

Chemical Analysis Report

WQ-ASSESS-2017-02-01-01

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

Event Description: **Tanyard, Quincy, Juniper, Harbinwood, unnamed**
Request ID: **RQ-2017-01-30-33**
Customer: **WQ-ASSESS**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: Curits Musson

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 08-MAR-2017 13:04

A handwritten signature in black ink, appearing to read "Colin Wright", is placed over a light gray rectangular background.

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: Tanyard Branch 100 meters upstream of Ralph Strong Rd **Collection Date/Time: 02/01/2017 09:05**

Field ID: G1WA0005-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868808	EPA 180.1 Rev. 2.0	Turbidity	7.4		NTU	P319115	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P319384	
		Sulfate	7.6		mg SO4/L	P319386	
	SM 2120 B	Color (true)	40		PCU	P319144	
	SM 2320 B-97	Total Alkalinity	47		mg CaCO3/L	P319319	
	SM 2540 C-97	TDS	112	A	mg/L	P320049	
	SM 2540 D-97	TSS	6	I	mg/L	P319584	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P319323	
1868809	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P319476	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P319211	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.66		mg N/L	P319473	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P319250	
	SM 5310 B-00	Organic Carbon	4.1		mg C/L	P319298	
1868810	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.059		mg P/L	P319195	

Ref. Method and Comment:

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Quincy Creek upstream of SR 65

Collection Date/Time: 02/01/2017 10:06

Field ID: G1WA0049-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868811	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P319115	
	EPA 300.0 Rev. 2.1	Chloride	5.3	A	mg Cl/L	P319384	
		Sulfate	1.2	A	mg SO4/L	P319386	
	SM 2120 B	Color (true)	66		PCU	P319144	
	SM 2320 B-97	Total Alkalinity	18		mg CaCO3/L	P319319	
	SM 2540 C-97	TDS	51		mg/L	P320049	
	SM 2540 D-97	TSS	9	I	mg/L	P319584	
	SM 4500 F-C-97	Fluoride	0.078	I	mg F/L	P319323	
1868812	EPA 350.1 Rev. 2.0	Ammonia-N	0.093		mg N/L	P319476	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P319213	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P319473	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P319250	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P319298	
1868813	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P319195	
1868832	EPA 200.7 Rev. 4.4	Calcium	5.75		mg/L	P319331	
		Iron	1.16E+03		ug/L	P319331	
		Magnesium	1.90		mg/L	P319331	
		Potassium	0.62	I	mg/L	P319331	
		Sodium	3.3		mg/L	P319331	
		Zinc	5.0	U	ug/L	P319331	
	EPA 200.8 Rev. 5.4	Arsenic	0.51		ug/L	P319331	

Field ID: G1WA0049-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868832	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P319331	
		Chromium	0.91	I	ug/L	P319331	
		Copper	0.36	I	ug/L	P319331	
		Lead	0.48		ug/L	P319331	
		Nickel	0.26	I	ug/L	P319331	
		Silver	0.010	U	ug/L	P319331	

Ref. Method and Comment:

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Quincy Creek upstream of SR 267

Collection Date/Time: 02/01/2017 10:32

Field ID: G1WA0050-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868814	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P319115	
	EPA 300.0 Rev. 2.1	Chloride	5.3		mg Cl/L	P319384	
		Sulfate	1.2		mg SO4/L	P319386	
	SM 2120 B	Color (true)	66		PCU	P319144	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P319319	
	SM 2540 C-97	TDS	54		mg/L	P320049	
	SM 2540 D-97	TSS	9	I	mg/L	P319584	
	SM 4500 F-C-97	Fluoride	0.073	I	mg F/L	P319323	
1868815	EPA 350.1 Rev. 2.0	Ammonia-N	0.15		mg N/L	P319476	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P319213	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P319473	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P319250	
	SM 5310 B-00	Organic Carbon	5.1		mg C/L	P319298	
1868816	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P319195	
1868833	EPA 200.7 Rev. 4.4	Calcium	5.47		mg/L	P319331	
		Iron	1.09E+03		ug/L	P319331	
		Magnesium	1.69		mg/L	P319331	
		Potassium	0.61	I	mg/L	P319331	
		Sodium	3.3		mg/L	P319331	
		Zinc	5.0	U	ug/L	P319331	
	EPA 200.8 Rev. 5.4	Arsenic	0.48		ug/L	P319331	
		Cadmium	0.020	U	ug/L	P319331	
		Chromium	0.83	I	ug/L	P319331	
		Copper	0.41	I	ug/L	P319331	
		Lead	0.45		ug/L	P319331	
		Nickel	0.27	I	ug/L	P319331	
		Silver	0.010	U	ug/L	P319331	

Field ID: G1WA0050-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							
EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.							

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

Collection Date/Time: 02/01/2017 09:00

Field ID: G1WA0018-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868817	EPA 180.1 Rev. 2.0	Turbidity	13	A	NTU	P319115	
	EPA 300.0 Rev. 2.1	Chloride	5.6		mg Cl/L	P319384	
		Sulfate	1.4		mg SO4/L	P319386	
	SM 2120 B	Color (true)	70		PCU	P319144	
	SM 2320 B-97	Total Alkalinity	20		mg CaCO3/L	P319319	
	SM 2540 C-97	TDS	55		mg/L	P320049	
	SM 2540 D-97	TSS	14		mg/L	P319584	
1868818	SM 4500 F-C-97	Fluoride	0.082	I	mg F/L	P319323	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P319358	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		mg N/L	P319213	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.25		mg N/L	P319473	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P319250	
1868819	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P319298	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P319195	
1868834	EPA 200.7 Rev. 4.4	Calcium	6.03		mg/L	P319331	
		Iron	1.42E+03		ug/L	P319331	
		Magnesium	1.98		mg/L	P319331	
		Potassium	0.65	I	mg/L	P319331	
		Sodium	3.4		mg/L	P319331	
		Zinc	5.0	U	ug/L	P319331	
	EPA 200.8 Rev. 5.4	Arsenic	0.57		ug/L	P319331	
		Cadmium	0.020	U	ug/L	P319331	
		Chromium	1.2	I	ug/L	P319331	
		Copper	0.39	I	ug/L	P319331	
		Lead	0.64		ug/L	P319331	
		Nickel	0.30	I	ug/L	P319331	
		Silver	0.010	U	ug/L	P319331	
	EPA 8321B	Sucralose**	0.13		ug/L	P319087	
	USGS O-2060-01	Diuron	0.0058	I	ug/L	P318793	
		Fenuron	0.0080	U	ug/L	P318793	
		Imidacloprid	0.0040	U	ug/L	P318793	
1868835		Linuron	0.0040	U	ug/L	P318793	
		Acetaminophen**	0.049		ug/L	P318793	
		Carbamazepine**	9.2E-04	I	ug/L	P318793	
		Primidone**	0.0080	U	ug/L	P318793	

Field ID: G1WA0018-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868835	USGS O-2060-01	Fluridone**	4.0E-04	U	ug/L	P318793	

Ref. Method and Comment:

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Elevated level of lead consistent with analysis of the redigested sample on 03/07/2017.

Sample Location: Juniper Creek upstream of Juniper Creek Rd Collection Date/Time: 02/01/2017 11:26

Field ID: G1WA0059-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868836	EPA 8321B	Sucralose**	0.045		ug/L	P319087	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P318793	
		Fenuron	0.0080	U	ug/L	P318793	
		Imidacloprid	0.0040	U	ug/L	P318793	
		Linuron	0.0040	U	ug/L	P318793	
		Acetaminophen**	0.0040	U	ug/L	P318793	
		Carbamazepine**	5.7E-04	I	ug/L	P318793	
		Primidone**	0.0080	U	ug/L	P318793	
		Fluridone**	4.0E-04	U	ug/L	P318793	

Sample Location: Harbinwood Estates Drain

Collection Date/Time: 02/01/2017 12:35

Field ID: G1WA0034-02012017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1868837	EPA 8321B	Sucralose**	0.24		ug/L	P319087	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P318793	
		Fenuron	0.0080	U	ug/L	P318793	
		Imidacloprid	0.014	I	ug/L	P318793	
		Linuron	0.0040	U	ug/L	P318793	
		Acetaminophen**	0.0040	U	ug/L	P318793	
		Carbamazepine**	4.0E-04	U	ug/L	P318793	
		Primidone**	0.0080	U	ug/L	P318793	
		Fluridone**	4.0E-04	U	ug/L	P318793	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P319115

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P319331

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P319331

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
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: P319331

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: P319384

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P319386

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P319358

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P319476

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P319211

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P319213

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P319473

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P319250

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P319195

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

Reference Method: EPA 8321B
Batch ID: P319087

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P319144

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P319319

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

Reference Method: SM 2540 C-97
Batch ID: P320049

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P319584

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97

Batch ID: P319323

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00

Batch ID: P319298

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

Reference Method: USGS O-2060-01

Batch ID: P318793

Component	Result	Code	Units
Acetaminophen	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P319331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	98.4		P	85 - 115
Iron	100		P	85 - 115
Magnesium	98.8		P	85 - 115
Potassium	97.0		P	85 - 115
Sodium	99.9		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P319331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	89.5		P	85 - 115
Cadmium	95.7		P	85 - 115
Chromium	96.8		P	85 - 115
Copper	88.9		P	85 - 115
Lead	91.0		P	85 - 115
Nickel	90.0		P	85 - 115
Silver	94.9		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P319384

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P319384

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P319386

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P319358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P319476

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P319211

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P319213

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P319473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P319250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	93.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P319195

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P319087

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	85.2		P	40 - 140

Reference Method: SM 2320 B-97

Batch ID: P319319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97

Batch ID: P319323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	92 - 103

Reference Method: SM 5310 B-00

Batch ID: P319298

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Reference Method: USGS O-2060-01

Batch ID: P318793

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	78.8		P	40 - 140
Carbamazepine	94.8		P	40 - 140
Diuron	88.4		P	40 - 140
Fenuron	92.4		P	40 - 140
Fluridone	70.0		P	40 - 140
Imidacloprid	94.0		P	40 - 160
Linuron	74.4		P	40 - 140
Primidone	70.8		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P319331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868994	Calcium	101		P	80 - 120
1868994	Iron	98.5		P	80 - 120
1868994	Magnesium	96.8		P	80 - 120
1868994	Potassium	99.9		P	80 - 120
1868994	Sodium	99.9		P	80 - 120
1868994	Zinc	101		P	80 - 120
1869009	Iron	96.2	95.1	P/P	80 - 120
1869009	Magnesium	97.6		P	80 - 120
1869009	Potassium	100	99.8	P/P	80 - 120
1869009	Sodium	101		P	80 - 120
1869009	Zinc	97.1	97.8	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P319331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868994	Arsenic	94.3		P	80 - 120
1868994	Cadmium	96.3		P	80 - 120
1868994	Chromium	94.2		P	80 - 120
1868994	Copper	90.1		P	80 - 120
1868994	Lead	95.6		P	80 - 120
1868994	Nickel	89.5		P	80 - 120
1868994	Silver	94.1		P	80 - 120
1869009	Arsenic	93.7	92.9	P/P	80 - 120
1869009	Cadmium	95.4	92.3	P/P	80 - 120
1869009	Chromium	94.3	93.7	P/P	80 - 120
1869009	Copper	89.7	89.1	P/P	80 - 120
1869009	Lead	94.5	94.4	P/P	80 - 120
1869009	Nickel	91.2	91.1	P/P	80 - 120
1869009	Silver	96.1	94.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P319384

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868808	Chloride	98.7		P	90 - 110
1868811	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P319386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868808	Sulfate	96.2		P	90 - 110
1868811	Sulfate	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P319211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868809	Kjeldahl Nitrogen	102	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P319213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868883	Kjeldahl Nitrogen	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P319473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868799	NO2NO3-N	106	106	P/P	90 - 110
1868799	NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P319250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P319250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868548	Total-P	94.6	93.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P319195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868894	O-Phosphate-P	97.5	101	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P319087

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868580	Sucralose	105	112	P/P	40 - 140

Reference Method: SM 4500 F-C-97
 Batch ID: P319323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868892	Fluoride	100	100	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P319298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1868799	Organic Carbon	95.8	93.9	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P318793

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1866907	Acetaminophen	72.4	74.4	P/P	40 - 140
1866907	Carbamazepine	99.3	103	P/P	40 - 140
1866907	Diuron	70.8	72.4	P/P	40 - 140
1866907	Fenuron	83.6	86.4	P/P	40 - 140
1866907	Fluridone	50.8	54.8	P/P	40 - 140
1866907	Imidacloprid	130	113	P/P	40 - 160
1866907	Linuron	80.4	73.6	P/P	40 - 140
1866907	Primidone	100	94.0	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P319115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868817	Turbidity	1.52	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P319331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1869009	Calcium	1.68	Spike	P	0 - 20
1869009	Iron	1.08	Spike	P	0 - 20
1869009	Magnesium	2.05	Spike	P	0 - 20
1869009	Potassium	0.279	Spike	P	0 - 20
1869009	Sodium	0.169	Spike	P	0 - 20
1869009	Zinc	0.731	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P319331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1869009	Arsenic	0.941	Spike	P	0 - 20
1869009	Cadmium	2.96	Spike	P	0 - 20
1869009	Chromium	0.528	Spike	P	0 - 20
1869009	Copper	0.727	Spike	P	0 - 20
1869009	Lead	0.107	Spike	P	0 - 20
1869009	Nickel	0.104	Spike	P	0 - 20
1869009	Silver	1.49	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P319384

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868811	Chloride	0.279	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P319386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868811	Sulfate	0.842	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P319358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868818	Ammonia-N	0.143	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P319476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868812	Ammonia-N	1.76	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P319211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868809	Kjeldahl Nitrogen	1.48	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P319213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868883	Kjeldahl Nitrogen	0.161	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P319473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868799	NO2NO3-N	0.948	Spike	P	0 - 15

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P319250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868548	Total-P	0.620	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P319195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868894	O-Phosphate-P	2.54	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P319087

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868580	Sucralose	6.45	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P319319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868892	Total Alkalinity	0.370	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P320049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868808	TDS	0.0	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
 Batch ID: P319323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868892	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P319298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1868799	Organic Carbon	1.85	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P318793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1866907	Acetaminophen	2.72	Spike	P	0 - 30
1866907	Carbamazepine	3.86	Spike	P	0 - 30
1866907	Diuron	1.79	Spike	P	0 - 30
1866907	Fenuron	3.29	Spike	P	0 - 30
1866907	Fluridone	7.30	Spike	P	0 - 30
1866907	Imidacloprid	12.9	Spike	P	0 - 30
1866907	Linuron	8.83	Spike	P	0 - 30
1866907	Primidone	6.58	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: 1868835
 Field Sample ID: G1WA0018-02012017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	120	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	81.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	106	P	40 - 160
USGS O-2060-01	Diuron-d6	71.2	P	40 - 150
USGS O-2060-01	Primidone-d5	117	P	40 - 150

Lab Sample ID: 1868836
 Field Sample ID: G1WA0059-02012017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	110	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	94.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	91.0	P	40 - 160
USGS O-2060-01	Diuron-d6	75.2	P	40 - 150
USGS O-2060-01	Primidone-d5	93.2	P	40 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1868837
 Field Sample ID: G1WA0034-02012017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	93.5	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	88.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	98.6	P	40 - 160
USGS O-2060-01	Diuron-d6	68.8	P	40 - 150
USGS O-2060-01	Primidone-d5	105	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A74215
 Included Lab Sample IDs: 1868808, 1868811, 1868814, 1868817

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	99.0	P/P	95 - 105

Reference Method: SM 2120 B
 Run ID: A74223
 Included Lab Sample IDs: 1868808, 1868811, 1868814, 1868817

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

Reference Method: USGS O-2060-01
 Run ID: A74237
 Included Lab Sample IDs: 1868835, 1868836, 1868837

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	96.4	98.8	P/P	60 - 150
Carbamazepine	125	135	P/P	60 - 150
Diuron	109	113	P/P	60 - 150
Fenuron	115	125	P/P	60 - 150
Fluridone	114	94.0	P/P	60 - 150
Imidacloprid	110	106	P/P	60 - 150
Linuron	94.4	107	P/P	60 - 150
Primidone	116	124	P/P	60 - 150

Reference Method: EPA 8321B
 Run ID: A74240
 Included Lab Sample IDs: 1868835, 1868836, 1868837

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	125	122	P/P	60 - 150
Sucralose	97.7	129	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A74242
 Included Lab Sample IDs: 1868810, 1868813, 1868816, 1868819

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	97.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A74275

Included Lab Sample IDs: 1868809, 1868812, 1868815, 1868818

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.3	99.2	P/P	90 - 110
Organic Carbon	99.2	99.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A74281

Included Lab Sample IDs: 1868808, 1868811, 1868814, 1868817

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

Reference Method: SM 4500 F-C-97

Run ID: A74281

Included Lab Sample IDs: 1868808, 1868811, 1868814, 1868817

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A74284

Included Lab Sample IDs: 1868809

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A74292

Included Lab Sample IDs: 1868809, 1868812, 1868815, 1868818

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.6	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A74296

Included Lab Sample IDs: 1868818

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A74297

Included Lab Sample IDs: 1868812, 1868815, 1868818

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A74307

Included Lab Sample IDs: 1868808, 1868811, 1868814, 1868817

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	92.7	97.2	P/P	90 - 110
Sulfate	92.8	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A74335

Included Lab Sample IDs: 1868809, 1868812, 1868815, 1868818

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A74337

Included Lab Sample IDs: 1868809, 1868812, 1868815

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	99.7	P/P	90 - 110
Ammonia-N	98.7	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A74420

Included Lab Sample IDs: 1868832, 1868833, 1868834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	105	109	P/P	90 - 110
Copper	103	107	P/P	90 - 110
Lead	103	109	P/P	90 - 110
Nickel	104	108	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A74510

Included Lab Sample IDs: 1868832, 1868833, 1868834

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A74549

Included Lab Sample IDs: 1868832, 1868833, 1868834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.3	96.4	P/P	90 - 110
Calcium	96.4	95.3	P/P	90 - 110
Iron	92.0	91.3	P/P	90 - 110
Iron	92.2	92.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A74549

Included Lab Sample IDs: 1868832, 1868833, 1868834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	94.4	93.8	P/P	90 - 110
Magnesium	94.4	94.4	P/P	90 - 110
Potassium	95.4	95.7	P/P	90 - 110
Potassium	95.7	96.3	P/P	90 - 110
Zinc	98.8	98.3	P/P	90 - 110
Zinc	99.2	98.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A74596

Included Lab Sample IDs: 1868832, 1868833, 1868834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	98.8	98.4	P/P	90 - 110

* 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						1.52	
EPA 200.7 Rev. 4.4	Calcium	98.4	101					1.68
	Iron	100	98.5	96.2	95.1			1.08
	Magnesium	98.8	96.8	97.6				2.05
	Potassium	97.0	99.9	100	99.8			0.279
	Sodium	99.9	99.9	101				0.169
	Zinc	102	101	97.1	97.8			0.731
EPA 200.8 Rev. 5.4	Arsenic	89.5	94.3	93.7	92.9			0.941
	Cadmium	95.7	96.3	95.4	92.3			2.96
	Chromium	96.8	94.2	94.3	93.7			0.528
	Copper	88.9	90.1	89.7	89.1			0.727
	Lead	91.0	95.6	94.5	94.4			0.107
	Nickel	90.0	89.5	91.2	91.1			0.104
	Silver	94.9	94.1	96.1	94.7			1.49
EPA 300.0 Rev. 2.1	Chloride	100	100	98.7			0.279	
	Sulfate	96.8	97.3	96.2			0.842	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4						0.143
	Ammonia-N	101						1.76
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.1	102	104				1.48
	Kjeldahl Nitrogen	103	104	103				0.161
EPA 353.2 Rev. 2.0	NO2NO3-N	104	106	104	106			0.948 RSD
EPA 365.1 Rev. 2.0	Total-P	93.6	94.6	93.9				0.620
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	97.5	101				2.54
EPA 8321B	Sucralose	85.2	105	112				6.45
SM 2320 B-97	Total Alkalinity	104					0.370	
SM 2540 C-97	TDS						0.0	
SM 4500 F-C-97	Fluoride	101	100	100				0.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 5310 B-00	Organic Carbon	95.0	95.8	93.9		1.85
USGS O-2060-01	Acetaminophen	78.8	72.4	74.4		2.72
	Carbamazepine	94.8	99.3	103		3.86
	Diuron	88.4	70.8	72.4		1.79
	Fenuron	92.4	83.6	86.4		3.29
	Fluridone	70.0	50.8	54.8		7.30
	Imidacloprid	94.0	130	113		12.9
	Linuron	74.4	80.4	73.6		8.83
	Primidone	70.8	100	94.0		6.58

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1868808, 1868811, 1868814, 1868817
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1868832, 1868833, 1868834
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1868832, 1868833, 1868834
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1868808, 1868811, 1868814, 1868817
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1868808, 1868811, 1868814, 1868817
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1868809, 1868812, 1868815, 1868818
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1868809, 1868812, 1868815, 1868818
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1868809, 1868812, 1868815, 1868818
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1868809, 1868812, 1868815, 1868818
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1868810, 1868813, 1868816, 1868819
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1868835, 1868836, 1868837
SM 2120 B / E31780	True Color measured at 450 nm	1868808, 1868811, 1868814, 1868817
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1868808, 1868811, 1868814, 1868817
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1868808, 1868811, 1868814, 1868817
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1868808, 1868811, 1868814, 1868817
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1868808, 1868811, 1868814, 1868817
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1868809, 1868812, 1868815, 1868818
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1868835, 1868836, 1868837

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	02/01/2017			02/01/2017 16:18	Julie Michelle Frank	1868808, 1868811, 1868814, 1868817
EPA 200.7 Rev. 4.4	02/01/2017	02/08/2017	Elliott D. Healy	02/16/2017	Joshua Ayres	1868832, 1868833, 1868834
	02/01/2017	02/08/2017	Elliott D. Healy	02/20/2017	Joshua Ayres	1868832, 1868833, 1868834
EPA 200.8 Rev. 5.4	02/01/2017	02/08/2017	Elliott D. Healy	02/11/2017	Betina Topolski	1868832, 1868833, 1868834
	02/01/2017	02/08/2017	Elliott D. Healy	02/15/2017	Betina Topolski	1868832, 1868833
	02/01/2017	02/08/2017	Elliott D. Healy	02/16/2017	Betina Topolski	1868834
EPA 300.0 Rev. 2.1	02/01/2017			02/07/2017	Ping Hua	1868808, 1868811, 1868814, 1868817
EPA 350.1 Rev. 2.0	02/01/2017			02/06/2017	Sofia Elnemr	1868818
	02/01/2017			02/07/2017	Sofia Elnemr	1868809, 1868812, 1868815
EPA 351.2 Rev. 2.0	02/01/2017	02/03/2017	Adrian Shelby	02/06/2017	Joseph Suarez	1868809, 1868812, 1868815, 1868818
EPA 353.2 Rev. 2.0	02/01/2017			02/07/2017	Virginia P. Brown	1868809, 1868812, 1868815, 1868818
EPA 365.1 Rev. 2.0	02/01/2017	02/03/2017	Vijayalakshmi Reddy	02/06/2017	Lipi Saha	1868809, 1868812, 1868815, 1868818
EPA 365.1 Rev. 2.0 dissolved	02/01/2017			02/02/2017 14:33	Julie Michelle Frank	1868810
	02/01/2017			02/02/2017 14:34	Julie Michelle Frank	1868813
	02/01/2017			02/02/2017 14:35	Julie Michelle Frank	1868816
	02/01/2017			02/02/2017 14:36	Julie Michelle Frank	1868819
EPA 8321B	02/01/2017	02/02/2017	Mohammad Ghaffari	02/02/2017	Mohammad Ghaffari	1868835, 1868836, 1868837
SM 2120 B	02/01/2017			02/01/2017 18:34	Jared I. Manley	1868808, 1868811
	02/01/2017			02/01/2017 18:35	Jared I. Manley	1868814
	02/01/2017			02/01/2017 18:36	Jared I. Manley	1868817
SM 2320 B-97	02/01/2017			02/04/2017	Dale L. Simmons	1868808, 1868811, 1868814, 1868817
SM 2540 C-97	02/01/2017			02/07/2017	Sima Feizi	1868808, 1868811, 1868814, 1868817
SM 2540 D-97	02/01/2017			02/07/2017	Sima Feizi	1868808, 1868811, 1868814, 1868817
SM 4500 F-C-97	02/01/2017			02/04/2017	Dale L. Simmons	1868808, 1868811, 1868814, 1868817
SM 5310 B-00	02/01/2017			02/03/2017	Julie Michelle Frank	1868809, 1868812, 1868815, 1868818
USGS O-2060-01	02/01/2017	02/01/2017	Hoor Shaik	02/02/2017	Juyoung Kim	1868835, 1868836, 1868837