

Chemical Analysis Report

NE-DIST-2016-10-19-01

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

Event Description: **UEC South**
Request ID: **RQ-2016-10-17-07**
Customer: **NE-DIST**
Project ID: **SMP**

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Jacksonville, FL 32256-7577
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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 and Nutrients.

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: Cracker Branch at CR 204

Collection Date/Time: 10/18/2016 09:05

Field ID: G5NE0079 10182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1842024	EPA 180.1 Rev. 2.0	Turbidity	1.5	A	NTU	P313523	
	EPA 300.0 Rev. 2.1	Chloride	54		mg Cl/L	P314456	
		Sulfate	4.5		mg SO4/L	P314461	
	SM 2120 B	Color (true)	1.1E+03		PCU	P313496	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P313617	
	SM 2540 C-97	TDS	245		mg/L	P314157	
	SM 2540 D-97	TSS	2	I	mg/L	P314151	
	SM 4500 F-C-97	Fluoride	0.058	I	mg F/L	P313619	
1842026	EPA 350.1 Rev. 2.0	Ammonia-N	0.01		mg N/L	P314551	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P314209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P313565	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P314223	
	SM 5310 B-00	Organic Carbon	72		mg C/L	P313573	
1842028	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.064		mg P/L	P313492	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Palm Coast Canal at Old Kings Rd

Collection Date/Time: 10/18/2016 09:55

Field ID: G5NE0005 10182016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1842025	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P313523	
	EPA 300.0 Rev. 2.1	Chloride	38		mg Cl/L	P314456	
		Sulfate	12		mg SO4/L	P314461	
	SM 2120 B	Color (true)	100		PCU	P313496	
	SM 2320 B-97	Total Alkalinity	70		mg CaCO3/L	P313618	
	SM 2540 C-97	TDS	180		mg/L	P314157	
	SM 2540 D-97	TSS	4	I	mg/L	P314151	
	SM 4500 F-C-97	Fluoride	0.086	I	mg F/L	P313620	
1842027	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P314552	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.73		mg N/L	P314209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P313565	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P314223	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P313573	
1842029	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.077		mg P/L	P313492	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: ICW at St.Joe Walkway, PC

Collection Date/Time: 10/18/2016 10:20

Field ID: g5ne0016 10182016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1842030	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P313523	

Field ID: g5ne0016 10182016

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1842030	SM 2320 B-97	Total Alkalinity	117		mg CaCO3/L	P313517	
	SM 2540 D-97	TSS	23		mg/L	P314155	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P313520	
1842031	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P314550	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P314563	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P313642	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P314228	
	SM 5310 B-00	Organic Carbon	7.1		mg C/L	P313763	
1842032	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P313494	
1842038	EPA 200.7 Rev. 4.4	Iron	270	I	ug/L	P313921	
	EPA 200.8 Rev. 5.4	Arsenic	2.66		ug/L	P313921	
		Cadmium	0.060	U	ug/L	P313921	
		Chromium	0.56	I	ug/L	P313921	
		Copper	1.3		ug/L	P313921	
		Lead	0.26	I	ug/L	P313921	
		Nickel	0.50	I	ug/L	P313921	
		Silver	0.015	U	ug/L	P313921	
		Zinc	3.0	U	ug/L	P313921	

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: Field Blank

Collection Date/Time: 10/18/2016 10:40

Field ID: Field Blank

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1842033	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P314552	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P314209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P313565	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P313573	
1842034	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P313492	
1842039	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P313545	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P313545	
		Cadmium	0.020	U	ug/L	P313545	
		Chromium	0.050	U	ug/L	P313545	
		Copper	0.10	U	ug/L	P313545	
		Lead	0.050	U	ug/L	P313545	
		Nickel	0.050	U	ug/L	P313545	
		Silver	0.0050	U	ug/L	P313545	
		Zinc	1.0	U	ug/L	P313545	

Ref. Method and Comment:

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P313523

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313545

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313545

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L
Copper	0.10	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.050	U	ug/L
Silver	0.0050	U	ug/L
Zinc	1.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L
Copper	0.10	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.050	U	ug/L
Silver	0.0050	U	ug/L
Zinc	1.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314456

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314461

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314550

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314552

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314563

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313565

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313642

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314223

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314228

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313494

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

Reference Method: SM 2120 B
Batch ID: P313496

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P313517

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

Reference Method: SM 2320 B-97
Batch ID: P313617

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

Reference Method: SM 2320 B-97
Batch ID: P313618

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

Reference Method: SM 2540 C-97
Batch ID: P314157

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P314151

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P314155

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P313520

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P313620

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P313573

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

Reference Method: SM 5310 B-00
Batch ID: P313763

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	102		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.3		P	85 - 115
Cadmium	97.5		P	85 - 115
Chromium	95.7		P	85 - 115
Copper	98.7		P	85 - 115
Lead	95.7		P	85 - 115
Nickel	99.4		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	95.6		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.1		P	85 - 115
Cadmium	99.5		P	85 - 115
Chromium	113		P	85 - 115
Copper	94.6		P	85 - 115
Lead	96.4		P	85 - 115
Nickel	96.3		P	85 - 115
Silver	97.0		P	85 - 115
Zinc	97.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314456

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314550

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314552

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	107		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313565

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	108		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314223

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314228

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313494

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

Reference Method: SM 2320 B-97
Batch ID: P313517

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

Reference Method: SM 2320 B-97
Batch ID: P313617

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P313618

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

Reference Method: SM 4500 F-C-97
Batch ID: P313520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P313620

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

Reference Method: SM 5310 B-00
Batch ID: P313573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.6		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P313763

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841413	Iron	104		P	80 - 120
1842020	Iron	102	102	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1844050	Iron	102	103	P/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P313545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841413	Arsenic	100		P	80 - 120
1841413	Cadmium	101		P	80 - 120
1841413	Chromium	93.2		P	80 - 120
1841413	Copper	94.9		P	80 - 120
1841413	Lead	99.0		P	80 - 120
1841413	Nickel	96.4		P	80 - 120
1841413	Silver	97.8		P	80 - 120
1841413	Zinc	99.4		P	80 - 120
1842020	Arsenic	99.7	101	P/P	80 - 120
1842020	Cadmium	100	99.4	P/P	80 - 120
1842020	Chromium	96.3	96.3	P/P	80 - 120
1842020	Copper	95.9	95.6	P/P	80 - 120
1842020	Lead	99.4	99.1	P/P	80 - 120
1842020	Nickel	95.7	96.2	P/P	80 - 120
1842020	Silver	98.2	97.5	P/P	80 - 120
1842020	Zinc	98.7	98.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P313921

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1844050	Arsenic	103	106	P/P	70 - 130
1844050	Cadmium	92.6	95.1	P/P	70 - 130
1844050	Chromium	76.6	79.2	P/P	70 - 130
1844050	Copper	90.9	95.1	P/P	70 - 130
1844050	Lead	105	108	P/P	70 - 130
1844050	Nickel	99.3	101	P/P	70 - 130
1844050	Silver	88.4	89.3	P/P	70 - 130
1844050	Zinc	93.7	95.6	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P314456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842112	Chloride	101		P	90 - 110
1842113	Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P314461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842112	Sulfate	98.6		P	90 - 110
1842113	Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P314550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841595	Ammonia-N	104	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841966	Ammonia-N	101	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314552

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842027	Ammonia-N	104	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841983	Kjeldahl Nitrogen	101	110	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841593	Kjeldahl Nitrogen	102	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313565

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842017	NO2NO3-N	108	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842031	NO2NO3-N	110	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314223

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842016	Total-P	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314228

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842031	Total-P	94.4	96.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842029	O-Phosphate-P	99.2	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313494

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1841885	O-Phosphate-P	97.3	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P313520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840427	Fluoride	97.1	99.1	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842085	Fluoride	99.8	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P313620

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842283	Fluoride	102	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P313763

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842031	Organic Carbon	96.9	94.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P313523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842024	Turbidity	8.93	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842020	Iron	0.201	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1844050	Iron	1.13	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842020	Arsenic	1.12	Spike	P	0 - 20
1842020	Cadmium	0.905	Spike	P	0 - 20
1842020	Chromium	0.0371	Spike	P	0 - 20
1842020	Copper	0.377	Spike	P	0 - 20
1842020	Lead	0.235	Spike	P	0 - 20
1842020	Nickel	0.557	Spike	P	0 - 20
1842020	Silver	0.664	Spike	P	0 - 20
1842020	Zinc	0.0504	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1844050	Arsenic	2.94	Spike	P	0 - 20
1844050	Cadmium	2.64	Spike	P	0 - 20
1844050	Chromium	3.27	Spike	P	0 - 20
1844050	Copper	4.30	Spike	P	0 - 20
1844050	Lead	2.92	Spike	P	0 - 20
1844050	Nickel	2.10	Spike	P	0 - 20
1844050	Silver	0.920	Spike	P	0 - 20
1844050	Zinc	2.10	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842112	Chloride	2.27	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P314461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842112	Sulfate	4.10	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841595	Ammonia-N	1.61	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841966	Ammonia-N	1.84	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842027	Ammonia-N	2.36	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841983	Kjeldahl Nitrogen	5.67	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841593	Kjeldahl Nitrogen	6.40	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842017	NO2NO3-N	2.82	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842031	NO2NO3-N	0.913	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842016	Total-P	0.457	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314228

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842031	Total-P	2.20	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842029	O-Phosphate-P	0.510	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841885	O-Phosphate-P	2.59	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P313496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841980	Color (true)	1.37	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P313517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840427	Total Alkalinity	0.169	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P313617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842085	Total Alkalinity	0.120	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P313618

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842283	Total Alkalinity	0.0951	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P314157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841893	TDS	7.24	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P313520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840427	Fluoride	1.40	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P313619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842085	Fluoride	0.959	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P313620

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842283	Fluoride	0.460	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P313573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1841551	Organic Carbon	1.11	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P313763

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842031	Organic Carbon	2.30	Spike	P	0 - 20

* 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 Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A72317
Included Lab Sample IDs: 1842028, 1842029, 1842032, 1842034

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.6	P/P	90 - 110
O-Phosphate-P	102	100	P/P	90 - 110
O-Phosphate-P	99.5	100	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A72318
Included Lab Sample IDs: 1842024, 1842025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103		P	85 - 115
Color (true)	104	104	P/P	85 - 115

Reference Method: SM 2320 B-97
Run ID: A72322
Included Lab Sample IDs: 1842030

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A72322

Included Lab Sample IDs: 1842030

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A72324

Included Lab Sample IDs: 1842024, 1842025, 1842030

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.0	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A72340

Included Lab Sample IDs: 1842026, 1842027, 1842033

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

Reference Method: SM 5310 B-00

Run ID: A72343

Included Lab Sample IDs: 1842026, 1842027, 1842033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.2	93.9	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A72356

Included Lab Sample IDs: 1842024, 1842025

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

Reference Method: SM 4500 F-C-97

Run ID: A72356

Included Lab Sample IDs: 1842024, 1842025

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A72364

Included Lab Sample IDs: 1842031

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

Reference Method: SM 5310 B-00

Run ID: A72401

Included Lab Sample IDs: 1842031

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A72421

Included Lab Sample IDs: 1842039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	96.9	97.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A72427

Included Lab Sample IDs: 1842039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.7	97.2	P/P	90 - 110
Cadmium	94.3	94.8	P/P	90 - 110
Chromium	92.5	93.7	P/P	90 - 110
Copper	97.2	97.4	P/P	90 - 110
Lead	94.0	93.7	P/P	90 - 110
Nickel	98.4	97.7	P/P	90 - 110
Silver	95.5	95.8	P/P	90 - 110
Zinc	98.7	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A72482

Included Lab Sample IDs: 1842038

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A72507

Included Lab Sample IDs: 1842038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.2	99.5	P/P	90 - 110
Cadmium	98.5	96.5	P/P	90 - 110
Nickel	95.6	101	P/P	90 - 110
Silver	96.8	96.3	P/P	90 - 110
Zinc	96.5	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72548

Included Lab Sample IDs: 1842026, 1842027

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A72549

Included Lab Sample IDs: 1842038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.8	94.7	P/P	90 - 110
Copper	99.3	96.4	P/P	90 - 110
Lead	95.2	93.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A72551

Included Lab Sample IDs: 1842026, 1842027, 1842033

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72588

Included Lab Sample IDs: 1842031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A72589

Included Lab Sample IDs: 1842024, 1842025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	99.7	P/P	90 - 110
Sulfate	101	97.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A72604

Included Lab Sample IDs: 1842026, 1842027, 1842031, 1842033

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A72672

Included Lab Sample IDs: 1842031

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	96.5	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			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					8.93	
EPA 200.7 Rev. 4.4	Iron	102	104	102	102		0.201
	Iron	105	102	103			1.13
EPA 200.8 Rev. 5.4	Arsenic	98.3	100	99.7	101		1.12
	Arsenic	97.1	103	106			2.94
	Cadmium	97.5	101	100	99.4		0.905
	Cadmium	99.5	92.6	95.1			2.64
	Chromium	95.7	93.2	96.3	96.3		0.0371

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 200.8 Rev. 5.4	Chromium	113	76.6	79.2			3.27
	Copper	98.7	94.9	95.9	95.6		0.377
	Copper	94.6	90.9	95.1			4.30
	Lead	95.7	99.0	99.4	99.1		0.235
	Lead	96.4	105	108			2.92
	Nickel	99.4	96.4	95.7	96.2		0.557
	Nickel	96.3	99.3	101			2.10
	Silver	95.6	97.8	98.2	97.5		0.664
	Silver	97.0	88.4	89.3			0.920
	Zinc	103	99.4	98.7	98.7		0.0504
	Zinc	97.5	93.7	95.6			2.10
EPA 300.0 Rev. 2.1	Chloride	101	101	99.8		2.27	
	Sulfate	98.7	98.6	97.8		4.10	
EPA 350.1 Rev. 2.0	Ammonia-N	104	104	106			1.61
	Ammonia-N	104	101	104			1.84
	Ammonia-N	107	104	98.7			2.36
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	101	110			5.67
	Kjeldahl Nitrogen	108	102	109			6.40
EPA 353.2 Rev. 2.0	NO2NO3-N	107	108	105			2.82
	NO2NO3-N	108	110	109			0.913
EPA 365.1 Rev. 2.0	Total-P	102	102	102			0.457
	Total-P	98.2	94.4	96.7			2.20
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	99.2	100			0.510
	O-Phosphate-P	104	97.3	100			2.59
SM 2120 B	Color (true)					1.37	
SM 2320 B-97	Total Alkalinity	103				0.169	
	Total Alkalinity	103				0.120	
	Total Alkalinity	103				0.0951	
SM 2540 C-97	TDS					7.24	
SM 4500 F-C-97	Fluoride	98.7	97.1	99.1			1.40
	Fluoride	98.5	99.8	101			0.959
	Fluoride	98.9	102	101			0.460
SM 5310 B-00	Organic Carbon	94.6					1.11
	Organic Carbon	100	96.9	94.3			2.30

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1842024, 1842025, 1842030
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1842038, 1842039
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1842038, 1842039
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1842024, 1842025
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1842024, 1842025
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1842026, 1842027, 1842031, 1842033
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1842026, 1842027, 1842031, 1842033
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1842026, 1842027, 1842031, 1842033

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1842026, 1842027, 1842031
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1842028, 1842029, 1842032, 1842034
SM 2120 B / E31780	True Color measured at 450 nm	1842024, 1842025
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1842024, 1842025, 1842030
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1842024, 1842025
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1842024, 1842025, 1842030
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1842024, 1842025, 1842030
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1842026, 1842027, 1842031, 1842033

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	10/19/2016			10/19/2016 15:13	Sima Feizi	1842024, 1842025, 1842030
EPA 200.7 Rev. 4.4	10/19/2016	10/20/2016	Elliott D. Healy	10/25/2016	Betina Topolski	1842039
	10/19/2016	10/26/2016	Elliott D. Healy	10/27/2016	Betina Topolski	1842038
EPA 200.8 Rev. 5.4	10/19/2016	10/20/2016	Elliott D. Healy	10/25/2016	Charles J. Peterson	1842039
	10/19/2016	10/26/2016	Elliott D. Healy	10/28/2016	Charles J. Peterson	1842038
	10/19/2016	10/26/2016	Elliott D. Healy	10/31/2016	Charles J. Peterson	1842038
EPA 300.0 Rev. 2.1	10/19/2016			11/03/2016	Ping Hua	1842024, 1842025
EPA 350.1 Rev. 2.0	10/19/2016			11/03/2016	Sofia Elnemr	1842026, 1842027, 1842031, 1842033
EPA 351.2 Rev. 2.0	10/19/2016	10/31/2016	Adrian Shelby	11/01/2016	Joseph Suarez	1842026, 1842027, 1842033
	10/19/2016	11/04/2016	Adrian Shelby	11/07/2016	Joseph Suarez	1842031
EPA 353.2 Rev. 2.0	10/19/2016			10/20/2016	Beverly Y. Sanders	1842026, 1842027, 1842033
	10/19/2016			10/21/2016	Beverly Y. Sanders	1842031
EPA 365.1 Rev. 2.0	10/19/2016	10/31/2016	Vijayalakshmi Reddy	11/01/2016	Lipi Saha	1842026, 1842027, 1842031
EPA 365.1 Rev. 2.0 dissolved	10/19/2016			10/19/2016 15:15	Julia Storbeck	1842029
	10/19/2016			10/19/2016 15:36	Julia Storbeck	1842034
	10/19/2016			10/19/2016 15:37	Julia Storbeck	1842028
	10/19/2016			10/19/2016 16:01	Julia Storbeck	1842032
SM 2120 B	10/19/2016			10/19/2016 16:17	Julie Michelle Frank	1842025
	10/19/2016			10/19/2016 16:42	Julie Michelle Frank	1842024
SM 2320 B-97	10/19/2016			10/19/2016	Dale L. Simmons	1842030
	10/19/2016			10/20/2016	Dale L. Simmons	1842024
	10/19/2016			10/21/2016	Dale L. Simmons	1842025
SM 2540 C-97	10/19/2016			10/22/2016	Yijie Li	1842024, 1842025
SM 2540 D-97	10/19/2016			10/22/2016	Yijie Li	1842024, 1842025, 1842030
SM 4500 F-C-97	10/19/2016			10/19/2016	Dale L. Simmons	1842030
	10/19/2016			10/20/2016	Dale L. Simmons	1842024
	10/19/2016			10/21/2016	Dale L. Simmons	1842025
SM 5310 B-00	10/19/2016			10/20/2016	Julie Michelle Frank	1842026, 1842027, 1842033
	10/19/2016			10/25/2016	Julie Michelle Frank	1842031