

Chemical Analysis Report

WQAP-2017-07-12-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Black, Quincy, Little, Tanyard, Juniper, Soapstone**
Request ID: **RQ-2017-07-10-19**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
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2600 Blair Stone Rd
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 04-AUG-2017 17:09



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Soapstone Branch 100 meters upstream of SR 375 **Collection Date/Time: 07/12/2017 08:45**

Field ID: G1WA0012_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913020	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P328388	
	EPA 300.0 Rev. 2.1	Chloride	3.4		mg Cl/L	P328553	
		Sulfate	0.33	I	mg SO4/L	P328556	
	SM 2120 B	Color (true)	490		PCU	P328382	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P328661	
	SM 2540 C-97	TDS	81		mg/L	P328899	
	SM 2540 D-97	TSS	2	I	mg/L	P329002	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P328820	
1913023	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P328616	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P328674	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P328698	
	SM 5310 B-00	Organic Carbon	42		mg C/L	P328861	
1913026	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P328473	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Black Creek upstream of SR 375

Collection Date/Time: 07/12/2017 09:10

Field ID: G1WA0047_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913040	EPA 8321B	Sucralose**	0.010	U	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328403	
		Diuron	8.0E-04	U	ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	8.0E-04	U	ug/L	P328403	MS
		Bentazon	8.0E-04	U	ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCP	0.0020	U	ug/L	P328403	
		Carbamazepine**	0.0011	I	ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	
		Fluridone**	4.0E-04	U	ug/L	P328403	

Sample Location: Juniper Creek upstream of Juniper Creek Rd.

Collection Date/Time: 07/12/2017 10:05

Field ID: G1WA0059_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913041	EPA 8321B	Sucralose**	0.039	I	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328403	
		Diuron	8.0E-04	U	ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	0.0062		ug/L	P328403	MS

Field ID: G1WA0059_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913041	USGS O-2060-01	Bentazon	8.0E-04	U	ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCPD	0.0020	U	ug/L	P328403	
		Carbamazepine**	0.0019		ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	
		Fluridone**	4.0E-04	U	ug/L	P328403	

Sample Location: Quincy Creek upstream of SR 65

Collection Date/Time: 07/12/2017 11:00

Field ID: G1WA0049_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913021	EPA 180.1 Rev. 2.0	Turbidity	12	A	NTU	P328389	
	EPA 300.0 Rev. 2.1	Chloride	5.5		mg Cl/L	P328553	
		Sulfate	0.56		mg SO4/L	P328556	
	SM 2120 B	Color (true)	89	A	PCU	P328382	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P328661	
	SM 2540 C-97	TDS	47		mg/L	P328899	
	SM 2540 D-97	TSS	9	I	mg/L	P329002	
	SM 4500 F-C-97	Fluoride	0.083	I	mg F/L	P328820	
1913024	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P328616	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P328674	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P328698	
	SM 5310 B-00	Organic Carbon	4.6		mg C/L	P328861	
1913027	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.034		mg P/L	P328473	
	dissolved						

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Quincy Creek upstream of SR 65

Collection Date/Time: 07/12/2017 11:00

Field ID: G1WA0049_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913044	EPA 200.7 Rev. 4.4	Calcium	6.12		mg/L	P328583	
		Iron	2.22E+03		ug/L	P328583	
		Magnesium	2.18		mg/L	P328583	
		Potassium	0.52	I	mg/L	P328583	
		Sodium	3.1		mg/L	P328583	
		Zinc	5.0	U	ug/L	P328583	
	EPA 200.8 Rev. 5.4	Arsenic	0.97		ug/L	P328583	
		Cadmium	0.020	U	ug/L	P328583	
		Chromium	0.60	I	ug/L	P328583	
		Copper	0.30	I	ug/L	P328583	
		Lead	0.33		ug/L	P328583	
		Nickel	0.22	I	ug/L	P328583	

Field ID: G1WA0049_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913044	EPA 200.8 Rev. 5.4	Silver	0.010	U	ug/L	P328583	

Sample Location: Quincy Creek upstream of SR 65

Collection Date/Time: 07/12/2017 11:00

Field ID: G1WA0049_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913042	EPA 8321B	Sucralose**	0.056		ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328403	
		Diuron	0.0033		ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	0.0065		ug/L	P328403	MS
		Bentazon	0.0040		ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCP	0.0020	U	ug/L	P328403	
		Carbamazepine**	4.0E-04	U	ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	
		Fluridone**	4.0E-04	U	ug/L	P328403	

Ref. Method and Comment:
 USGS O-2060-01: Results confirmed in re-extraction.

Sample Location: Quincy Creek 100 meters upstream of Ralph Strong Rd.

Collection Date/Time: 07/12/2017 11:40

Field ID: G1WA0018_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913022	EPA 180.1 Rev. 2.0	Turbidity	15		NTU	P328389	
	EPA 300.0 Rev. 2.1	Chloride	5.8		mg Cl/L	P328553	
		Sulfate	0.60		mg SO4/L	P328556	
	SM 2120 B	Color (true)	35	A	PCU	P328384	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P328662	
	SM 2540 C-97	TDS	40		mg/L	P328899	
	SM 2540 D-97	TSS	16		mg/L	P329002	
	SM 4500 F-C-97	Fluoride	0.090	I	mg F/L	P328667	
1913025	EPA 350.1 Rev. 2.0	Ammonia-N	0.033		mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P328617	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P328674	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P328698	
	SM 5310 B-00	Organic Carbon	4.6		mg C/L	P328861	
1913028	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P328473	

Ref. Method and Comment:
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Quincy Creek 100 meters upstream of Ralph Strong Rd.

Collection Date/Time: 07/12/2017 11:40

Field ID: G1WA0018_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913045	EPA 200.7 Rev. 4.4	Calcium	6.27		mg/L	P328583	
		Iron	2.36E+03		ug/L	P328583	
		Magnesium	2.13		mg/L	P328583	
		Potassium	0.49	I	mg/L	P328583	
		Sodium	3.2		mg/L	P328583	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P328583	
		Arsenic	1.04		ug/L	P328583	
		Cadmium	0.020	U	ug/L	P328583	
		Chromium	0.99	I	ug/L	P328583	
		Copper	0.35	I	ug/L	P328583	
		Lead	0.60		ug/L	P328583	
		Nickel	0.27	I	ug/L	P328583	
		Silver	0.010	U	ug/L	P328583	

Ref. Method and Comment:
EPA 200.8 Rev. 5.4: The lead result was confirmed on 08/03/2017.

Sample Location: Quincy Creek 100 meters upstream of Ralph Strong Rd.

Collection Date/Time: 07/12/2017 11:40

Field ID: G1WA0018_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913043	EPA 8321B	Sucralose**	0.043		ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328403	
		Diuron	0.0031	I	ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	0.0049		ug/L	P328403	MS
		Bentazon	0.0054		ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCP	0.0020	U	ug/L	P328403	
		Carbamazepine**	4.0E-04	U	ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	
		Fluridone**	4.0E-04	U	ug/L	P328403	

Sample Location: QC Blank DI Water

Collection Date/Time: 07/12/2017 10:45

Field ID: G1WA0049_07122017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913063	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P328389	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P328553	
		Sulfate	0.20	U	mg SO4/L	P328556	
		Color (true)	2.5	U	PCU	P328382	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P328662	
	SM 2540 C-97	TDS	15	U	mg/L	P328899	
	SM 2540 D-97	TSS	2	U	mg/L	P329002	

Field ID: G1WA0049_07122017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913063	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P328667	
1913067	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P328617	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P328674	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P328698	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P328861	
1913071	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P328473	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: QC Blank DI Water

Collection Date/Time: 07/12/2017 10:45

Field ID: G1WA0049_07122017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913086	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P328583	
		Iron	30	U	ug/L	P328583	
		Magnesium	0.040	U	mg/L	P328583	
		Potassium	0.30	U	mg/L	P328583	
		Sodium	0.50	U	mg/L	P328583	
		Zinc	5.1	I	ug/L	P328583	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P328583	
		Cadmium	0.020	U	ug/L	P328583	
		Chromium	0.40	U	ug/L	P328583	
		Copper	17.3		ug/L	P328583	
		Lead	0.050	U	ug/L	P328583	
		Nickel	0.20	U	ug/L	P328583	
		Silver	0.010	U	ug/L	P328583	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: The zinc result was confirmed in the undigested sample on 07/18/2017.

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 07/19/2017.

Sample Location: QC Blank DI Water

Collection Date/Time: 07/12/2017 10:45

Field ID: G1WA0049_07122017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913083	EPA 8321B	Sucralose**	0.010	U	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328403	
		Diuron	8.0E-04	U	ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	8.0E-04	U	ug/L	P328403	MS
		Bentazon	8.0E-04	U	ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCPD	0.0020	U	ug/L	P328403	
		Carbamazepine**	4.0E-04	U	ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	

Field ID: G1WA0049_07122017B

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913083	USGS O-2060-01	Fluridone**	4.0E-04	U	ug/L	P328403	

Sample Location: Quincy Creek upstream of SR 65 DUP

Collection Date/Time: 07/12/2017 11:00

Field ID: G1WA0049_07122017D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913064	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P328389	
	EPA 300.0 Rev. 2.1	Chloride	5.5		mg Cl/L	P328553	
		Sulfate	0.55		mg SO4/L	P328556	
	SM 2120 B	Color (true)	87		PCU	P328382	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P328662	
	SM 2540 C-97	TDS	50		mg/L	P328899	
	SM 2540 D-97	TSS	10		mg/L	P329002	
1913068	SM 4500 F-C-97	Fluoride	0.084	I	mg F/L	P328667	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P328616	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P328674	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P328698	
1913072	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P328861	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P328473	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Quincy Creek upstream of SR 65 DUP

Collection Date/Time: 07/12/2017 11:00

Field ID: G1WA0049_07122017D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913087	EPA 200.7 Rev. 4.4	Calcium	6.12		mg/L	P328583	
		Iron	2.30E+03		ug/L	P328583	
		Magnesium	2.22		mg/L	P328583	
		Potassium	0.49	I	mg/L	P328583	
		Sodium	3.1		mg/L	P328583	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P328583	
		Arsenic	1.01		ug/L	P328583	
		Cadmium	0.020	U	ug/L	P328583	
		Chromium	0.71	I	ug/L	P328583	
		Copper	0.30	I	ug/L	P328583	
		Lead	0.38		ug/L	P328583	
		Nickel	0.24	I	ug/L	P328583	
		Silver	0.010	U	ug/L	P328583	

Sample Location: Quincy Creek upstream of SR 65 DUP

Collection Date/Time: 07/12/2017 11:00

Field ID: G1WA0049_07122017D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913084	EPA 8321B	Sucralose**	0.056		ug/L	P328402	

Field ID: G1WA0049_07122017D

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913084	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P328403	
		Diuron	0.0032		ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	0.0056		ug/L	P328403	MS
		Bentazon	0.0040		ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCPD	0.0020	U	ug/L	P328403	
		Carbamazepine**	4.0E-04	U	ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	
		Fluridone**	4.0E-04	U	ug/L	P328403	

Sample Location: Tanyard Branch 100 meters upstream of Ralph Strong Rd. **Collection Date/Time: 07/12/2017 11:50**

Field ID: G1WA0005_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913065	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P328389	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P328553	
		Sulfate	13		mg SO4/L	P328556	
	SM 2120 B	Color (true)	80		PCU	P328382	
	SM 2320 B-97	Total Alkalinity	66	A	mg CaCO3/L	P328662	
	SM 2540 C-97	TDS	154	A	mg/L	P328899	
	SM 2540 D-97	TSS	8	IA	mg/L	P329002	
	SM 4500 F-C-97	Fluoride	0.31		mg F/L	P328667	
1913069	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P328617	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.48		mg N/L	P328675	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P328698	
	SM 5310 B-00	Organic Carbon	4.5		mg C/L	P328861	
1913073	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.099		mg P/L	P328473	
	dissolved						

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Little River 100 meters upstream of SR 12 **Collection Date/Time: 07/12/2017 13:05**

Field ID: G1WA0020_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913066	EPA 180.1 Rev. 2.0	Turbidity	22		NTU	P328389	
	EPA 300.0 Rev. 2.1	Chloride	7.2		mg Cl/L	P328553	
		Sulfate	3.5		mg SO4/L	P328556	
	SM 2120 B	Color (true)	37		PCU	P328384	
	SM 2320 B-97	Total Alkalinity	28		mg CaCO3/L	P328662	
	SM 2540 C-97	TDS	83		mg/L	P328899	
	SM 2540 D-97	TSS	17		mg/L	P329002	

Field ID: G1WA0020_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913066	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P328667	
1913070	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P328590	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P328617	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.4		mg N/L	P328675	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P328698	
	SM 5310 B-00	Organic Carbon	5.7		mg C/L	P328861	
1913074	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P328473	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Little River 100 meters upstream of SR 12

Collection Date/Time: 07/12/2017 13:05

Field ID: G1WA0020_07122017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1913085	EPA 8321B	Sucralose**	0.023	I	ug/L	P328402	
	USGS O-2060-01	2,4-D	0.023		ug/L	P328403	
		Diuron	0.015		ug/L	P328403	
		Fenuron	0.0080	U	ug/L	P328403	RPD
		Imidacloprid	0.0096		ug/L	P328403	MS
		Bentazon	0.0076		ug/L	P328403	
		Linuron	0.0040	U	ug/L	P328403	
		Acetaminophen**	0.0080	U	ug/L	P328403	
		MCP	0.0020	U	ug/L	P328403	
		Carbamazepine**	4.0E-04	U	ug/L	P328403	
		Triclopyr**	0.0040	U	ug/L	P328403	
		Primidone**	0.0040	U	ug/L	P328403	
		Fluridone**	4.0E-04	U	ug/L	P328403	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P328388

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P328389

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P328583

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P328583

Component	Result	Code	Units
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P328583

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328553

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328590

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328616

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328617

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328675

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328698

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328473

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P328402

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P328382

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P328384

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P328661

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2320 B-97
Batch ID: P328662

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 C-97
Batch ID: P328899

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P329002

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P328667

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P328861

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: USGS O-2060-01
Batch ID: P328403

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P328583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	96.0		P	85 - 115
Sodium	99.9		P	85 - 115
Zinc	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P328583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	98.4		P	85 - 115
Copper	98.5		P	85 - 115
Lead	95.9		P	85 - 115
Nickel	101		P	85 - 115
Silver	96.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P328553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P328556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P328590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	102		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P328616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	104		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P328617

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P328674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P328675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328698

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	95.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.1		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P328402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	89.0		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P328661

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P328662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P328667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P328861

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P328403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	91.1		P	40 - 150
Acetaminophen	148		P	30 - 150
Bentazon	87.1		P	40 - 150
Carbamazepine	123		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P328403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diuron	106		P	40 - 150
Fenuron	109		P	40 - 150
Fluridone	123		P	40 - 150
Imidacloprid	76.0		P	40 - 160
Linuron	111		P	40 - 150
MCPP	95.6		P	40 - 150
Primidone	107		P	40 - 150
Triclopyr	96.1		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P328583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913134	Calcium	96.3		P	80 - 120
1913134	Iron	103		P	80 - 120
1913134	Magnesium	97.5		P	80 - 120
1913134	Potassium	96.0		P	80 - 120
1913134	Sodium	98.3		P	80 - 120
1913134	Zinc	98.2		P	80 - 120
1913470	Calcium	98.7		P	80 - 120
1913470	Iron	106	106	P/P	80 - 120
1913470	Magnesium	100		P	80 - 120
1913470	Potassium	95.2	96.4	P/P	80 - 120
1913470	Sodium	99.8		P	80 - 120
1913470	Zinc	97.4	97.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P328583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913134	Arsenic	103		P	80 - 120
1913134	Cadmium	103		P	80 - 120
1913134	Chromium	97.9		P	80 - 120
1913134	Copper	96.6		P	80 - 120
1913134	Lead	96.6		P	80 - 120
1913134	Nickel	99.8		P	80 - 120
1913134	Silver	97.2		P	80 - 120
1913470	Arsenic	102	102	P/P	80 - 120
1913470	Cadmium	105	105	P/P	80 - 120
1913470	Chromium	96.0	96.4	P/P	80 - 120
1913470	Copper	96.2	96.2	P/P	80 - 120
1913470	Lead	95.0	95.2	P/P	80 - 120
1913470	Nickel	96.9	98.0	P/P	80 - 120
1913470	Silver	96.6	96.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912890	Chloride	98.7		P	90 - 110
1913066	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912890	Sulfate	98.2		P	90 - 110
1913066	Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912940	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912891	Kjeldahl Nitrogen	99.3	90.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913025	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912894	NO2NO3-N	96.2	90.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913103	NO2NO3-N	98.5	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328698

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913024	Total-P	96.6	93.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913027	O-Phosphate-P	99.5	99.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P328402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912913	Sucralose	118	114	P/P	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P328667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913065	Fluoride	98.0	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97
 Batch ID: P328820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1913130	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P328861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912852	Organic Carbon	99.0		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P328403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1912972	2,4-D	120	122	P/P	40 - 150
1912972	Acetaminophen	105	112	P/P	30 - 150
1912972	Bentazon	92.8	85.9	P/P	40 - 150
1912972	Carbamazepine	128	128	P/P	40 - 150
1912972	Diuron	101	98.9	P/P	40 - 150
1912972	Fenuron	71.9	98.7	P/P	40 - 150
1912972	Fluridone	79.8	71.2	P/P	40 - 150
1912972	Imidacloprid	158	202	P/F	40 - 160
1912972	Linuron	109	106	P/P	40 - 150
1912972	MCP	111	104	P/P	40 - 150
1912972	Primidone	104	115	P/P	40 - 150
1912972	Triclopyr	109	102	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P328388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912896	Turbidity	1.89	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P328389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913021	Turbidity	0.810	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P328583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913470	Calcium	0.246	Spike	P	0 - 20
1913470	Iron	0.500	Spike	P	0 - 20
1913470	Magnesium	0.376	Spike	P	0 - 20
1913470	Potassium	0.947	Spike	P	0 - 20
1913470	Sodium	0.185	Spike	P	0 - 20
1913470	Zinc	0.218	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P328583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913470	Arsenic	0.366	Spike	P	0 - 20
1913470	Cadmium	0.229	Spike	P	0 - 20
1913470	Chromium	0.403	Spike	P	0 - 20
1913470	Copper	0.0572	Spike	P	0 - 20
1913470	Lead	0.224	Spike	P	0 - 20
1913470	Nickel	1.13	Spike	P	0 - 20
1913470	Silver	0.101	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912890	Chloride	0.750	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P328556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912890	Sulfate	2.30	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P328590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912940	Ammonia-N	0.227	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912891	Kjeldahl Nitrogen	6.93	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P328617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913025	Kjeldahl Nitrogen	0.923	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912894	NO2NO3-N	4.69	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P328675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913103	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P328698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913024	Total-P	2.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P328473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913027	O-Phosphate-P	0.150	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P328402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912913	Sucralose	3.37	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P328382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913021	Color (true)	0.313	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P328384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913022	Color (true)	9.27	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P328661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912682	Total Alkalinity	0.253	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P328662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913065	Total Alkalinity	0.163	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P328899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913065	TDS	8.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P328667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913065	Fluoride	1.90	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P328820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1913130	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P328861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912852	Organic Carbon	0.315	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P328403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912972	2,4-D	1.82	Spike	P	0 - 30
1912972	Acetaminophen	6.81	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P328403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1912972	Bentazon	7.66	Spike	P	0 - 30
1912972	Carbamazepine	0.298	Spike	P	0 - 30
1912972	Diuron	1.88	Spike	P	0 - 30
1912972	Fenuron	31.4	Spike	F	0 - 30
1912972	Fluridone	11.4	Spike	P	0 - 30
1912972	Imidacloprid	24.4	Spike	P	0 - 30
1912972	Linuron	2.67	Spike	P	0 - 30
1912972	MCP	6.43	Spike	P	0 - 30
1912972	Primidone	10.3	Spike	P	0 - 30
1912972	Triclopyr	6.65	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1913040
Field Sample ID: G1WA0047_07122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	69.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	122	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	116	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	104	P	30 - 160
USGS O-2060-01	Diuron-d6	67.0	P	30 - 160
USGS O-2060-01	Primidone-d5	77.4	P	30 - 160

Lab Sample ID: 1913041
Field Sample ID: G1WA0059_07122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	108	P	40 - 160
USGS O-2060-01	2,4-D-d3	114	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	89.8	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	123	P	30 - 160
USGS O-2060-01	Diuron-d6	89.4	P	30 - 160
USGS O-2060-01	Primidone-d5	80.4	P	30 - 160

Lab Sample ID: 1913042
Field Sample ID: G1WA0049_07122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	111	P	40 - 160
USGS O-2060-01	2,4-D-d3	106	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	93.5	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	135	P	30 - 160
USGS O-2060-01	Diuron-d6	102	P	30 - 160
USGS O-2060-01	Primidone-d5	138	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1913043

Field Sample ID: G1WA0018_07122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	117	P	40 - 160
USGS O-2060-01	2,4-D-d3	99.0	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	93.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	113	P	30 - 160
USGS O-2060-01	Diuron-d6	81.3	P	30 - 160
USGS O-2060-01	Primidone-d5	132	P	30 - 160

Lab Sample ID: 1913083

Field Sample ID: G1WA0049_07122017B

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	95.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	76.8	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	78.5	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	110	P	30 - 160
USGS O-2060-01	Diuron-d6	92.3	P	30 - 160
USGS O-2060-01	Primidone-d5	82.8	P	30 - 160

Lab Sample ID: 1913084

Field Sample ID: G1WA0049_07122017D

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	98.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	113	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	92.7	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	120	P	30 - 160
USGS O-2060-01	Diuron-d6	88.9	P	30 - 160
USGS O-2060-01	Primidone-d5	95.4	P	30 - 160

Lab Sample ID: 1913085

Field Sample ID: G1WA0020_07122017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	87.1	P	40 - 160
USGS O-2060-01	2,4-D-d3	102	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	99.4	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	105	P	30 - 160
USGS O-2060-01	Diuron-d6	78.7	P	30 - 160
USGS O-2060-01	Primidone-d5	129	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A77666

Included Lab Sample IDs: 1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	85 - 115
Color (true)	103	109	P/P	85 - 115
Color (true)	109	107	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A77668

Included Lab Sample IDs: 1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77695

Included Lab Sample IDs: 1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	105	P/P	90 - 110
Chloride	105	108	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110
Sulfate	104	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A77701

Included Lab Sample IDs: 1913026, 1913027, 1913028, 1913071, 1913072, 1913073, 1913074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	102	P/P	90 - 110
O-Phosphate-P	99.7	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77748

Included Lab Sample IDs: 1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	102	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A77776

Included Lab Sample IDs: 1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	110	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A77776

Included Lab Sample IDs: 1913022, 1913063, 1913064, 1913065, 1913066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	102	P/P	90 - 110
Fluoride	101	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A77777

Included Lab Sample IDs: 1913040, 1913041, 1913042, 1913043, 1913083, 1913084, 1913085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	110	P/P	60 - 160
Sucralose	140	145	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A77777

Included Lab Sample IDs: 1913040, 1913041, 1913042, 1913043, 1913083, 1913084, 1913085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	145	145	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77778

Included Lab Sample IDs: 1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	98.0	P/P	90 - 110
NO2NO3-N	97.0	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A77792

Included Lab Sample IDs: 1913044, 1913045, 1913086, 1913087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.3	98.8	P/P	95 - 105
Calcium	98.8	97.5	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Iron	101	101	P/P	95 - 105
Magnesium	101	101	P/P	90 - 110
Magnesium	101	101	P/P	95 - 105
Potassium	96.7	96.5	P/P	90 - 110
Potassium	98.5	96.7	P/P	95 - 105
Sodium	97.9	99.4	P/P	95 - 105
Sodium	99.4	98.3	P/P	90 - 110
Zinc	99.2	101	P/P	90 - 110
Zinc	99.2	99.2	P/P	95 - 105

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77801

Included Lab Sample IDs: 1913023, 1913024, 1913068

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.6	98.4	P/P	90 - 110
Kjeldahl Nitrogen	98.4	91.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77810

Included Lab Sample IDs: 1913025, 1913067, 1913069, 1913070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	90.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77814

Included Lab Sample IDs: 1913024, 1913025, 1913068, 1913069, 1913070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	98.9	P/P	90 - 110
Total-P	98.9	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A77824

Included Lab Sample IDs: 1913044, 1913045, 1913086, 1913087

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	102	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Cadmium	101	99.5	P/P	90 - 110
Cadmium	99.5	99.6	P/P	90 - 110
Chromium	100	99.6	P/P	90 - 110
Chromium	99.6	99.4	P/P	90 - 110
Copper	100	101	P/P	90 - 110
Copper	101	100	P/P	90 - 110
Lead	93.6	95.1	P/P	90 - 110
Lead	94.6	93.6	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Silver	94.9	95.0	P/P	90 - 110
Silver	95.4	94.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77827

Included Lab Sample IDs: 1913023, 1913067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	103	P/P	90 - 110
Total-P	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A77832

Included Lab Sample IDs: 1913020, 1913021

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A77848

Included Lab Sample IDs: 1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.4	P/P	90 - 110
Organic Carbon	98.4	99.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A77880

Included Lab Sample IDs: 1913040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.5	106	P/P	50 - 150
Acetaminophen	112	114	P/P	60 - 150
Bentazon	80.6	77.5	P/P	50 - 150
Carbamazepine	119	118	P/P	60 - 150
Diuron	103	99.5	P/P	60 - 150
Fenuron	98.3	99.4	P/P	60 - 150
Fluridone	102	101	P/P	60 - 160
Imidacloprid	71.4	94.3	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A77880

Included Lab Sample IDs: 1913040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	113	87.3	P/P	60 - 150
MCP	97.3	99.8	P/P	50 - 150
Primidone	111	109	P/P	60 - 150
Triclopyr	96.7	102	P/P	50 - 150

Reference Method: USGS O-2060-01

Run ID: A78009

Included Lab Sample IDs: 1913041, 1913042, 1913043, 1913083, 1913084, 1913085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.0	100	P/P	50 - 150
Acetaminophen	101	92.4	P/P	60 - 150
Bentazon	96.3	96.9	P/P	50 - 150
Carbamazepine	105	103	P/P	60 - 150
Diuron	93.5	97.2	P/P	60 - 150
Fenuron	101	104	P/P	60 - 150
Fluridone	120	135	P/P	60 - 160
Imidacloprid	94.4	85.0	P/P	60 - 150
Linuron	95.2	105	P/P	60 - 150
MCP	105	93.9	P/P	50 - 150
Primidone	133	126	P/P	60 - 150
Triclopyr	104	98.3	P/P	50 - 150

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.89	
	Turbidity				0.810	
EPA 200.7 Rev. 4.4	Calcium	102	96.3 98.7			0.246
	Iron	104	103 106 106			0.500
	Magnesium	102	97.5 100			0.376
	Potassium	96.0	96.0 95.2 96.4			0.947
	Sodium	99.9	98.3 99.8			0.185
	Zinc	102	98.2 97.4 97.6			0.218
EPA 200.8 Rev. 5.4	Arsenic	102	103 102 102			0.366
	Cadmium	101	103 105 105			0.229
	Chromium	98.4	97.9 96.0 96.4			0.403
	Copper	98.5	96.6 96.2 96.2			0.0572
	Lead	95.9	96.6 95.0 95.2			0.224
	Nickel	101	99.8 96.9 98.0			1.13
	Silver	96.7	97.2 96.6 96.7			0.101
EPA 300.0 Rev. 2.1	Chloride	102	98.7 99.7		0.750	
	Sulfate	99.9	98.2 98.7		2.30	
EPA 350.1 Rev. 2.0	Ammonia-N	102	102 101			0.227

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	
						SMP	MS
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	99.3	90.3			6.93
	Kjeldahl Nitrogen	94.8	102	103			0.923
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	96.2	90.8			4.69
	NO2NO3-N	99.5	98.5	98.5			0.0
EPA 365.1 Rev. 2.0	Total-P	95.4	96.6	93.9			2.18
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.1	99.5	99.3			0.150
EPA 8321B	Sucralose	89.0	118	114			3.37
SM 2120 B	Color (true)					0.313	
	Color (true)					9.27	
SM 2320 B-97	Total Alkalinity	102				0.253	
	Total Alkalinity	103				0.163	
SM 2540 C-97	TDS					8.41	
SM 4500 F-C-97	Fluoride	100	98.0	101			1.90
	Fluoride	98.9	100	100			0.0
SM 5310 B-00	Organic Carbon	96.0	99.0				0.315
USGS O-2060-01	2,4-D	91.1	120	122			1.82
	Acetaminophen	148	105	112			6.81
	Bentazon	87.1	92.8	85.9			7.66
	Carbamazepine	123	128	128			0.298
	Diuron	106	101	98.9			1.88
	Fenuron	109	71.9	98.7			31.4
	Fluridone	123	79.8	71.2			11.4
	Imidacloprid	76.0	158	202			24.4
	Linuron	111	109	106			2.67
	MCPP	95.6	111	104			6.43
	Primidone	107	104	115			10.3
	Triclopyr	96.1	109	102			6.65

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1913044, 1913045, 1913086, 1913087
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1913044, 1913045, 1913086, 1913087
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1913026, 1913027, 1913028, 1913071, 1913072, 1913073, 1913074
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1913040, 1913041, 1913042, 1913043, 1913083, 1913084, 1913085
SM 2120 B / E31780	True Color measured at 450 nm	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1913040, 1913041, 1913042, 1913043, 1913083, 1913084, 1913085
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1913040, 1913041, 1913042, 1913043, 1913083, 1913084, 1913085

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	07/12/2017			07/12/2017 17:13	DeAsia Armster	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
EPA 200.7 Rev. 4.4	07/12/2017	07/17/2017	Elliott D. Healy	07/18/2017	Betina Topolski	1913044, 1913045, 1913086, 1913087
EPA 200.8 Rev. 5.4	07/12/2017	07/17/2017	Elliott D. Healy	07/19/2017	Nadine Brooks	1913044, 1913045, 1913086, 1913087
EPA 300.0 Rev. 2.1	07/12/2017			07/14/2017	Julia Storbeck	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
EPA 350.1 Rev. 2.0	07/12/2017			07/14/2017	Sofia Elnemr	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 351.2 Rev. 2.0	07/12/2017	07/18/2017	Adrian Shelby	07/19/2017	Joseph Suarez	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 353.2 Rev. 2.0	07/12/2017			07/18/2017	Beverly Y. Sanders	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
EPA 365.1 Rev. 2.0	07/12/2017	07/18/2017	Vijayalakshmi Reddy	07/19/2017	Lipi Saha	1913024, 1913025, 1913068, 1913069, 1913070
EPA 365.1 Rev. 2.0 dissolved	07/12/2017	07/18/2017	Vijayalakshmi Reddy	07/20/2017	Lipi Saha	1913023, 1913067
	07/12/2017			07/13/2017 13:57	Anthony C. Onicha	1913027
	07/12/2017			07/13/2017 14:21	Anthony C. Onicha	1913026
	07/12/2017			07/13/2017 14:22	Anthony C. Onicha	1913028
	07/12/2017			07/13/2017 14:23	Anthony C. Onicha	1913071
	07/12/2017			07/13/2017 14:24	Anthony C. Onicha	1913072, 1913073
EPA 8321B	07/12/2017			07/13/2017 14:25	Anthony C. Onicha	1913074
	07/12/2017	07/14/2017	Mohammad Ghaffari	07/14/2017	Mohammad Ghaffari	1913040, 1913041, 1913042, 1913043, 1913083, 1913084, 1913085
SM 2120 B	07/12/2017			07/12/2017 17:21	Tanya Welborn	1913021
	07/12/2017			07/12/2017 17:22	Tanya Welborn	1913063
	07/12/2017			07/12/2017 17:23	Tanya Welborn	1913064
	07/12/2017			07/12/2017 17:24	Tanya Welborn	1913065
	07/12/2017			07/12/2017 17:31	Tanya Welborn	1913020
	07/12/2017			07/12/2017 17:36	Tanya Welborn	1913022
	07/12/2017			07/12/2017 17:37	Tanya Welborn	1913066
SM 2320 B-97	07/12/2017			07/15/2017	Dale L. Simmons	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 2540 C-97	07/12/2017			07/18/2017	Yijie Li	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 2540 D-97	07/12/2017			07/18/2017	Yijie Li	1913020, 1913021, 1913022, 1913063, 1913064, 1913065, 1913066
SM 4500 F-C-97	07/12/2017			07/15/2017	Dale L. Simmons	1913022, 1913063, 1913064, 1913065, 1913066
	07/12/2017			07/20/2017	Dale L. Simmons	1913020, 1913021
SM 5310 B-00	07/12/2017			07/20/2017	Sofia Elnemr	1913023, 1913024, 1913025, 1913067, 1913068, 1913069, 1913070
USGS O-2060-01	07/12/2017	07/17/2017	Hoor Shaik	07/21/2017	Juyoung Kim	1913040

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
USGS O-2060-01	07/12/2017	07/17/2017	Hoor Shaik	07/26/2017	Juyoung Kim	1913041, 1913042, 1913043, 1913083, 1913084, 1913085