	2954482	4.19	
280-22864-2	MW16-46S-111511	19360708	4.05	3884774	4.19	
280-22864-3	MW16-45S-111511	17731015	4.05	3689989	4.19	
280-22864-4	MW16-45I-111511	18165933	4.05	3525760	4.18	
280-22864-5	MW16-DUP01-111511	11127720Q	4.04	2109657Q	4.17	
CCV 280-97141/24		19674850	4.06	5396197	4.19	

OA = 13C4 PFOA (IS)
 PFOS = 13C4 PFOS (IS)

Area Limit = 60%-155% of internal standard area
 RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII PFOA/PFOS

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\Denchrom\chromdata\LC_LCMS5\20111121-2783.b\PC511K20041.d
 Lims ID: 280-22864-A-3-A Client ID: MW16-45S-111511
 Inject. Date: 20-Nov-2011 23:04:15 Dil. Factor: 1.0000
 Sample Type: Client
 Sample ID: 280-22864-a-3-a, Sample
 Misc. Info.:
 Operator: TW/JB Instrument ID: LC_LCMS5
 Vol. Injected: 20.0000 ALS Bottle#: 0
 Lims Batch ID: 97141 Lims Sample ID: 21
 Raw Data: Smoothed
 Detector: MS QQQ
 Method: \\Denchrom\chromdata\LC_LCMS5\20111121-2783.b\8321_PFOA_S.m
 Last Update: 21-Nov-2011 08:59:34 Calib Date: 20-Nov-2011 21:39:10
 Quant Method: Internal/External Standard Quant By: Initial Calibration
 Last ICal File: \\Denchrom\chromdata\LC_LCMS5\20111121-2783.b\PC511K20030.d
 Limit Group: LC - PFOA
 Integrator: Falcon
 Process Host: DENPC285

First Level Reviewer: bonnettj Date: 21-Nov-2011 08:57:40

Signal	RT	ADJ RT	DLT RT	REL RT	Response	On-Col Amt ug/L	Ratio Range	Ratio	Flags
1 Perfluorooctanoic acid									
413.0 > 368.9	4.040	4.113	-0.073	0.998	216917	0.0615	0.70- 1.30	1.00	
413.0 > 169.0	4.049	4.113	-0.064	1.000	32225		3.67- 6.82	6.73	
* 4 13C4 PFOA (IS)									
417.0 > 371.9	4.048	4.114	-0.066		17731015	10.0			
\$ 9 13C8 PFOA									
421.0 > 375.9	4.048	4.114	-0.066	1.000	16305559	11.0			
2 Perfluorooctanoic Sulfonate									
498.9 > 79.9		4.242							
498.9 > 98.9		4.242							
\$ 6 13C8 PFOS									
506.9 > 80.0	4.186	4.243	-0.057	1.000	3365566	10.1			
* 5 13C4 PFOS (IS)									
502.9 > 80.0	4.187	4.245	-0.058		3689989	9.56			

PFOA rep result 0.0013 ug/L

$$\frac{(216917)(10 \text{ ug/L})(245 \text{ ml})(20 \text{ uL})}{(17731015)(0.9134)(5 \text{ ml})(100000)} = 0.0013 \text{ ug/L}$$

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD	ANALYTICAL_METHOD_GRP_DESC
MID_ATLANTIC	DAVISVILLE_NCBC	280-22864-1	SITE 00016	SITE 00016	MW16-465	Monitoring well	351361.046	194568.159	N6247008D1001	WE51	TETRA TECH NUS, INC.	MW16-465-111511	Ground water	Normal (Regular)	15-Nov-11	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	DAVISVILLE_NCBC	280-22864-1	SITE 00016	SITE 00016	MW16-465	Monitoring well	351361.046	194568.159	N6247008D1001	WE51	TETRA TECH NUS, INC.	MW16-465-111511-D	Ground water	Field duplicate	15-Nov-11	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	DAVISVILLE_NCBC	280-22864-1	SITE 00016	SITE 00016	MW16-46i	Monitoring well	351354.898	194571.075	N6247008D1001	WE51	TETRA TECH NUS, INC.	MW16-46i-111511	Ground water	Normal (Regular)	15-Nov-11	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	DAVISVILLE_NCBC	280-22864-1	SITE 00016	SITE 00016	MW16-45i	Monitoring well	351293.4	194514.44	N6247008D1001	WE51	TETRA TECH NUS, INC.	MW16-45i-111511	Ground water	Normal (Regular)	15-Nov-11	TA_WS-LC-0025	Perfluoroalkyl Compounds
MID_ATLANTIC	DAVISVILLE_NCBC	280-22864-1	SITE 00016	SITE 00016	MW16-455	Monitoring well	351289.272	194509.701	N6247008D1001	WE51	TETRA TECH NUS, INC.	MW16-455-111511	Ground water	Normal (Regular)	15-Nov-11	TA_WS-LC-0025	Perfluoroalkyl Compounds