

Chemical Analysis Report

WQAP-2017-01-04-01

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

Event Description: **2017 SMP Kit Template 1**

Request ID: **RQ-2017-01-02-51**

Customer: **WQAP**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 27-JAN-2017 14:59



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: Caney Creek upstream of US 90

Collection Date/Time: 01/04/2017 10:50

Field ID: G1WA0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861213	EPA 180.1 Rev. 2.0	Turbidity	29		NTU	P317765	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P317946	
		Sulfate	2.0		mg SO4/L	P318151	
	SM 2120 B	Color (true)	96	A	PCU	P317737	
	SM 2320 B-97	Total Alkalinity	28		mg CaCO3/L	P317839	
	SM 2540 C-97	TDS	57		mg/L	P318154	
	SM 2540 D-97	TSS	30		mg/L	P318292	
	SM 4500 F-C-97	Fluoride	0.082	I	mg F/L	P317843	
1861215	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P317868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P317825	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.36		mg N/L	P317995	
	EPA 365.1 Rev. 2.0	Total-P	0.46		mg P/L	P317882	
	SM 5310 B-00	Organic Carbon	8.9		mg C/L	P317833	
1861217	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.26		mg P/L	P317723	
1861231	EPA 200.7 Rev. 4.4	Calcium	7.69		mg/L	P317794	
		Iron	960		ug/L	P317794	
		Magnesium	2.60		mg/L	P317794	
		Potassium	3.1		mg/L	P317794	
		Sodium	4.5		mg/L	P317794	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P317794	
		Arsenic	0.88	I	ug/L	P317794	
		Cadmium	0.050	U	ug/L	P317794	
		Chromium	1.7		ug/L	P317794	
		Copper	0.85	I	ug/L	P317794	
		Lead	0.67	I	ug/L	P317794	
		Nickel	0.44	I	ug/L	P317794	
		Silver	0.025	U	ug/L	P317794	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

Sample Location: Caney Creek upstream of US 90

Collection Date/Time: 01/04/2017 10:50

Field ID: G1WA0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861233	EPA 8321B	Sucralose**	0.010	U	ug/L	P317722	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P317721	
		Fenuron	0.0080	U	ug/L	P317721	
		Imidacloprid	0.0040	U	ug/L	P317721	
		Linuron	0.0040	U	ug/L	P317721	
		Acetaminophen**	0.0040	U	ug/L	P317721	
		Carbamazepine**	4.0E-04	U	ug/L	P317721	
		Primidone**	0.0080	U	ug/L	P317721	
		Fluridone**	4.0E-04	U	ug/L	P317721	

Sample Location: Wards Creek upstream of bridge at CR 259

Collection Date/Time: 01/04/2017 11:41

Field ID: G1WA0002-01042017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861204	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P317764	
	EPA 300.0 Rev. 2.1	Chloride	4.4		mg Cl/L	P317946	
		Sulfate	1.2		mg SO4/L	P318151	
	SM 2120 B	Color (true)	110		PCU	P317735	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P317839	
	SM 2540 C-97	TDS	33		mg/L	P318154	
	SM 2540 D-97	TSS	2	I	mg/L	P318292	
	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P317843	
1861207	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P317867	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P317824	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P317994	
	EPA 365.1 Rev. 2.0	Total-P	0.047		mg P/L	P317882	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P317832	
1861210	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P317723	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

Sample Location: Wards Creek upstream of bridge at CR 259

Collection Date/Time: 01/04/2017 11:41

Field ID: G1WA0002-01042017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861234	EPA 8321B	Sucralose**	0.010	U	ug/L	P317722	
	USGS O-2060-01	Diuron	0.0040	U	ug/L	P317721	
		Fenuron	0.0080	U	ug/L	P317721	
		Imidacloprid	0.0040	U	ug/L	P317721	
		Linuron	0.0040	U	ug/L	P317721	
		Acetaminophen**	0.0040	U	ug/L	P317721	
		Carbamazepine**	4.0E-04	U	ug/L	P317721	
		Primidone**	0.0080	U	ug/L	P317721	
		Fluridone**	4.0E-04	U	ug/L	P317721	

Ref. Method and Comment:

USGS O-2060-01: Results confirmed in re-extraction.

Sample Location: Chicken Branch at Old Plank Rd

Collection Date/Time: 01/04/2017 08:30

Field ID: G1WA0031-01042017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861205	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P317764	
	EPA 300.0 Rev. 2.1	Chloride	5.6		mg Cl/L	P317946	
		Sulfate	12		mg SO4/L	P318151	
	SM 2120 B	Color (true)	81	A	PCU	P317735	
	SM 2320 B-97	Total Alkalinity	105		mg CaCO3/L	P317839	
	SM 2540 C-97	TDS	124		mg/L	P318154	
	SM 2540 D-97	TSS	2	I	mg/L	P318292	

Field ID: G1WA0031-01042017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861205	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P317843	
1861208	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P317867	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P317824	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.091		mg N/L	P317994	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P317882	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P317832	
1861211	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P317723	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

Sample Location: Lake Lafayette Drain 250 meters downstream of Weems Rd **Collection Date/Time: 01/04/2017 09:20**

Field ID: G1WA0007-01042017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861214	EPA 180.1 Rev. 2.0	Turbidity	8.1		NTU	P317765	
	EPA 300.0 Rev. 2.1	Chloride	3.7		mg Cl/L	P317946	
		Sulfate	14		mg SO4/L	P318151	
	SM 2120 B	Color (true)	14		PCU	P317735	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P317839	
	SM 2540 C-97	TDS	35		mg/L	P318155	
	SM 2540 D-97	TSS	7	I	mg/L	P318293	
	SM 4500 F-C-97	Fluoride	0.049	I	mg F/L	P317843	
1861216	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P317868	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P317825	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P317995	
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P317882	
	SM 5310 B-00	Organic Carbon	2.9		mg C/L	P317833	
1861218	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P317723	
1861232	EPA 200.7 Rev. 4.4	Calcium	8.29		mg/L	P317794	
		Iron	310		ug/L	P317794	
		Magnesium	2.54		mg/L	P317794	
		Potassium	1.1	I	mg/L	P317794	
		Sodium	2.4		mg/L	P317794	
		Zinc	5.0	U	ug/L	P317794	
	EPA 200.8 Rev. 5.4	Arsenic	0.54	I	ug/L	P317794	
		Cadmium	0.050	U	ug/L	P317794	
		Chromium	0.77	I	ug/L	P317794	
		Copper	0.77	I	ug/L	P317794	
		Lead	0.35	I	ug/L	P317794	
		Nickel	0.25	U	ug/L	P317794	
		Silver	0.025	U	ug/L	P317794	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

Sample Location: Alford Arm Tributary at Buck Lake Rd

Collection Date/Time: 01/04/2017 10:00

Field ID: G1WA0017-01042017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1861206	EPA 180.1 Rev. 2.0	Turbidity	1.5	A	NTU	P317765	
	EPA 300.0 Rev. 2.1	Chloride	3.6		mg Cl/L	P317946	
		Sulfate	0.21	I	mg SO4/L	P318151	
	SM 2120 B	Color (true)	68		PCU	P317735	
	SM 2320 B-97	Total Alkalinity	13		mg CaCO3/L	P317839	
	SM 2540 C-97	TDS	21	I	mg/L	P318154	
	SM 2540 D-97	TSS	3	I	mg/L	P318292	
	SM 4500 F-C-97	Fluoride	0.036	I	mg F/L	P317843	
1861209	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P317867	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P317825	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P317995	
	EPA 365.1 Rev. 2.0	Total-P	0.082		mg P/L	P317882	
	SM 5310 B-00	Organic Carbon	7.3		mg C/L	P317832	
1861212	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.046		mg P/L	P317723	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P317764

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P317765

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P317794

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: P317794

Component	Result	Code	Units
Arsenic	0.25	U	ug/L
Cadmium	0.050	U	ug/L
Chromium	0.30	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P317794

Component	Result	Code	Units
Copper	0.50	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.25	U	ug/L
Silver	0.025	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317946

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P318151

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317867

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317868

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317824

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317825

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317994

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317995

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P317882

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317723

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

Reference Method: EPA 8321B
Batch ID: P317722

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P317735

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P317737

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P317839

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-97
Batch ID: P318154

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P318155

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P318292

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P318293

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P317843

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P317832

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

Reference Method: SM 5310 B-00
Batch ID: P317833

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

Reference Method: USGS O-2060-01
Batch ID: P317721

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: P317794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	107		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	87.2		P	85 - 115
Sodium	101		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P317794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P317794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.5		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	96.4		P	85 - 115
Copper	100		P	85 - 115
Lead	98.3		P	85 - 115
Nickel	97.6		P	85 - 115
Silver	96.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P317946

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P318151

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P317867

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P317868

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P317824

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P317825

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: P317994

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317995

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P317882

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317723

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P317722

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	81.0		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P317839

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

Reference Method: SM 4500 F-C-97
Batch ID: P317843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P317832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P317833

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P317721

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	79.2		P	40 - 140
Carbamazepine	102		P	40 - 140
Diuron	94.0		P	40 - 140
Fenuron	102		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P317721

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluridone	96.4		P	40 - 140
Imidacloprid	92.0		P	40 - 160
Linuron	104		P	40 - 140
Primidone	82.4		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P317794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861232	Calcium	97.2		P	80 - 120
1861232	Iron	100	98.9	P/P	80 - 120
1861232	Magnesium	102	101	P/P	80 - 120
1861232	Potassium	90.6	89.2	P/P	80 - 120
1861232	Sodium	104	104	P/P	80 - 120
1861232	Zinc	102	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P317794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861232	Arsenic	99.7	101	P/P	80 - 120
1861232	Cadmium	102	103	P/P	80 - 120
1861232	Chromium	99.5	101	P/P	80 - 120
1861232	Copper	98.7	101	P/P	80 - 120
1861232	Lead	100	102	P/P	80 - 120
1861232	Nickel	97.1	100	P/P	80 - 120
1861232	Silver	98.0	98.1	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317946

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861214	Chloride	100		P	90 - 110
1861281	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P318151

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861214	Sulfate	96.0		P	90 - 110
1861281	Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861154	Ammonia-N	98.9	96.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861215	Ammonia-N	97.7	96.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317824

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861155	Kjeldahl Nitrogen	101	98.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861294	Kjeldahl Nitrogen	101	96.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861156	NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861209	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P317882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861207	Total-P	96.5	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317723

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861210	O-Phosphate-P	97.5	95.2	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P317722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861233	Sucralose	102	103	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P317843

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861151	Fluoride	97.5	100	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P317832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861119	Organic Carbon	93.8	92.4	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P317833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861215	Organic Carbon	94.3	94.5	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P317721

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1861233	Acetaminophen	95.6	92.4	P/P	40 - 140
1861233	Carbamazepine	101	97.9	P/P	40 - 140
1861233	Diuron	73.2	74.0	P/P	40 - 140
1861233	Fenuron	82.0	81.2	P/P	40 - 140
1861233	Fluridone	81.6	80.8	P/P	40 - 140
1861233	Imidacloprid	122	111	P/P	40 - 160
1861233	Linuron	103	90.0	P/P	40 - 140
1861233	Primidone	103	98.4	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P317764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861152	Turbidity	2.38	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P317765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861206	Turbidity	8.00	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P317794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861232	Calcium	0.855	Spike	P	0 - 20
1861232	Iron	1.26	Spike	P	0 - 20
1861232	Magnesium	0.537	Spike	P	0 - 20
1861232	Potassium	1.23	Spike	P	0 - 20
1861232	Sodium	0.209	Spike	P	0 - 20
1861232	Zinc	0.661	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P317794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861232	Arsenic	1.15	Spike	P	0 - 20
1861232	Cadmium	0.562	Spike	P	0 - 20
1861232	Chromium	1.89	Spike	P	0 - 20
1861232	Copper	1.89	Spike	P	0 - 20
1861232	Lead	1.68	Spike	P	0 - 20
1861232	Nickel	3.28	Spike	P	0 - 20
1861232	Silver	0.156	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317946

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861281	Chloride	0.106	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861154	Ammonia-N	1.82	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861215	Ammonia-N	1.55	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861155	Kjeldahl Nitrogen	1.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861294	Kjeldahl Nitrogen	3.34	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861156	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861209	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P317882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861207	Total-P	1.04	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317723

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861210	O-Phosphate-P	2.08	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P317722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861233	Sucralose	0.976	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P317735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861205	Color (true)	1.06	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P317737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861213	Color (true)	0.964	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P317839

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861151	Total Alkalinity	0.272	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P318154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861153	TDS	3.33	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P318155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861282	TDS	5.10	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P317843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861151	Fluoride	2.05	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P317832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861119	Organic Carbon	0.885	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P317833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861215	Organic Carbon	0.144	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P317721

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1861233	Acetaminophen	3.40	Spike	P	0 - 30
1861233	Carbamazepine	3.17	Spike	P	0 - 30
1861233	Diuron	1.09	Spike	P	0 - 30
1861233	Fenuron	0.980	Spike	P	0 - 30
1861233	Fluridone	0.985	Spike	P	0 - 30
1861233	Imidacloprid	9.95	Spike	P	0 - 30
1861233	Linuron	13.7	Spike	P	0 - 30
1861233	Primidone	4.76	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: 1861233
 Field Sample ID: G1WA0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	85.0	P	60 - 150
USGS O-2060-01	Acetaminophen-d4	70.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	93.0	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1861233
 Field Sample ID: G1WA0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Diuron-d6	69.8	P	40 - 150
USGS O-2060-01	Primidone-d5	88.2	P	40 - 150

Lab Sample ID: 1861234
 Field Sample ID: G1WA0002-01042017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	83.0	P	60 - 150
USGS O-2060-01	Acetaminophen-d4	74.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	75.6	P	40 - 160
USGS O-2060-01	Diuron-d6	53.8	P	40 - 150
USGS O-2060-01	Primidone-d5	90.8	P	40 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A73735
 Included Lab Sample IDs: 1861210, 1861211, 1861212, 1861217, 1861218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	97.4	P/P	90 - 110

Reference Method: SM 2120 B
 Run ID: A73740
 Included Lab Sample IDs: 1861204, 1861205, 1861206, 1861213, 1861214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	85 - 115
Color (true)	99.9	99.8	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A73748
 Included Lab Sample IDs: 1861204, 1861205, 1861206, 1861213, 1861214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	100	100	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1
 Run ID: A73754
 Included Lab Sample IDs: 1861204, 1861205, 1861206, 1861213, 1861214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	103	P/P	90 - 110
Chloride	103	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A73766

Included Lab Sample IDs: 1861207, 1861208, 1861209, 1861215, 1861216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.9	96.4	P/P	90 - 110
Organic Carbon	96.1	95.9	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A73767

Included Lab Sample IDs: 1861204, 1861205, 1861206, 1861213, 1861214

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

Reference Method: SM 4500 F-C-97

Run ID: A73767

Included Lab Sample IDs: 1861204, 1861205, 1861206, 1861213, 1861214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A73778

Included Lab Sample IDs: 1861207, 1861208, 1861209, 1861215, 1861216

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

Reference Method: EPA 8321B

Run ID: A73809

Included Lab Sample IDs: 1861233, 1861234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	78.0	68.7	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A73816

Included Lab Sample IDs: 1861207, 1861208, 1861209, 1861215, 1861216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A73828

Included Lab Sample IDs: 1861207, 1861208, 1861209, 1861215, 1861216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110
NO2NO3-N	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A73829

Included Lab Sample IDs: 1861209, 1861215, 1861216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	106	P/P	90 - 110
Total-P	106	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A73831

Included Lab Sample IDs: 1861231, 1861232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.1	P/P	90 - 110
Arsenic	99.1	97.8	P/P	90 - 110
Cadmium	103	101	P/P	90 - 110
Cadmium	105	103	P/P	90 - 110
Chromium	100	99.2	P/P	90 - 110
Chromium	99.5	100	P/P	90 - 110
Copper	101	99.6	P/P	90 - 110
Copper	99.6	99.3	P/P	90 - 110
Lead	100	99.2	P/P	90 - 110
Lead	99.2	98.1	P/P	90 - 110
Nickel	98.3	98.5	P/P	90 - 110
Nickel	98.5	98.9	P/P	90 - 110
Silver	101	98.7	P/P	90 - 110
Silver	103	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A73833

Included Lab Sample IDs: 1861231, 1861232

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.0	95.7	P/P	90 - 110
Iron	94.8	95.8	P/P	90 - 110
Magnesium	97.8	98.1	P/P	90 - 110
Potassium	103	101	P/P	90 - 110
Sodium	108	106	P/P	90 - 110
Zinc	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A73866

Included Lab Sample IDs: 1861207, 1861208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.2	95.8	P/P	90 - 110
Total-P	97.2	96.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A73881

Included Lab Sample IDs: 1861204, 1861205, 1861206, 1861213, 1861214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	94.1	97.7	P/P	90 - 110
Sulfate	98.5	94.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A73912

Included Lab Sample IDs: 1861233, 1861234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	90.8	92.4	P/P	60 - 150
Acetaminophen	96.4	90.8	P/P	60 - 150
Carbamazepine	109	112	P/P	60 - 150
Carbamazepine	112	125	P/P	60 - 150
Diuron	110	117	P/P	60 - 150
Diuron	117	124	P/P	60 - 150
Fenuron	111	119	P/P	60 - 150
Fenuron	119	121	P/P	60 - 150
Fluridone	112	117	P/P	60 - 150
Fluridone	117	120	P/P	60 - 150
Imidacloprid	110	108	P/P	60 - 150
Imidacloprid	84.8	110	P/P	60 - 150
Linuron	125	147	P/P	60 - 150
Linuron	130	125	P/P	60 - 150
Primidone	74.4	84.4	P/P	60 - 150
Primidone	96.0	74.4	P/P	60 - 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				2.38	
	Turbidity				8.00	
EPA 200.7 Rev. 4.4	Calcium	103	97.2			0.855
	Iron	107	100 98.9			1.26
	Magnesium	108	102 101			0.537
	Potassium	87.2	90.6 89.2			1.23
	Sodium	101	104 104			0.209
	Zinc	105	102 103			0.661
EPA 200.8 Rev. 5.4	Arsenic	97.5	99.7 101			1.15
	Cadmium	102	102 103			0.562
	Chromium	96.4	99.5 101			1.89
	Copper	100	98.7 101			1.89
	Lead	98.3	100 102			1.68
	Nickel	97.6	97.1 100			3.28
	Silver	96.3	98.0 98.1			0.156
EPA 300.0 Rev. 2.1	Chloride	101	99.0 100		0.106	
	Sulfate	97.5	97.2 96.0			
EPA 350.1 Rev. 2.0	Ammonia-N	102	98.9 96.6			1.82
	Ammonia-N	100	97.7 96.1			1.55
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	101 98.9			1.94
	Kjeldahl Nitrogen	103	101 96.7			3.34
EPA 353.2 Rev. 2.0	NO2NO3-N	105	99.0 99.0			0.0
	NO2NO3-N	102	104 103			0.484
EPA 365.1 Rev. 2.0	Total-P	94.5	96.5 95.4			1.04

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	97.5	95.2		2.08
EPA 8321B	Sucralose	81.0	102	103		0.976
SM 2120 B	Color (true)				1.06	
	Color (true)				0.964	
SM 2320 B-97	Total Alkalinity	102			0.272	
SM 2540 C-97	TDS				3.33	
	TDS				5.10	
SM 4500 F-C-97	Fluoride	96.7	97.5	100		2.05
SM 5310 B-00	Organic Carbon	98.0	93.8	92.4		0.885
	Organic Carbon	96.3	94.3	94.5		0.144
USGS O-2060-01	Acetaminophen	79.2	95.6	92.4		3.40
	Carbamazepine	102	101	97.9		3.17
	Diuron	94.0	73.2	74.0		1.09
	Fenuron	102	82.0	81.2		0.980
	Fluridone	96.4	81.6	80.8		0.985
	Imidacloprid	92.0	122	111		9.95
	Linuron	104	103	90.0		13.7
	Primidone	82.4	103	98.4		4.76

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1861204, 1861205, 1861206, 1861213, 1861214
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1861231, 1861232
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1861231, 1861232
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1861204, 1861205, 1861206, 1861213, 1861214
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1861204, 1861205, 1861206, 1861213, 1861214
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1861207, 1861208, 1861209, 1861215, 1861216
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1861207, 1861208, 1861209, 1861215, 1861216
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1861207, 1861208, 1861209, 1861215, 1861216
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1861207, 1861208, 1861209, 1861215, 1861216
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1861210, 1861211, 1861212, 1861217, 1861218
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1861233, 1861234
SM 2120 B / E31780	True Color measured at 450 nm	1861204, 1861205, 1861206, 1861213, 1861214
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1861204, 1861205, 1861206, 1861213, 1861214
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1861204, 1861205, 1861206, 1861213, 1861214
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1861204, 1861205, 1861206, 1861213, 1861214
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1861204, 1861205, 1861206, 1861213, 1861214
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1861207, 1861208, 1861209, 1861215, 1861216
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1861233, 1861234

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	01/04/2017			01/04/2017 17:14	Sima Feizi	1861204, 1861205, 1861206, 1861213, 1861214
EPA 200.7 Rev. 4.4	01/04/2017	01/05/2017	Elliott D. Healy	01/09/2017	Joshua Ayres	1861231, 1861232
EPA 200.8 Rev. 5.4	01/04/2017	01/05/2017	Elliott D. Healy	01/09/2017	Robert K Palmer	1861231, 1861232
EPA 300.0 Rev. 2.1	01/04/2017			01/07/2017	Ping Hua	1861204, 1861205, 1861206, 1861213, 1861214
	01/04/2017			01/11/2017	Ping Hua	1861204, 1861205, 1861206, 1861213, 1861214
EPA 350.1 Rev. 2.0	01/04/2017			01/05/2017	Sofia Elnemr	1861207, 1861208, 1861209, 1861215, 1861216
EPA 351.2 Rev. 2.0	01/04/2017	01/06/2017	Adrian Shelby	01/09/2017	Joseph Suarez	1861207, 1861208, 1861209, 1861215, 1861216
EPA 353.2 Rev. 2.0	01/04/2017			01/09/2017	Beverly Y. Sanders	1861207, 1861208, 1861209, 1861215, 1861216
EPA 365.1 Rev. 2.0	01/04/2017	01/06/2017	Vijayalakshmi Reddy	01/09/2017	Beverly Y. Sanders	1861209, 1861215, 1861216
	01/04/2017	01/06/2017	Vijayalakshmi Reddy	01/11/2017	Lipi Saha	1861207, 1861208
EPA 365.1 Rev. 2.0 dissolved	01/04/2017			01/04/2017 14:52	Lipi Saha	1861210
	01/04/2017			01/04/2017 14:55	Lipi Saha	1861211
	01/04/2017			01/04/2017 14:56	Lipi Saha	1861212
	01/04/2017			01/04/2017 14:57	Lipi Saha	1861217
	01/04/2017			01/04/2017 14:58	Lipi Saha	1861218
EPA 8321B	01/04/2017	01/06/2017	Mohammad Ghaffari	01/06/2017	Mohammad Ghaffari	1861233, 1861234
SM 2120 B	01/04/2017			01/04/2017 18:17	Jared I. Manley	1861205
	01/04/2017			01/04/2017 18:20	Jared I. Manley	1861204
	01/04/2017			01/04/2017 18:21	Jared I. Manley	1861206
	01/04/2017			01/04/2017 18:22	Jared I. Manley	1861214
	01/04/2017			01/04/2017 18:38	Jared I. Manley	1861213
SM 2320 B-97	01/04/2017			01/06/2017	Dale L. Simmons	1861204, 1861205, 1861206, 1861213, 1861214
SM 2540 C-97	01/04/2017			01/06/2017	Yijie Li	1861204, 1861205, 1861206, 1861213, 1861214
SM 2540 D-97	01/04/2017			01/06/2017	Yijie Li	1861204, 1861205, 1861206, 1861213, 1861214
SM 4500 F-C-97	01/04/2017			01/06/2017	Dale L. Simmons	1861204, 1861205, 1861206, 1861213, 1861214
SM 5310 B-00	01/04/2017			01/05/2017	Julie Michelle Frank	1861207, 1861208, 1861209, 1861215, 1861216
USGS O-2060-01	01/04/2017	01/10/2017	Hoor Shaik	01/11/2017	Juyoung Kim	1861233
	01/04/2017	01/10/2017	Hoor Shaik	01/12/2017	Juyoung Kim	1861234