

Chemical Analysis Report

CEN-DIST-2017-12-01-04

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

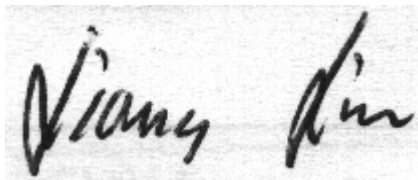
Event Description: **Rouse / Drawdy**
Request ID: **RQ-2017-11-27-69**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Mike Linger

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

Certified by: Liang Lin, Environmental Administrator

Date Certified: 21-DEC-2017 15:48

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored 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: Lake Drawdy @ 150 m NNE of Center

Collection Date/Time: 11/30/2017 14:30

Field ID: G2CE0079

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950119	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P336260	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P336482	
		Sulfate	7.6		mg SO4/L	P336485	
	SM 2120 B	Color (true)	320		PCU	P336225	
	SM 2320 B-97	Total Alkalinity	5.2		mg CaCO3/L	P336618	
	SM 2540 C-97	TDS	102		mg/L	P336674	
	SM 2540 D-97	TSS	3	I	mg/L	P336783	
	SM 4500 F-C-97	Fluoride	0.039	I	mg F/L	P336621	RPD
1950125	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P336796	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P336759	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P336387	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P336571	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P336546	
1950131	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P336218	
1950151	EPA 200.7 Rev. 4.4	Calcium	6.80		mg/L	P336398	
		Iron	270		ug/L	P336398	
		Magnesium	2.33		mg/L	P336398	
		Potassium	2.8		mg/L	P336398	
		Sodium	12.7		mg/L	P336398	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P336398	
		Arsenic	1.42		ug/L	P336398	
		Cadmium	0.020	U	ug/L	P336398	
		Chromium	0.52	I	ug/L	P336398	
		Copper	1.49		ug/L	P336398	
		Lead	0.33		ug/L	P336398	
		Nickel	0.23	I	ug/L	P336398	
		Silver	0.010	U	ug/L	P336398	

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: Lake Drawdy @ 150 m S of Center

Collection Date/Time: 11/30/2017 14:45

Field ID: G2CE0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950120	EPA 180.1 Rev. 2.0	Turbidity	1.00		NTU	P336260	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P336482	
		Sulfate	7.7		mg SO4/L	P336485	
	SM 2120 B	Color (true)	310		PCU	P336225	
	SM 2320 B-97	Total Alkalinity	5.1		mg CaCO3/L	P336618	
	SM 2540 C-97	TDS	109		mg/L	P336675	
	SM 2540 D-97	TSS	2	I	mg/L	P336785	
	SM 4500 F-C-97	Fluoride	0.041	I	mg F/L	P336621	RPD
1950126	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P336796	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P336759	

Field ID: G2CE0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950126	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P336388	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P336571	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P336635	
1950132	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P336218	
1950152	EPA 200.7 Rev. 4.4	Calcium	6.75		mg/L	P336398	
		Iron	270		ug/L	P336398	
		Magnesium	2.29		mg/L	P336398	
		Potassium	2.8		mg/L	P336398	
		Sodium	12.6		mg/L	P336398	
		Zinc	5.0	U	ug/L	P336398	
	EPA 200.8 Rev. 5.4	Arsenic	1.38		ug/L	P336398	
		Cadmium	0.020	U	ug/L	P336398	
		Chromium	0.54	I	ug/L	P336398	
		Copper	1.48		ug/L	P336398	
		Lead	0.32		ug/L	P336398	
		Nickel	0.29	I	ug/L	P336398	
		Silver	0.010	U	ug/L	P336398	

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: Lake Rouse @ NW corner of Lake

Collection Date/Time: 11/30/2017 15:20

Field ID: G2CE0100

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950121	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P336260	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P336482	
		Sulfate	6.1		mg SO4/L	P336485	
	SM 2120 B	Color (true)	110		PCU	P336225	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P336618	
	SM 2540 C-97	TDS	88		mg/L	P336675	
	SM 2540 D-97	TSS	2	I	mg/L	P336785	
	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P336621	RPD
1950127	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P336796	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P336759	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P336388	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P336571	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P336635	
1950133	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P336218	
1950153	EPA 200.7 Rev. 4.4	Calcium	13.4		mg/L	P336398	
		Iron	75	I	ug/L	P336398	
		Magnesium	1.31		mg/L	P336398	
		Potassium	1.8		mg/L	P336398	
		Sodium	10.8		mg/L	P336398	
		Zinc	5.0	U	ug/L	P336398	
	EPA 200.8 Rev. 5.4	Arsenic	1.16		ug/L	P336398	

Field ID: G2CE0100

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950153	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P336398	
		Chromium	0.40	U	ug/L	P336398	
		Copper	0.70	I	ug/L	P336398	
		Lead	0.15	I	ug/L	P336398	
		Nickel	0.20	U	ug/L	P336398	
		Silver	0.010	U	ug/L	P336398	

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: Lake Rouse @ NE corner of Lake

Collection Date/Time: 11/30/2017 15:28

Field ID: G2CE0101

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950122	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P336260	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P336482	
		Sulfate	6.1		mg SO4/L	P336485	
	SM 2120 B	Color (true)	110		PCU	P336225	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P336618	
	SM 2540 C-97	TDS	87		mg/L	P336675	
	SM 2540 D-97	TSS	3	I	mg/L	P336785	
	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P336621	RPD
1950128	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P336796	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P336759	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P336388	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P336571	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P336635	
1950134	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P336218	
1950154	EPA 200.7 Rev. 4.4	Calcium	13.3		mg/L	P336398	
		Iron	73	I	ug/L	P336398	
		Magnesium	1.29		mg/L	P336398	
		Potassium	1.9		mg/L	P336398	
		Sodium	10.7		mg/L	P336398	
		Zinc	5.0	U	ug/L	P336398	
	EPA 200.8 Rev. 5.4	Arsenic	1.17		ug/L	P336398	
		Cadmium	0.020	U	ug/L	P336398	
		Chromium	0.40	U	ug/L	P336398	
		Copper	0.72	I	ug/L	P336398	
		Lead	0.14	I	ug/L	P336398	
		Nickel	0.20	U	ug/L	P336398	
		Silver	0.010	U	ug/L	P336398	

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: Lake Rouse @ SE corner of Lake

Collection Date/Time: 11/30/2017 15:37

Field ID: G2CE0102

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950123	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P336260	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P336483	
		Sulfate	6.1		mg SO4/L	P336486	
		Color (true)	110		PCU	P336225	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P336618	
	SM 2540 C-97	TDS	87		mg/L	P336675	
	SM 2540 D-97	TSS	3	I	mg/L	P336785	
	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P336621	RPD
1950129	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P336796	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P336759	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P336388	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P336572	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P336635	
1950135	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P336218	
1950155	EPA 200.7 Rev. 4.4	Calcium	13.3		mg/L	P336398	
		Iron	79	I	ug/L	P336398	
		Magnesium	1.28		mg/L	P336398	
		Potassium	1.8		mg/L	P336398	
		Sodium	10.7		mg/L	P336398	
		Zinc	5.0	U	ug/L	P336398	
	EPA 200.8 Rev. 5.4	Arsenic	1.14		ug/L	P336398	
		Cadmium	0.020	U	ug/L	P336398	
		Chromium	0.40	U	ug/L	P336398	
		Copper	0.92		ug/L	P336398	
		Lead	0.15	I	ug/L	P336398	
		Nickel	0.20	U	ug/L	P336398	
		Silver	0.010	U	ug/L	P336398	

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: Lake Rouse @ SE corner of Lake

Collection Date/Time: 11/30/2017 15:47

Field ID: G2CE0103

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950124	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P336260	
	EPA 300.0 Rev. 2.1	Chloride	15	A	mg Cl/L	P336483	
		Sulfate	6.1	A	mg SO4/L	P336486	
		Color (true)	110		PCU	P336225	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P336618	
	SM 2540 C-97	TDS	86		mg/L	P336675	
	SM 2540 D-97	TSS	3	I	mg/L	P336785	
	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P336621	RPD
1950130	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P336796	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P336759	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P336388	

Field ID: G2CE0103

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1950130	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P336572	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P336635	
1950136	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P336218	
1950156	EPA 200.7 Rev. 4.4	Calcium	13.2		mg/L	P336398	
		Iron	73	I	ug/L	P336398	
		Magnesium	1.29		mg/L	P336398	
		Potassium	1.8		mg/L	P336398	
		Sodium	10.6		mg/L	P336398	
		Zinc	5.0	U	ug/L	P336398	
	EPA 200.8 Rev. 5.4	Arsenic	1.11		ug/L	P336398	
		Cadmium	0.020	U	ug/L	P336398	
		Chromium	0.40	U	ug/L	P336398	
		Copper	0.71	I	ug/L	P336398	
		Lead	0.15	I	ug/L	P336398	
		Nickel	0.20	U	ug/L	P336398	
		Silver	0.010	U	ug/L	P336398	

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: P336260

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P336398

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: P336398

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336482

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336483

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336485

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336486

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336796

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336759

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336387

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336388

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336571

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
Batch ID: P336572

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P336218

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

Reference Method: SM 2120 B
Batch ID: P336225

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P336618

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

Reference Method: SM 2540 C-97
Batch ID: P336674

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P336675

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P336783

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P336785

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P336621

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P336546

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

Reference Method: SM 5310 B-00
Batch ID: P336635

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: P336398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	105		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	99.5		P	85 - 115
Sodium	102		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336398

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.4		P	85 - 115
Lead	101		P	85 - 115
Nickel	102		P	85 - 115
Silver	108		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336482

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336483

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.8		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336486

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336796

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: P336759

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336387

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336388

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336571

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: P336572

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P336218

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

Reference Method: SM 2320 B-97
Batch ID: P336618

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 4500 F-C-97
Batch ID: P336621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.7		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P336546

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.8		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P336635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P336398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950240	Calcium	106	100	P/P	80 - 120
1950240	Iron	107	104	P/P	80 - 120
1950240	Magnesium	109	106	P/P	80 - 120
1950240	Potassium	99.5	96.2	P/P	80 - 120
1950240	Sodium	98.8		P	80 - 120
1950240	Zinc	101	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950240	Arsenic	98.1	97.5	P/P	80 - 120
1950240	Cadmium	103	102	P/P	80 - 120
1950240	Chromium	99.5	98.9	P/P	80 - 120
1950240	Copper	94.2	93.0	P/P	80 - 120
1950240	Lead	103	99.3	P/P	80 - 120
1950240	Nickel	96.9	96.0	P/P	80 - 120
1950240	Silver	105	106	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950021	Chloride	97.8		P	90 - 110
1950053	Chloride	96.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336483

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336483

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950124	Chloride	97.7		P	90 - 110
1950231	Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950021	Sulfate	98.8		P	90 - 110
1950053	Sulfate	98.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950124	Sulfate	98.4		P	90 - 110
1950231	Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950088	Ammonia-N	101	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336759

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950127	Kjeldahl Nitrogen	95.6	93.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950022	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336388

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950126	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950088	Total-P	100	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950233	Total-P	99.3	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P336218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950092	O-Phosphate-P	98.2	98.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P336621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950090	Fluoride	105	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P336546

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949962	Organic Carbon	102	103	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P336635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1950126	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P336260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950111	Turbidity	3.46	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P336398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950240	Calcium	3.00	Spike	P	0 - 20
1950240	Iron	2.64	Spike	P	0 - 20
1950240	Magnesium	2.30	Spike	P	0 - 20
1950240	Potassium	2.64	Spike	P	0 - 20
1950240	Sodium	1.46	Spike	P	0 - 20
1950240	Zinc	1.16	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950240	Arsenic	0.666	Spike	P	0 - 20
1950240	Cadmium	0.622	Spike	P	0 - 20
1950240	Chromium	0.692	Spike	P	0 - 20
1950240	Copper	0.846	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P336398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950240	Lead	3.38	Spike	P	0 - 20
1950240	Nickel	0.847	Spike	P	0 - 20
1950240	Silver	0.326	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950021	Chloride	0.782	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950124	Chloride	0.265	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950021	Sulfate	0.734	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P336486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950124	Sulfate	0.142	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950088	Ammonia-N	1.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950127	Kjeldahl Nitrogen	1.60	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950022	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950126	NO2NO3-N	0.312	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950088	Total-P	2.24	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950233	Total-P	3.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P336218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950092	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P336225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950090	Color (true)	0.959	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P336618

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950090	Total Alkalinity	1.29	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P336674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950021	TDS	5.76	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P336675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950278	TDS	5.68	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P336621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950090	Fluoride	3.37	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P336546

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949962	Organic Carbon	1.03	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P336635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1950126	Organic Carbon	0.597	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: A80641
Included Lab Sample IDs: 1950131, 1950132, 1950133, 1950134, 1950135, 1950136

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

Reference Method: SM 2120 B
Run ID: A80644
Included Lab Sample IDs: 1950119, 1950120, 1950121, 1950122, 1950123, 1950124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115
Color (true)	103	102	P/P	85 - 115
Color (true)	104	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A80658
Included Lab Sample IDs: 1950119, 1950120, 1950121, 1950122, 1950123, 1950124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A80658

Included Lab Sample IDs: 1950119, 1950120, 1950121, 1950122, 1950123, 1950124

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A80702

Included Lab Sample IDs: 1950125, 1950126, 1950127, 1950128, 1950129, 1950130

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A80735

Included Lab Sample IDs: 1950119, 1950120, 1950121, 1950122, 1950123, 1950124

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Chloride	102	101	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110
Sulfate	102	99.7	P/P	90 - 110
Sulfate	99.7	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A80746

Included Lab Sample IDs: 1950151, 1950152, 1950153, 1950154, 1950155, 1950156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	99.6	P/P	90 - 110
Calcium	102	102	P/P	95 - 105
Iron	101	102	P/P	95 - 105
Iron	102	101	P/P	90 - 110
Magnesium	101	102	P/P	95 - 105
Magnesium	102	100	P/P	90 - 110
Potassium	97.7	97.8	P/P	90 - 110
Potassium	98.7	97.7	P/P	95 - 105
Sodium	100	99.2	P/P	95 - 105
Sodium	99.2	98.8	P/P	90 - 110
Zinc	100	102	P/P	95 - 105
Zinc	102	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A80752

Included Lab Sample IDs: 1950125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80769

Included Lab Sample IDs: 1950151, 1950152, 1950153, 1950154, 1950155, 1950156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	96.3	94.6	P/P	90 - 110
Arsenic	99.0	96.3	P/P	90 - 110
Cadmium	96.6	97.1	P/P	90 - 110
Cadmium	97.1	96.5	P/P	90 - 110
Chromium	96.8	96.2	P/P	90 - 110
Chromium	97.0	96.8	P/P	90 - 110
Copper	96.3	94.0	P/P	90 - 110
Copper	98.2	96.3	P/P	90 - 110
Lead	97.8	97.3	P/P	90 - 110
Lead	98.0	97.8	P/P	90 - 110
Nickel	96.1	94.2	P/P	90 - 110
Nickel	97.5	96.1	P/P	90 - 110
Silver	109	109	P/P	90 - 110
Silver	109	109	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A80770

Included Lab Sample IDs: 1950119, 1950120, 1950121, 1950122, 1950123, 1950124

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: A80770

Included Lab Sample IDs: 1950119, 1950120, 1950121, 1950122, 1950123, 1950124

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

Reference Method: SM 5310 B-00

Run ID: A80775

Included Lab Sample IDs: 1950126, 1950127, 1950128, 1950129, 1950130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	99.0	P/P	90 - 110
Organic Carbon	99.0	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80825

Included Lab Sample IDs: 1950125, 1950126, 1950127, 1950128, 1950129, 1950130

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A80834

Included Lab Sample IDs: 1950125, 1950126, 1950127, 1950128, 1950129, 1950130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	97.0	P/P	90 - 110
Total-P	97.0	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80882

Included Lab Sample IDs: 1950125, 1950126, 1950127, 1950128, 1950129, 1950130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.7	93.2	P/P	90 - 110
Kjeldahl Nitrogen	99.3	97.7	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				3.46	
EPA 200.7 Rev. 4.4	Calcium	105	106 100			3.00
	Iron	105	107 104			2.64
	Magnesium	108	109 106			2.30
	Potassium	99.5	99.5 96.2			2.64
	Sodium	102	98.8			1.46
	Zinc	101	101 100			1.16
EPA 200.8 Rev. 5.4	Arsenic	102	98.1 97.5			0.666
	Cadmium	103	103 102			0.622
	Chromium	101	99.5 98.9			0.692
	Copper	99.4	94.2 93.0			0.846
	Lead	101	103 99.3			3.38
	Nickel	102	96.9 96.0			0.847
	Silver	108	105 106			0.326
EPA 300.0 Rev. 2.1	Chloride	98.5	97.8 96.9		0.782	
	Chloride	97.5	97.7 98.6		0.265	
	Sulfate	99.8	98.8 98.7		0.734	
	Sulfate	98.5	98.4 99.7		0.142	
EPA 350.1 Rev. 2.0	Ammonia-N	100	101 98.2			1.74
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	95.6 93.2			1.60
EPA 353.2 Rev. 2.0	NO2NO3-N	103	101 101			0.0
	NO2NO3-N	106	100 100			0.312
EPA 365.1 Rev. 2.0	Total-P	102	100 97.8			2.24
	Total-P	99.4	99.3 103			3.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	98.2 98.2			0.0
SM 2120 B	Color (true)				0.959	
SM 2320 B-97	Total Alkalinity	103			1.29	
SM 2540 C-97	TDS				5.76	
	TDS				5.68	
SM 4500 F-C-97	Fluoride	99.7	105 100			3.37
SM 5310 B-00	Organic Carbon	98.8	102 103			1.03
	Organic Carbon	99.1	103			0.597

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
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Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1950151, 1950152, 1950153, 1950154, 1950155, 1950156
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1950151, 1950152, 1950153, 1950154, 1950155, 1950156
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1950131, 1950132, 1950133, 1950134, 1950135, 1950136
SM 2120 B / E31780	True Color measured at 450 nm	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1950125, 1950126, 1950127, 1950128, 1950129, 1950130

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	12/01/2017			12/01/2017 15:40	Tanya Welborn	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
EPA 200.7 Rev. 4.4	12/01/2017	12/05/2017	Elliott D. Healy	12/06/2017	Betina Topolski	1950151, 1950152, 1950153, 1950154, 1950155, 1950156
EPA 200.8 Rev. 5.4	12/01/2017	12/05/2017	Elliott D. Healy	12/07/2017	Robert K Palmer	1950151, 1950152, 1950153, 1950154, 1950155, 1950156
EPA 300.0 Rev. 2.1	12/01/2017			12/06/2017	Julia Storbeck	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
EPA 350.1 Rev. 2.0	12/01/2017			12/08/2017	Sofia Elnemr	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 351.2 Rev. 2.0	12/01/2017	12/12/2017	Adrian Shelby	12/13/2017	Joseph Suarez	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 353.2 Rev. 2.0	12/01/2017			12/05/2017	Lauren Bottorf	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 365.1 Rev. 2.0	12/01/2017	12/07/2017	Sima Feizi	12/11/2017	Lipi Saha	1950125, 1950126, 1950127, 1950128, 1950129, 1950130
EPA 365.1 Rev. 2.0 dissolved	12/01/2017			12/01/2017 15:07	Megan Treadwell	1950131
	12/01/2017			12/01/2017 15:08	Megan Treadwell	1950132, 1950133
	12/01/2017			12/01/2017 15:09	Megan Treadwell	1950134
	12/01/2017			12/01/2017 15:10	Megan Treadwell	1950135
	12/01/2017			12/01/2017 15:11	Megan Treadwell	1950136
SM 2120 B	12/01/2017			12/01/2017 16:25	Tanya Welborn	1950121
	12/01/2017			12/01/2017 16:26	Tanya Welborn	1950122, 1950123
	12/01/2017			12/01/2017 16:27	Tanya Welborn	1950124
	12/01/2017			12/01/2017 16:39	Tanya Welborn	1950119
	12/01/2017			12/01/2017 16:42	Tanya Welborn	1950120
SM 2320 B-97	12/01/2017			12/07/2017	Dale L. Simmons	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 2540 C-97	12/01/2017			12/06/2017	Yijie Li	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 2540 D-97	12/01/2017			12/06/2017	Yijie Li	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 4500 F-C-97	12/01/2017			12/07/2017	Dale L. Simmons	1950119, 1950120, 1950121, 1950122, 1950123, 1950124
SM 5310 B-00	12/01/2017			12/06/2017	Ping Hua	1950125
	12/01/2017			12/07/2017	Ping Hua	1950126, 1950127, 1950128, 1950129, 1950130