UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 16-0451
Project: 16-0451, North Georgia Surface Water PFC Study - Reported by Floyd Wellborn

August 24, 2016

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 16-0451, North Georgia Surface Water PFC Study
Civil Enforcement

FROM: Floyd Wellborn
ASB Organic Chemistry Section Chief

THRU: Danny France, Chief
Analytical Support Branch

TO: Mike Neill

This data report is being reissued. Some or all of these results were previously reported. Please substitute the corrected results for those results previously reported. Please refer to the Report Narrative for more details.

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Section 5.2 of the ASB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
Semi Volatile Organics (SVOA)		
PFCs	ASB 100S (Water)	ISO

ED_005067_00000089-00001

Report Narrative for Work Order: E162703 Analysis: SVOA

8/23/16 FW SVOA: These results have been re-reported after instrument maintenance, which resolved previous analysis quality control problems, and reanalysis within sample holding time. This report replaces the previous report E162703 SVOA FINAL 08 05 16 1651.

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov, and provide a reason for holding samples beyond 60 days

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SAMPLES INCLUDED IN THIS REPORT

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
1084	E162703-01	Surface Water	6/19/16 09:20	6/27/16 9:50
1085	E162703-02	Surface Water	6/19/16 12:45	6/27/16 9:50
1086	E162703-03	Surface Water	6/19/16 13:25	6/27/16 9:50
1087	E162703-04	Surface Water	6/19/16 14:55	6/27/16 9:50
1088	E162703-05	Surface Water	6/19/16 15:53	6/27/16 9:50
1089	E162703-06	Surface Water	6/19/16 16:40	6/27/16 9:50
1090	E162703-07	Surface Water	6/20/16 08:45	6/27/16 9:50
1094	E162703-11	Surface Water	6/20/16 09:55	6/27/16 9:50
1095	E162703-12	Surface Water	6/20/16 10:55	6/27/16 9:50
1096	E162703-13	Surface Water	6/20/16 11:10	6/27/16 9:50
1097	E162703-14	Surface Water	6/21/16 09:15	6/27/16 9:50
1098	E162703-15	Surface Water	6/21/16 10:25	6/27/16 9:50
1099	E162703-16	Surface Water	6/21/16 11:05	6/27/16 9:50
1100	E162703-17	Surface Water	6/21/16 12:25	6/27/16 9:50
1101	E162703-18	Surface Water	6/21/16 14:05	6/27/16 9:50
1102	E162703-19	Surface Water	6/21/16 14:45	6/27/16 9:50
1103	E162703-20	Surface Water	6/21/16 15:10	6/27/16 9:50
1104	E162703-21	Surface Water	6/22/16 09:05	6/27/16 9:50
1105	E162703-22	Surface Water	6/22/16 10:05	6/27/16 9:50
1109	E162703-26	Surface Water	6/22/16 12:15	6/27/16 9:50
1110	E162703-27	Surface Water	6/22/16 12:50	6/27/16 9:50
1111	E162703-28	Surface Water	6/22/16 15:34	6/27/16 9:50
1112	E162703-29	Surface Water	6/23/16 08:55	6/27/16 9:50
1113	E162703-30	Surface Water	6/23/16 09:10	6/27/16 9:50
1114	E162703-31	Surface Water	6/23/16 13:40	6/27/16 9:50
1115	E162703-32	Surface Water	6/24/16 11:20	6/27/16 9:50
1116	E162703-33	Surface Water	6/24/16 12:10	6/27/16 9:50
1117	E162703-34	Surface Water	6/24/16 12:45	6/27/16 9:50
1118	E162703-35	Surface Water	6/24/16 13:15	6/27/16 9:50
1119	E162703-36	Surface Water	6/24/16 13:30	6/27/16 9:50
1120	E162703-37	Surface Water	6/24/16 13:45	6/27/16 9:50
1121	E162703-38	Surface Water	6/24/16 14:35	6/27/16 9:50
1122	E162703-39	Surface Water	6/24/16 15:05	6/27/16 9:50

ED_005067_00000089-00003

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.
QM-3	Matrix Spike Precision outside method control limits
QR-1	MRL verification recovery less than lower control limits.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO The test, if analyzed after June 26, 2012, is accredited under the EPA Region 4 ASB's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1691.

NR The EPA Region 4 Laboratory has not requested accreditation for this test.

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1084 **Lab ID:** E162703-01

Station ID: RV_14_4438 **Matrix:** Surface Water

Date Collected: 6/19/16 9:20

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:17	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:17	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:17	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:17	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:17	ASB 100S
375-95-1	PFNA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:17	ASB 100S
335-67-1	PFOA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:17	ASB 100S
1763-23-1	PFOS	0.015	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 0:17	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1085 **Lab ID:** E162703-02

Station ID: RV_14_16663 **Matrix:** Surface Water

Date Collected: 6/19/16 12:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:35	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 0:35	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:35	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 0:35	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:35	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 0:35	ASB 100S
335-67-1	PFOA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 0:35	ASB 100S
1763-23-1	PFOS	0.017	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 0:35	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1086 **Lab ID:** E162703-03

Station ID: RV_14_16664 **Matrix:** Surface Water

Date Collected: 6/19/16 13:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.081		ug/L	0.026	7/01/16 10:46	8/17/16 0:52	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:52	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:52	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:52	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 0:52	ASB 100S
375-95-1	PFNA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:52	ASB 100S
335-67-1	PFOA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 0:52	ASB 100S
1763-23-1	PFOS	0.030		ug/L	0.026	7/01/16 10:46	8/17/16 0:52	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1087 **Lab ID:** E162703-04

Station ID: RV_14_4457 **Matrix:** Surface Water

Date Collected: 6/19/16 14:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.037		ug/L	0.026	7/01/16 10:46	8/17/16 1:09	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 1:09	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 1:09	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 1:09	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 1:09	ASB 100S
375-95-1	PFNA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 1:09	ASB 100S
335-67-1	PFOA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 1:09	ASB 100S
1763-23-1	PFOS	0.019	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 1:09	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1088 **Lab ID:** E162703-05

Station ID: RV_14_16665 **Matrix:** Surface Water

Date Collected: 6/19/16 15:53

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.53		ug/L	0.026	7/01/16 10:46	8/17/16 1:26	ASB 100S
335-76-2	PFDA	0.033	J, Q-2	ug/L	0.045	7/01/16 10:46	8/17/16 1:26	ASB 100S
375-85-9	PFHpA	0.11		ug/L	0.026	7/01/16 10:46	8/17/16 1:26	ASB 100S
307-24-4	PFHxA	0.17		ug/L	0.045	7/01/16 10:46	8/17/16 1:26	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 1:26	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 1:26	ASB 100S
335-67-1	PFOA	0.15		ug/L	0.045	7/01/16 10:46	8/17/16 1:26	ASB 100S
1763-23-1	PFOS	0.32		ug/L	0.026	7/01/16 10:46	8/17/16 1:26	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1089 **Lab ID:** E162703-06

Station ID: RV_14_16666 **Matrix:** Surface Water

Date Collected: 6/19/16 16:40

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	1.6		ug/L	0.26	7/01/16 10:46	8/17/16 1:43	ASB 100S
335-76-2	PFDA	0.029	J, Q-2	ug/L	0.045	7/01/16 10:46	8/17/16 5:07	ASB 100S
375-85-9	PFHpA	0.16		ug/L	0.026	7/01/16 10:46	8/17/16 5:07	ASB 100S
307-24-4	PFHxA	0.26		ug/L	0.045	7/01/16 10:46	8/17/16 5:07	ASB 100S
355-46-4	PFHxS	0.060		ug/L	0.026	7/01/16 10:46	8/17/16 5:07	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 5:07	ASB 100S
335-67-1	PFOA	0.39		ug/L	0.045	7/01/16 10:46	8/17/16 5:07	ASB 100S
1763-23-1	PFOS	0.43		ug/L	0.026	7/01/16 10:46	8/17/16 5:07	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1090 **Lab ID:** E162703-07

Station ID: RV_14_4455 **Matrix:** Surface Water

Date Collected: 6/20/16 8:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.23		ug/L	0.026	7/01/16 10:46	8/17/16 2:00	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 2:00	ASB 100S
375-85-9	PFHpA	0.029		ug/L	0.026	7/01/16 10:46	8/17/16 2:00	ASB 100S
307-24-4	PFHxA	0.062		ug/L	0.045	7/01/16 10:46	8/17/16 2:00	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 2:00	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 2:00	ASB 100S
335-67-1	PFOA	0.045	J, QM-3	ug/L	0.045	7/01/16 10:46	8/17/16 2:00	ASB 100S
1763-23-1	PFOS	0.10		ug/L	0.026	7/01/16 10:46	8/17/16 2:00	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1094 **Lab ID:** E162703-11

Station ID: RV_14_4458 **Matrix:** Surface Water

Date Collected: 6/20/16 9:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.28		ug/L	0.026	7/01/16 10:46	8/17/16 2:17	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 2:17	ASB 100S
375-85-9	PFHpA	0.057		ug/L	0.026	7/01/16 10:46	8/17/16 2:17	ASB 100S
307-24-4	PFHxA	0.076		ug/L	0.045	7/01/16 10:46	8/17/16 2:17	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 2:17	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 2:17	ASB 100S
335-67-1	PFOA	0.096		ug/L	0.045	7/01/16 10:46	8/17/16 2:17	ASB 100S
1763-23-1	PFOS	0.18		ug/L	0.026	7/01/16 10:46	8/17/16 2:17	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1095 **Lab ID:** E162703-12

Station ID: RV_14_16667 **Matrix:** Surface Water

Date Collected: 6/20/16 10:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.38		ug/L	0.026	7/01/16 10:46	8/17/16 2:34	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 2:34	ASB 100S
375-85-9	PFHpA	0.074		ug/L	0.026	7/01/16 10:46	8/17/16 2:34	ASB 100S
307-24-4	PFHxA	0.12		ug/L	0.046	7/01/16 10:46	8/17/16 2:34	ASB 100S
355-46-4	PFHxS	0.018	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 2:34	ASB 100S
375-95-1	PFNA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 2:34	ASB 100S
335-67-1	PFOA	0.15		ug/L	0.046	7/01/16 10:46	8/17/16 2:34	ASB 100S
1763-23-1	PFOS	0.15		ug/L	0.026	7/01/16 10:46	8/17/16 2:34	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1096 **Lab ID:** E162703-13

Station ID: POSSIBLE RUNOFF FROM LAS **Matrix:** Surface Water

Date Collected: 6/20/16 11:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	7.5		ug/L	0.26	7/01/16 10:46	8/17/16 2:51	ASB 100S
335-76-2	PFDA	0.31		ug/L	0.045	7/01/16 10:46	8/17/16 5:24	ASB 100S
375-85-9	PFHpA	2.7		ug/L	0.26	7/01/16 10:46	8/17/16 2:51	ASB 100S
307-24-4	PFHxA	4.8		ug/L	0.45	7/01/16 10:46	8/17/16 2:51	ASB 100S
355-46-4	PFHxS	0.085		ug/L	0.026	7/01/16 10:46	8/17/16 5:24	ASB 100S
375-95-1	PFNA	0.13		ug/L	0.045	7/01/16 10:46	8/17/16 5:24	ASB 100S
335-67-1	PFOA	0.88		ug/L	0.045	7/01/16 10:46	8/17/16 5:24	ASB 100S
1763-23-1	PFOS	2.3		ug/L	0.26	7/01/16 10:46	8/17/16 2:51	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1097 **Lab ID:** E162703-14

Station ID: RV_14_4460 **Matrix:** Surface Water

Date Collected: 6/21/16 9:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.36		ug/L	0.026	7/01/16 10:46	8/17/16 3:08	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 3:08	ASB 100S
375-85-9	PFHpA	0.067		ug/L	0.026	7/01/16 10:46	8/17/16 3:08	ASB 100S
307-24-4	PFHxA	0.14		ug/L	0.045	7/01/16 10:46	8/17/16 3:08	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 3:08	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 3:08	ASB 100S
335-67-1	PFOA	0.15		ug/L	0.045	7/01/16 10:46	8/17/16 3:08	ASB 100S
1763-23-1	PFOS	0.15		ug/L	0.026	7/01/16 10:46	8/17/16 3:08	ASB 100S

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Sample ID: 1098 **Lab ID:** E162703-15

Station ID: RV_14_16671 **Matrix:** Surface Water

Date Collected: 6/21/16 10:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	7.6		ug/L	0.26	7/01/16 10:46	8/17/16 3:25	ASB 100S
335-76-2	PFDA	0.21		ug/L	0.045	7/01/16 10:46	8/17/16 5:41	ASB 100S
375-85-9	PFHpA	1.4		ug/L	0.26	7/01/16 10:46	8/17/16 3:25	ASB 100S
307-24-4	PFHxA	2.7		ug/L	0.45	7/01/16 10:46	8/17/16 3:25	ASB 100S
355-46-4	PFHxS	0.077		ug/L	0.026	7/01/16 10:46	8/17/16 5:41	ASB 100S
375-95-1	PFNA	0.11		ug/L	0.045	7/01/16 10:46	8/17/16 5:41	ASB 100S
335-67-1	PFOA	0.63		ug/L	0.045	7/01/16 10:46	8/17/16 5:41	ASB 100S
1763-23-1	PFOS	1.2		ug/L	0.26	7/01/16 10:46	8/17/16 3:25	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1099 **Lab ID:** E162703-16

Station ID: PO_14_2439 **Matrix:** Surface Water

Date Collected: 6/21/16 11:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.14		ug/L	0.026	7/01/16 10:46	8/17/16 3:42	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 3:42	ASB 100S
375-85-9	PFHpA	0.034		ug/L	0.026	7/01/16 10:46	8/17/16 3:42	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 3:42	ASB 100S
355-46-4	PFHxS	0.020	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 3:42	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 3:42	ASB 100S
335-67-1	PFOA	0.052		ug/L	0.045	7/01/16 10:46	8/17/16 3:42	ASB 100S
1763-23-1	PFOS	0.083		ug/L	0.026	7/01/16 10:46	8/17/16 3:42	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1100 **Lab ID:** E162703-17

Station ID: RV_14_4463 **Matrix:** Surface Water

Date Collected: 6/21/16 12:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.33		ug/L	0.026	7/01/16 10:46	8/17/16 3:59	ASB 100S
335-76-2	PFDA	0.022	J, Q-2	ug/L	0.046	7/01/16 10:46	8/17/16 3:59	ASB 100S
375-85-9	PFHpA	0.069		ug/L	0.026	7/01/16 10:46	8/17/16 3:59	ASB 100S
307-24-4	PFHxA	0.11		ug/L	0.046	7/01/16 10:46	8/17/16 3:59	ASB 100S
355-46-4	PFHxS	0.022	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 3:59	ASB 100S
375-95-1	PFNA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 3:59	ASB 100S
335-67-1	PFOA	0.16		ug/L	0.046	7/01/16 10:46	8/17/16 3:59	ASB 100S
1763-23-1	PFOS	0.13		ug/L	0.026	7/01/16 10:46	8/17/16 3:59	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1101 **Lab ID:** E162703-18

Station ID: RV_14_16672 **Matrix:** Surface Water

Date Collected: 6/21/16 14:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	5.7		ug/L	0.26	7/01/16 10:46	8/17/16 4:16	ASB 100S
335-76-2	PFDA	0.48		ug/L	0.045	7/01/16 10:46	8/17/16 5:58	ASB 100S
375-85-9	PFHpA	0.95		ug/L	0.026	7/01/16 10:46	8/17/16 5:58	ASB 100S
307-24-4	PFHxA	1.3		ug/L	0.45	7/01/16 10:46	8/17/16 4:16	ASB 100S
355-46-4	PFHxS	0.11		ug/L	0.026	7/01/16 10:46	8/17/16 5:58	ASB 100S
375-95-1	PFNA	0.13		ug/L	0.045	7/01/16 10:46	8/17/16 5:58	ASB 100S
335-67-1	PFOA	0.60		ug/L	0.045	7/01/16 10:46	8/17/16 5:58	ASB 100S
1763-23-1	PFOS	2.1		ug/L	0.26	7/01/16 10:46	8/17/16 4:16	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1102 **Lab ID:** E162703-19

Station ID: RV_14_16673 **Matrix:** Surface Water

Date Collected: 6/21/16 14:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.35		ug/L	0.026	7/01/16 10:46	8/17/16 4:33	ASB 100S
335-76-2	PFDA	0.024	J, Q-2	ug/L	0.046	7/01/16 10:46	8/17/16 4:33	ASB 100S
375-85-9	PFHpA	0.081		ug/L	0.026	7/01/16 10:46	8/17/16 4:33	ASB 100S
307-24-4	PFHxA	0.098		ug/L	0.046	7/01/16 10:46	8/17/16 4:33	ASB 100S
355-46-4	PFHxS	0.018	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 4:33	ASB 100S
375-95-1	PFNA	0.046	U	ug/L	0.046	7/01/16 10:46	8/17/16 4:33	ASB 100S
335-67-1	PFOA	0.14		ug/L	0.046	7/01/16 10:46	8/17/16 4:33	ASB 100S
1763-23-1	PFOS	0.25		ug/L	0.026	7/01/16 10:46	8/17/16 4:33	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1103 **Lab ID:** E162703-20

Station ID: RV_14_4419 **Matrix:** Surface Water

Date Collected: 6/21/16 15:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.20		ug/L	0.026	7/01/16 10:46	8/17/16 4:50	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 4:50	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 4:50	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 4:50	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/01/16 10:46	8/17/16 4:50	ASB 100S
375-95-1	PFNA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 4:50	ASB 100S
335-67-1	PFOA	0.045	U	ug/L	0.045	7/01/16 10:46	8/17/16 4:50	ASB 100S
1763-23-1	PFOS	0.013	J, Q-2	ug/L	0.026	7/01/16 10:46	8/17/16 4:50	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1104 **Lab ID:** E162703-21

Station ID: RV_14_16674 **Matrix:** Surface Water

Date Collected: 6/22/16 9:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.22		ug/L	0.026	7/05/16 14:00	8/16/16 13:44	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 13:44	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 13:44	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 13:44	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 13:44	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 13:44	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 13:44	ASB 100S
1763-23-1	PFOS	0.085		ug/L	0.026	7/05/16 14:00	8/16/16 13:44	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1105 **Lab ID:** E162703-22

Station ID: RV_14_4420 **Matrix:** Surface Water

Date Collected: 6/22/16 10:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.22		ug/L	0.026	7/05/16 14:00	8/16/16 14:01	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 14:01	ASB 100S
375-85-9	PFHpA	0.019	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 14:01	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 14:01	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:01	ASB 100S
375-95-1	PFNA	0.046	U, J, QR-1	ug/L	0.046	7/05/16 14:00	8/16/16 14:01	ASB 100S
335-67-1	PFOA	0.026		ug/L	0.026	7/05/16 14:00	8/16/16 14:01	ASB 100S
1763-23-1	PFOS	0.061		ug/L	0.026	7/05/16 14:00	8/16/16 14:01	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1109 **Lab ID:** E162703-26

Station ID: RV_14_4423 **Matrix:** Surface Water

Date Collected: 6/22/16 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.23		ug/L	0.026	7/05/16 14:00	8/16/16 14:18	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 14:18	ASB 100S
375-85-9	PFHpA	0.020	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 14:18	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 14:18	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:18	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 14:18	ASB 100S
335-67-1	PFOA	0.026		ug/L	0.026	7/05/16 14:00	8/16/16 14:18	ASB 100S
1763-23-1	PFOS	0.059		ug/L	0.026	7/05/16 14:00	8/16/16 14:18	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1110 **Lab ID:** E162703-27

Station ID: RV_14_16676 **Matrix:** Surface Water

Date Collected: 6/22/16 12:50

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.029		ug/L	0.026	7/05/16 14:00	8/16/16 14:35	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 14:35	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:35	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 14:35	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:35	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 14:35	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:35	ASB 100S
1763-23-1	PFOS	0.024	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 14:35	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1111 **Lab ID:** E162703-28

Station ID: RV_14_4426 **Matrix:** Surface Water

Date Collected: 6/22/16 15:34

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.22		ug/L	0.026	7/05/16 14:00	8/16/16 14:52	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 14:52	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:52	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 14:52	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 14:52	ASB 100S
375-95-1	PFNA	0.046	U, J, QR-1	ug/L	0.046	7/05/16 14:00	8/16/16 14:52	ASB 100S
335-67-1	PFOA	0.018	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 14:52	ASB 100S
1763-23-1	PFOS	0.058		ug/L	0.026	7/05/16 14:00	8/16/16 14:52	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1112 **Lab ID:** E162703-29

Station ID: RV_14_4427 **Matrix:** Surface Water

Date Collected: 6/23/16 8:55

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.22		ug/L	0.026	7/05/16 14:00	8/16/16 15:09	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 15:09	ASB 100S
375-85-9	PFHpA	0.019	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 15:09	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 15:09	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:09	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 15:09	ASB 100S
335-67-1	PFOA	0.028		ug/L	0.026	7/05/16 14:00	8/16/16 15:09	ASB 100S
1763-23-1	PFOS	0.057		ug/L	0.026	7/05/16 14:00	8/16/16 15:09	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1113 **Lab ID:** E162703-30

Station ID: RV_14_16679 **Matrix:** Surface Water

Date Collected: 6/23/16 9:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:26	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 15:26	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:26	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 15:26	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:26	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 15:26	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:26	ASB 100S
1763-23-1	PFOS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:26	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1114 **Lab ID:** E162703-31

Station ID: RV_14_4430 **Matrix:** Surface Water

Date Collected: 6/23/16 13:40

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.22		ug/L	0.026	7/05/16 14:00	8/16/16 15:43	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 15:43	ASB 100S
375-85-9	PFHpA	0.018	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 15:43	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 15:43	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:43	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 15:43	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 15:43	ASB 100S
1763-23-1	PFOS	0.050		ug/L	0.026	7/05/16 14:00	8/16/16 15:43	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1115 **Lab ID:** E162703-32

Station ID: RV_14_4533 **Matrix:** Surface Water

Date Collected: 6/24/16 11:20

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.23		ug/L	0.026	7/05/16 14:00	8/16/16 16:00	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 16:00	ASB 100S
375-85-9	PFHpA	0.019	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 16:00	ASB 100S
307-24-4	PFHxA	0.037	J, Q-2	ug/L	0.045	7/05/16 14:00	8/16/16 16:00	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:00	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 16:00	ASB 100S
335-67-1	PFOA	0.021	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 16:00	ASB 100S
1763-23-1	PFOS	0.076		ug/L	0.026	7/05/16 14:00	8/16/16 16:00	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1116 **Lab ID:** E162703-33

Station ID: RV_14_16685 **Matrix:** Surface Water

Date Collected: 6/24/16 12:10

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.041		ug/L	0.026	7/05/16 14:00	8/16/16 16:17	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 16:17	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:17	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 16:17	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:17	ASB 100S
375-95-1	PFNA	0.046	U, J, QR-1	ug/L	0.046	7/05/16 14:00	8/16/16 16:17	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:17	ASB 100S
1763-23-1	PFOS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:17	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1117 **Lab ID:** E162703-34

Station ID: RV_14_4534 **Matrix:** Surface Water

Date Collected: 6/24/16 12:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.24		ug/L	0.026	7/05/16 14:00	8/16/16 16:34	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 16:34	ASB 100S
375-85-9	PFHpA	0.019	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 16:34	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 16:34	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:34	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 16:34	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:34	ASB 100S
1763-23-1	PFOS	0.059		ug/L	0.026	7/05/16 14:00	8/16/16 16:34	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1118 **Lab ID:** E162703-35

Station ID: RV_14_16686 **Matrix:** Surface Water

Date Collected: 6/24/16 13:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.22		ug/L	0.026	7/05/16 14:00	8/16/16 16:51	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 16:51	ASB 100S
375-85-9	PFHpA	0.017	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 16:51	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 16:51	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 16:51	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 16:51	ASB 100S
335-67-1	PFOA	0.020	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 16:51	ASB 100S
1763-23-1	PFOS	0.066		ug/L	0.026	7/05/16 14:00	8/16/16 16:51	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1119 **Lab ID:** E162703-36

Station ID: RV_14_16687 **Matrix:** Surface Water

Date Collected: 6/24/16 13:30

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:08	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 17:08	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:08	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 17:08	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:08	ASB 100S
375-95-1	PFNA	0.046	U, J, QR-1	ug/L	0.046	7/05/16 14:00	8/16/16 17:08	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:08	ASB 100S
1763-23-1	PFOS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:08	ASB 100S

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Semi Volatile Organics

Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1120 **Lab ID:** E162703-37

Station ID: RV_14_4599 **Matrix:** Surface Water

Date Collected: 6/24/16 13:45

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.19		ug/L	0.026	7/05/16 14:00	8/16/16 17:25	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 17:25	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:25	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 17:25	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:25	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 17:25	ASB 100S
335-67-1	PFOA	0.022	J, Q-2	ug/L	0.026	7/05/16 14:00	8/16/16 17:25	ASB 100S
1763-23-1	PFOS	0.045		ug/L	0.026	7/05/16 14:00	8/16/16 17:25	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1121 **Lab ID:** E162703-38

Station ID: RV_14_4604 **Matrix:** Surface Water

Date Collected: 6/24/16 14:35

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.13		ug/L	0.026	7/05/16 14:00	8/16/16 17:42	ASB 100S
335-76-2	PFDA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 17:42	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:42	ASB 100S
307-24-4	PFHxA	0.046	U	ug/L	0.046	7/05/16 14:00	8/16/16 17:42	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:42	ASB 100S
375-95-1	PFNA	0.046	U, J, QR-1	ug/L	0.046	7/05/16 14:00	8/16/16 17:42	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:42	ASB 100S
1763-23-1	PFOS	0.034		ug/L	0.026	7/05/16 14:00	8/16/16 17:42	ASB 100S

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Project: 16-0451, North Georgia Surface Water PFC Study

Sample ID: 1122 **Lab ID:** E162703-39

Station ID: RV_14_4614 **Matrix:** Surface Water

Date Collected: 6/24/16 15:05

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
375-73-5	PFBS	0.11		ug/L	0.026	7/05/16 14:00	8/16/16 17:59	ASB 100S
335-76-2	PFDA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 17:59	ASB 100S
375-85-9	PFHpA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:59	ASB 100S
307-24-4	PFHxA	0.045	U	ug/L	0.045	7/05/16 14:00	8/16/16 17:59	ASB 100S
355-46-4	PFHxS	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:59	ASB 100S
375-95-1	PFNA	0.045	U, J, QR-1	ug/L	0.045	7/05/16 14:00	8/16/16 17:59	ASB 100S
335-67-1	PFOA	0.026	U	ug/L	0.026	7/05/16 14:00	8/16/16 17:59	ASB 100S
1763-23-1	PFOS	0.033		ug/L	0.026	7/05/16 14:00	8/16/16 17:59	ASB 100S

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1608048 - S PFC										
Blank (1608048-BLK1)				Prepared: 07/22/16 Analyzed: 08/17/16						
ASB 100S										
PFBS	U	0.026	ug/L							U
PFDA	U	0.046	"							U
PFHpA	U	0.026	"							U
PFHxA	U	0.046	"							U
PFHxS	U	0.026	"							U
PFNA	U	0.046	"							U
PFOA	U	0.026	"							U
PFOS	U	0.026	"							U
LCS (1608048-BS1)				Prepared: 07/22/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	0.65658	0.026	ug/L	0.58119		113	70-130			
PFDA	0.59335	0.045	"	0.58719		101	70-130			
PFHpA	0.65433	0.026	"	0.59312		110	70-130			
PFHxA	0.64497	0.045	"	0.58142		111	70-130			
PFHxS	0.67405	0.026	"	0.59031		114	70-130			
PFNA	0.70018	0.045	"	0.59251		118	70-130			
PFOA	0.70019	0.026	"	0.58644		119	70-130			
PFOS	0.57502	0.026	"	0.59312		96.9	70-130			
Matrix Spike (1608048-MS1)		**Source: E162703-22RE1**		Prepared: 07/05/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	0.79533	0.026	ug/L	0.51114	0.22297	112	70-130			
PFDA	0.55524	0.046	"	0.51642	U	108	70-130			
PFHpA	0.63288	0.026	"	0.52163	0.019058	118	70-130			
PFHxA	0.55827	0.046	"	0.51134	U	109	70-130			
PFHxS	0.56703	0.026	"	0.51916	U	109	70-130			
PFNA	0.50492	0.046	"	0.52109	U	96.9	70-130			
PFOA	0.68933	0.026	"	0.51575	0.026110	129	70-130			
PFOS	0.53731	0.026	"	0.52163	0.061153	91.3	70-130			

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Semi Volatile Organics (SVOA) - Quality Control

US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1608048 - S PFC										
Matrix Spike Dup (1608048-MSD1)		**Source: E162703-22RE1**		Prepared: 07/05/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	0.73412	0.026	ug/L	0.52821	0.22297	96.8	70-130	8.00	20	
PFDA	0.59107	0.045	"	0.53366	U	111	70-130	6.25	20	
PFHpA	0.57420	0.026	"	0.53904	0.019058	103	70-130	9.72	20	
PFHxA	0.58121	0.045	"	0.52841	U	110	70-130	4.03	20	
PFHxS	0.56855	0.026	"	0.53649	U	106	70-130	0.268	20	
PFNA	0.54048	0.045	"	0.53849	U	100	70-130	6.80	20	
PFOA	0.60959	0.026	"	0.53297	0.026110	109	70-130	12.3	20	
PFOS	0.58729	0.026	"	0.53904	0.061153	97.6	70-130	8.89	20	
MRL Verification (1608048-PS1)				Prepared: 07/22/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	0.034906	0.026	ug/L	0.025990		134	50-150			MRL-2
PFHpA	0.022948	0.026	"	0.026524		86.5	50-150			Q-2, MRL-2, J
PFHxS	0.022851	0.026	"	0.026398		86.6	50-150			Q-2, MRL-2, J
PFOA	0.022630	0.026	"	0.026225		86.3	50-150			Q-2, MRL-2, J
PFOS	0.022213	0.026	"	0.026524		83.7	50-150			Q-2, MRL-2, J
MRL Verification (1608048-PS2)				Prepared: 07/22/16 Analyzed: 08/16/16						
ASB 100S										
PFDA	0.030647	0.045	ug/L	0.045954		66.7	50-150			Q-2, MRL-2, J
PFHxA	0.033641	0.045	"	0.045502		73.9	50-150			Q-2, MRL-2, J
PFNA	0.019783	0.045	"	0.046370		42.7	50-150			Q-2, MRL-2, QR-1, U
Batch 1608086 - S PFC										
Blank (1608086-BLK1)				Prepared: 07/22/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	U	0.026	ug/L							U
PFDA	U	0.046	"							U
PFHpA	U	0.026	"							U
PFHxA	U	0.046	"							U
PFHxS	U	0.026	"							U
PFNA	U	0.046	"							U

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Semi Volatile Organics (SVOA) - Quality Control
US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1608086 - S PFC										
Blank (1608086-BLK1)				Prepared: 07/22/16 Analyzed: 08/16/16						
PFOA	U	0.046	ug/L							U
PFOS	U	0.026	"							U
LCS (1608086-BS1)				Prepared: 07/22/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	0.63338	0.026	ug/L	0.58119		109	70-130			
PFDA	0.70243	0.045	"	0.58719		120	70-130			
PFHpA	0.65147	0.026	"	0.59312		110	70-130			
PFHxA	0.64846	0.045	"	0.58142		112	70-130			
PFHxS	0.70746	0.026	"	0.59031		120	70-130			
PFNA	0.66944	0.045	"	0.59251		113	70-130			
PFOA	0.74758	0.045	"	0.58644		127	70-130			
PFOS	0.53952	0.026	"	0.59312		91.0	70-130			
Matrix Spike (1608086-MS1)		**Source: E162703-07RE1**		Prepared: 07/01/16 Analyzed: 08/17/16						
ASB 100S										
PFBS	0.79835	0.026	ug/L	0.56729	0.22637	101	70-130			
PFDA	0.63056	0.046	"	0.57315	U	110	70-130			
PFHpA	0.65272	0.026	"	0.57893	0.029294	108	70-130			
PFHxA	0.68616	0.046	"	0.56751	0.061840	110	70-130			
PFHxS	0.70955	0.026	"	0.57619	U	123	70-130			
PFNA	0.59778	0.046	"	0.57834	U	103	70-130			
PFOA	0.77084	0.046	"	0.57241	0.045425	127	70-130			
PFOS	0.57303	0.026	"	0.57893	0.10354	81.1	70-130			
Matrix Spike Dup (1608086-MSD1)		**Source: E162703-07RE1**		Prepared: 07/01/16 Analyzed: 08/17/16						
ASB 100S										
PFBS	0.75008	0.026	ug/L	0.52112	0.22637	100	70-130	6.23	20	
PFDA	0.59617	0.046	"	0.52650	U	113	70-130	5.61	20	
PFHpA	0.60333	0.026	"	0.53181	0.029294	108	70-130	7.86	20	
PFHxA	0.64053	0.046	"	0.52132	0.061840	111	70-130	6.88	20	
PFHxS	0.62295	0.026	"	0.52929	U	118	70-130	13.0	20	
PFNA	0.56766	0.046	"	0.53127	U	107	70-130	5.17	20	
PFOA	0.61730	0.046	"	0.52582	0.045425	109	70-130	22.1	20	QM-3
PFOS	0.59201	0.026	"	0.53181	0.10354	91.9	70-130	3.26	20	

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Semi Volatile Organics (SVOA) - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1608086 - S PFC										
MRL Verification (1608086-PS1)				Prepared: 07/22/16 Analyzed: 08/16/16						
ASB 100S										
PFBS	0.032029	0.026	ug/L	0.025990		123	50-150			MRL-2
PFHpA	0.023125	0.026	"	0.026524		87.2	50-150			Q-2, MRL-2, J
PFHxS	0.033137	0.026	"	0.026398		126	50-150			MRL-2
PFOS	0.026998	0.026	"	0.026524		102	50-150			MRL-2
MRL Verification (1608086-PS2)				Prepared: 07/22/16 Analyzed: 08/20/16						
ASB 100S										
PFDA	0.039014	0.045	ug/L	0.045954		84.9	50-150			Q-2, MRL-2, J
PFHxA	0.031326	0.045	"	0.045502		68.8	50-150			Q-2, MRL-2, J
PFNA	0.024746	0.045	"	0.046370		53.4	50-150			Q-2, MRL-2, U
PFOA	0.034808	0.045	"	0.045894		75.8	50-150			Q-2, MRL-2, J

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Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
MRL-2	MRL verification for Non-Potable Water matrix
Q-2	Result greater than MDL but less than MRL.
QM-3	Matrix Spike Precision outside method control limits
QR-1	MRL verification recovery less than lower control limits.