

Chemical Analysis Report

SE-DIST-2017-06-20-01

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

Event Description: **SMP-G5 Everglades Run**
Request ID: **RQ-2017-06-12-23**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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Certified by: Colin Wright, Program Administrator

Date Certified: 11-JUL-2017 09:48

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on 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 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: WCA 3 L-67 @ S-151

Collection Date/Time: 06/19/2017 10:30

Field ID: G5SE0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907363	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P327194	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P327405	
		Sulfate	9.3		mg SO4/L	P327408	
	SM 2120 B	Color (true)	74		PCU	P327145	
	SM 2320 B-97	Total Alkalinity	141		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	307		mg/L	P327489	
	SM 2540 D-97	TSS	8	I	mg/L	P327527	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P327456	
1907365	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P327286	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P327188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041		mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P327457	
1907367	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327171	

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: WCA 2B @ S-141

Collection Date/Time: 06/19/2017 11:15

Field ID: G5SE0040

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907364	EPA 180.1 Rev. 2.0	Turbidity	0.70		NTU	P327194	
	EPA 300.0 Rev. 2.1	Chloride	46		mg Cl/L	P327405	
		Sulfate	7.9		mg SO4/L	P327408	
	SM 2120 B	Color (true)	100	A	PCU	P327146	
	SM 2320 B-97	Total Alkalinity	92		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	237	A	mg/L	P327490	
	SM 2540 D-97	TSS	3	IA	mg/L	P327528	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P327456	
1907366	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P327286	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P327188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P327457	
1907368	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327171	

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: WCA1 South rear S-39

Collection Date/Time: 06/19/2017 11:45

Field ID: G5SE0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907369	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P327194	
	EPA 300.0 Rev. 2.1	Chloride	71		mg Cl/L	P327405	
		Sulfate	35		mg SO4/L	P327408	

Field ID: G5SE0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907369	SM 2120 B	Color (true)	100		PCU	P327146	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	358		mg/L	P327490	
	SM 2540 D-97	TSS	2	I	mg/L	P327528	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P327456	
1907372	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P327286	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P327188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.041		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P327457	
1907375	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010	I	mg P/L	P327171	
1907393	EPA 200.7 Rev. 4.4	Calcium	49.9		mg/L	P327270	
		Iron	30	U	ug/L	P327270	
		Magnesium	10.3		mg/L	P327270	
		Potassium	4.7		mg/L	P327270	
		Sodium	47.9		mg/L	P327270	
		Zinc	5.0	U	ug/L	P327270	
	EPA 200.8 Rev. 5.4	Arsenic	1.38		ug/L	P327270	
		Cadmium	0.020	U	ug/L	P327270	
		Chromium	0.40	U	ug/L	P327270	
		Copper	0.34	I	ug/L	P327270	
		Lead	0.071	I	ug/L	P327270	
		Nickel	0.20	U	ug/L	P327270	
		Silver	0.010	U	ug/L	P327270	

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: WCA1 West @ L39 Canal

Collection Date/Time: 06/19/2017 12:15

Field ID: G5SE0019

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907370	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P327194	
	EPA 300.0 Rev. 2.1	Chloride	86		mg Cl/L	P327405	
		Sulfate	64		mg SO4/L	P327408	
	SM 2120 B	Color (true)	150		PCU	P327146	
	SM 2320 B-97	Total Alkalinity	185		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	506		mg/L	P327490	
	SM 2540 D-97	TSS	3	I	mg/L	P327528	
	SM 4500 F-C-97	Fluoride	0.50		mg F/L	P327456	
1907373	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P327286	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P327188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036		mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	27		mg C/L	P327457	
1907376	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010	I	mg P/L	P327171	

Field ID: G5SE0019

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907394	EPA 200.7 Rev. 4.4	Calcium	75.8		mg/L	P327270	
		Iron	30	U	ug/L	P327270	
		Magnesium	18.7		mg/L	P327270	
		Potassium	8.1		mg/L	P327270	
		Sodium	55.2		mg/L	P327270	
	EPA 200.8 Rev. 5.4	Zinc	8.7	I	ug/L	P327270	
		Arsenic	2.34		ug/L	P327270	
		Cadmium	0.020	U	ug/L	P327270	
		Chromium	0.40	U	ug/L	P327270	
		Copper	0.40	I	ug/L	P327270	
		Lead	0.088	I	ug/L	P327270	
		Nickel	0.21	I	ug/L	P327270	
		Silver	0.010	U	ug/L	P327270	

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: WCA1 NE at S6 boat ramp

Collection Date/Time: 06/19/2017 12:25

Field ID: G5SE0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907371	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P327195	
	EPA 300.0 Rev. 2.1	Chloride	69		mg Cl/L	P327405	
		Sulfate	51		mg SO4/L	P327408	
		Color (true)	130		PCU	P327146	
	SM 2320 B-97	Total Alkalinity	159		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	460		mg/L	P327490	
	SM 2540 D-97	TSS	2	I	mg/L	P327528	
	SM 4500 F-C-97	Fluoride	0.44		mg F/L	P327456	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P327286	
		Kjeldahl Nitrogen	1.6		mg N/L	P327188	
1907374	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.016		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P327457	
1907377	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327171	
1907395	EPA 200.7 Rev. 4.4	Calcium	64.1		mg/L	P327270	
		Iron	30	U	ug/L	P327270	
		Magnesium	15.8		mg/L	P327270	
		Potassium	7.3		mg/L	P327270	
		Sodium	47.2		mg/L	P327270	
		Zinc	5.0	U	ug/L	P327270	
	EPA 200.8 Rev. 5.4	Arsenic	1.66		ug/L	P327270	
		Cadmium	0.020	U	ug/L	P327270	
		Chromium	0.40	U	ug/L	P327270	
		Copper	0.24	I	ug/L	P327270	
		Lead	0.065	I	ug/L	P327270	

Field ID: G5SE0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907395	EPA 200.8 Rev. 5.4	Nickel	0.20	U	ug/L	P327270	
		Silver	0.010	U	ug/L	P327270	

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: WCA1 North @ G-251

Collection Date/Time: 06/19/2017 13:00

Field ID: G5SE0061

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907378	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P327195	
	EPA 300.0 Rev. 2.1	Chloride	86		mg Cl/L	P327406	
		Sulfate	58		mg SO4/L	P327409	
	SM 2120 B	Color (true)	140		PCU	P327146	
	SM 2320 B-97	Total Alkalinity	194		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	534		mg/L	P327490	
	SM 2540 D-97	TSS	2	I	mg/L	P327528	
	SM 4500 F-C-97	Fluoride	0.50		mg F/L	P327456	
1907380	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P327288	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P327188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P327457	
1907382	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P327171	
1907396	EPA 200.7 Rev. 4.4	Calcium	74.2		mg/L	P327270	
		Iron	30	U	ug/L	P327270	
		Magnesium	18.3		mg/L	P327270	
		Potassium	7.7		mg/L	P327270	
		Sodium	55.5		mg/L	P327270	
		Zinc	5.0	U	ug/L	P327270	
	EPA 200.8 Rev. 5.4	Arsenic	1.90		ug/L	P327270	
		Beryllium	0.010	U	ug/L	P327270	
		Cadmium	0.020	U	ug/L	P327270	
		Chromium	0.40	U	ug/L	P327270	
		Copper	0.27	I	ug/L	P327270	
		Lead	0.050	U	ug/L	P327270	
		Nickel	0.20	U	ug/L	P327270	
		Silver	0.010	U	ug/L	P327270	

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: WCA1 North @ G-301

Collection Date/Time: 06/19/2017 13:30

Field ID: G5SE0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907379	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P327195	
	EPA 300.0 Rev. 2.1	Chloride	96		mg Cl/L	P327406	

Field ID: G5SE0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1907379	EPA 300.0 Rev. 2.1	Sulfate	60		mg SO4/L	P327409	
	SM 2120 B	Color (true)	120		PCU	P327146	
	SM 2320 B-97	Total Alkalinity	188		mg CaCO3/L	P327452	
	SM 2540 C-97	TDS	584		mg/L	P327490	
	SM 2540 D-97	TSS	2	I	mg/L	P327528	
	SM 4500 F-C-97	Fluoride	0.42		mg F/L	P327456	
1907381	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P327288	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P327188	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P327301	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P327211	
	SM 5310 B-00	Organic Carbon	23		mg C/L	P327457	
1907383	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P327173	
1907397	EPA 200.7 Rev. 4.4	Calcium	77.8		mg/L	P327270	
		Iron	30	U	ug/L	P327270	
		Magnesium	15.7		mg/L	P327270	
		Potassium	7.5		mg/L	P327270	
		Sodium	63.2		mg/L	P327270	
		Zinc	5.0	U	ug/L	P327270	
	EPA 200.8 Rev. 5.4	Arsenic	2.55		ug/L	P327270	
		Beryllium	0.010	U	ug/L	P327270	
		Cadmium	0.020	U	ug/L	P327270	
		Chromium	0.40	U	ug/L	P327270	
		Copper	0.83		ug/L	P327270	
		Lead	0.056	I	ug/L	P327270	
		Nickel	0.21	I	ug/L	P327270	
		Silver	0.010	U	ug/L	P327270	

Ref. Method and Comment:

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: P327194

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P327195

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P327270

Component	Result	Code	Units
Calcium	0.075	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327270

Component	Result	Code	Units
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: P327270

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Beryllium	0.010	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: P327405

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327406

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327408

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327409

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327286

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327288

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327188

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327301

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327171

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327173

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

Reference Method: SM 2120 B
Batch ID: P327145

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P327146

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P327452

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P327489

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P327490

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P327527

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P327528

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P327456

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P327457

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: P327270

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	106		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	98.5		P	85 - 115
Sodium	103		P	85 - 115
Zinc	98.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327270

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327270

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beryllium	98.7		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	101		P	85 - 115
Copper	97.4		P	85 - 115
Lead	99.5		P	85 - 115
Nickel	99.2		P	85 - 115
Silver	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327405

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327406

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327409

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327286

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327288

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327188

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327301

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327211

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327171

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327173

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

Reference Method: SM 2320 B-97
Batch ID: P327452

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

Reference Method: SM 4500 F-C-97
Batch ID: P327456

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P327457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907395	Calcium	110		P	80 - 120
1907395	Iron	108		P	80 - 120
1907395	Magnesium	109		P	80 - 120
1907395	Potassium	108		P	80 - 120
1907395	Sodium	107		P	80 - 120
1907395	Zinc	102		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907500	Calcium	105		P	80 - 120
1907500	Iron	107	106	P/P	80 - 120
1907500	Magnesium	105		P	80 - 120
1907500	Potassium	99.1	99.0	P/P	80 - 120
1907500	Sodium	103		P	80 - 120
1907500	Zinc	99.9	97.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907395	Arsenic	106		P	80 - 120
1907395	Beryllium	99.4		P	80 - 120
1907395	Cadmium	105		P	80 - 120
1907395	Chromium	95.6		P	80 - 120
1907395	Copper	96.2		P	80 - 120
1907395	Lead	102		P	80 - 120
1907395	Nickel	97.9		P	80 - 120
1907395	Silver	100		P	80 - 120
1907500	Arsenic	104	107	P/P	80 - 120
1907500	Beryllium	97.5	102	P/P	80 - 120
1907500	Cadmium	102	104	P/P	80 - 120
1907500	Chromium	94.3	97.7	P/P	80 - 120
1907500	Copper	95.4	98.7	P/P	80 - 120
1907500	Lead	101	104	P/P	80 - 120
1907500	Nickel	95.6	98.7	P/P	80 - 120
1907500	Silver	100	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907154	Chloride	97.0		P	90 - 110
1907260	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907606	Chloride	93.4		P	90 - 110
1907786	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907154	Sulfate	95.3		P	90 - 110
1907260	Sulfate	98.5		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907606	Sulfate	91.3		P	90 - 110
1907786	Sulfate	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907359	Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907380	Ammonia-N	101	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907380	Kjeldahl Nitrogen	93.4	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327301

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907315	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907366	Total-P	95.4	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327171

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907360	O-Phosphate-P	97.3	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327173

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907383	O-Phosphate-P	95.7	95.7	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P327456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907606	Fluoride	98.9	101	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P327457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1907162	Organic Carbon	93.1	93.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907311	Turbidity	4.12	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P327195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907491	Turbidity	13.3	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P327270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907500	Calcium	0.386	Spike	P	0 - 20
1907500	Iron	0.647	Spike	P	0 - 20
1907500	Magnesium	0.195	Spike	P	0 - 20
1907500	Potassium	0.0666	Spike	P	0 - 20
1907500	Sodium	0.0908	Spike	P	0 - 20
1907500	Zinc	2.06	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P327270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907500	Arsenic	2.78	Spike	P	0 - 20
1907500	Beryllium	4.47	Spike	P	0 - 20
1907500	Cadmium	1.71	Spike	P	0 - 20
1907500	Chromium	3.35	Spike	P	0 - 20
1907500	Copper	3.27	Spike	P	0 - 20
1907500	Lead	2.88	Spike	P	0 - 20
1907500	Nickel	3.19	Spike	P	0 - 20
1907500	Silver	2.17	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907260	Chloride	0.755	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907606	Chloride	1.59	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907260	Sulfate	1.20	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P327409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907606	Sulfate	2.48	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907359	Ammonia-N	1.07	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P327288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907380	Ammonia-N	1.23	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P327188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907380	Kjeldahl Nitrogen	3.49	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P327301

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907315	NO2NO3-N	1.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P327211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907366	Total-P	5.11	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907360	O-Phosphate-P	0.615	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P327173

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907383	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P327145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907358	Color (true)	2.09	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P327146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907364	Color (true)	1.66	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P327452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907606	Total Alkalinity	3.25	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P327489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907260	TDS	9.05	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P327490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907364	TDS	5.06	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P327456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907606	Fluoride	1.49	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P327457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1907162	Organic Carbon	0.0290	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 300.0 Rev. 2.1
Run ID: A77183
Included Lab Sample IDs: 1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.1	100	P/P	90 - 110
Chloride	99.0	99.4	P/P	90 - 110
Chloride	99.4	95.1	P/P	90 - 110
Sulfate	104	99.6	P/P	90 - 110
Sulfate	95.9	100	P/P	90 - 110
Sulfate	99.6	95.9	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A77207
Included Lab Sample IDs: 1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.5	98.5	P/P	85 - 115
Color (true)	98.5	96.9	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A77215
Included Lab Sample IDs: 1907367, 1907368, 1907375, 1907376, 1907377, 1907382, 1907383

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A77223
Included Lab Sample IDs: 1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A77259
Included Lab Sample IDs: 1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A77259

Included Lab Sample IDs: 1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	99.3	P/P	90 - 110
Ammonia-N	99.7	99.7	P/P	90 - 110
Ammonia-N	100	99.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A77262

Included Lab Sample IDs: 1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A77267

Included Lab Sample IDs: 1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	98.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A77282

Included Lab Sample IDs: 1907393, 1907394, 1907395, 1907396, 1907397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	103	P/P	90 - 110
Calcium	103	101	P/P	90 - 110
Iron	100	101	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	97.5	97.9	P/P	90 - 110
Potassium	97.9	98.0	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Sodium	101	100	P/P	90 - 110
Zinc	96.9	97.9	P/P	90 - 110
Zinc	97.9	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A77292

Included Lab Sample IDs: 1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.1	96.2	P/P	90 - 110
Kjeldahl Nitrogen	96.2	94.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A77329

Included Lab Sample IDs: 1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	105	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A77329

Included Lab Sample IDs: 1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	99.1	P/P	90 - 110
Fluoride	99.1	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A77331

Included Lab Sample IDs: 1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.6	94.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A77408

Included Lab Sample IDs: 1907393, 1907394, 1907395, 1907396, 1907397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	102	P/P	90 - 110
Beryllium	101	99.2	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Chromium	104	97.6	P/P	90 - 110
Copper	101	100	P/P	90 - 110
Lead	99.6	99.8	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Silver	93.7	94.9	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						4.12	
	Turbidity						13.3	
EPA 200.7 Rev. 4.4	Calcium	105		110	105			0.386
	Iron	106		108	107	106		0.647
	Magnesium	103		109	105			0.195
	Potassium	98.5		108	99.1	99.0		0.0666
	Sodium	103		107	103			0.0908
	Zinc	98.9		102	99.9	97.9		2.06
EPA 200.8 Rev. 5.4	Arsenic	102		106	104	107		2.78
	Beryllium	98.7		99.4	97.5	102		4.47
	Cadmium	101		105	102	104		1.71
	Chromium	101		95.6	94.3	97.7		3.35
	Copper	97.4		96.2	95.4	98.7		3.27
	Lead	99.5		102	101	104		2.88
	Nickel	99.2		97.9	95.6	98.7		3.19
	Silver	100		100	100	102		2.17
EPA 300.0 Rev. 2.1	Chloride	96.8		101	97.0		0.755	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 300.0 Rev. 2.1	Chloride	103	93.4	99.7	1.59	
	Sulfate	95.2	98.5	95.3	1.20	
	Sulfate	102	91.3	98.6	2.48	
EPA 350.1 Rev. 2.0	Ammonia-N	103	100	101		1.07
	Ammonia-N	104	101	98.7		1.23
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	93.4	102		3.49
EPA 353.2 Rev. 2.0	NO2NO3-N	103	104	102		1.11
EPA 365.1 Rev. 2.0	Total-P	102	95.4	100		5.11
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	97.3	97.9		0.615
	O-Phosphate-P	101	95.7	95.7		0.0
SM 2120 B	Color (true)				2.09	
	Color (true)				1.66	
SM 2320 B-97	Total Alkalinity	104			3.25	
SM 2540 C-97	TDS				9.05	
	TDS				5.06	
SM 4500 F-C-97	Fluoride	97.1	98.9	101		1.49
SM 5310 B-00	Organic Carbon	96.8	93.1	93.2		0.0290

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1907393, 1907394, 1907395, 1907396, 1907397
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1907393, 1907394, 1907395, 1907396, 1907397
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1907367, 1907368, 1907375, 1907376, 1907377, 1907382, 1907383
SM 2120 B / E31780	True Color measured at 450 nm	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381

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	06/20/2017			06/20/2017 16:32	DeAsia Armster	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
EPA 200.7 Rev. 4.4	06/20/2017	06/21/2017	Elliott D. Healy	06/22/2017	Betina Topolski	1907393, 1907394, 1907395, 1907396, 1907397
EPA 200.8 Rev. 5.4	06/20/2017	06/21/2017	Elliott D. Healy	06/29/2017	Robert K Palmer	1907393, 1907394, 1907395, 1907396, 1907397
EPA 300.0 Rev. 2.1	06/20/2017			06/22/2017	Julia Storbeck	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
EPA 350.1 Rev. 2.0	06/20/2017			06/21/2017	Sofia Elnemr	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 351.2 Rev. 2.0	06/20/2017	06/21/2017	Adrian Shelby	06/22/2017	Tanya Welborn	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 353.2 Rev. 2.0	06/20/2017			06/22/2017	Beverly Y. Sanders	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 365.1 Rev. 2.0	06/20/2017	06/21/2017	Vijayalakshmi Reddy	06/22/2017	Lipi Saha	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381
EPA 365.1 Rev. 2.0 dissolved SM 2120 B	06/20/2017			06/20/2017 14:59	Anthony C. Onicha	1907383
	06/20/2017			06/20/2017 15:33	Anthony C. Onicha	1907367
	06/20/2017			06/20/2017 15:34	Anthony C. Onicha	1907368
	06/20/2017			06/20/2017 15:35	Anthony C. Onicha	1907375
	06/20/2017			06/20/2017 15:36	Anthony C. Onicha	1907376
	06/20/2017			06/20/2017 15:37	Anthony C. Onicha	1907377
	06/20/2017			06/20/2017 15:38	Anthony C. Onicha	1907382
	06/20/2017			06/20/2017 15:08	Tanya Welborn	1907363
	06/20/2017			06/20/2017 15:11	Tanya Welborn	1907364
	06/20/2017			06/20/2017 15:12	Tanya Welborn	1907369
	06/20/2017			06/20/2017 15:13	Tanya Welborn	1907370
	06/20/2017			06/20/2017 15:14	Tanya Welborn	1907371
	06/20/2017			06/20/2017 15:15	Tanya Welborn	1907378, 1907379
SM 2320 B-97	06/20/2017			06/24/2017	Dale L. Simmons	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 2540 C-97	06/20/2017			06/21/2017	Yijie Li	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 2540 D-97	06/20/2017			06/21/2017	Yijie Li	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 4500 F-C-97	06/20/2017			06/24/2017	Dale L. Simmons	1907363, 1907364, 1907369, 1907370, 1907371, 1907378, 1907379
SM 5310 B-00	06/20/2017			06/24/2017	Sofia Elnemr	1907365, 1907366, 1907372, 1907373, 1907374, 1907380, 1907381