

Chemical Analysis Report

CEN-DIST-2018-03-06-02

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

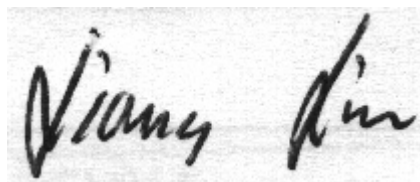
Event Description: **Mirror / Felter / Tilden X4**
Request ID: **RQ-2018-03-05-63**
Customer: **CEN-DIST**
Project ID: **SMP**

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
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 03-APR-2018 17:19

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 TILDEN @ 140M NW OF CENTER

Collection Date/Time: 03/05/2018 12:40

Field ID: G1CE0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972147	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P341076	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P341226	
		Sulfate	9.9		mg SO4/L	P341230	
	SM 2120 B	Color (true)	350		PCU	P341022	
	SM 2320 B-97	Total Alkalinity	36		mg CaCO3/L	P341454	
	SM 2540 C-97	TDS	156		mg/L	P341469	
	SM 2540 D-97	TSS	4	I	mg/L	P341377	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P341459	
1972151	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P341408	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P341177	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.077		mg N/L	P341203	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P341268	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P341325	
1972155	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.077		mg P/L	P341055	
1972175	EPA 200.7 Rev. 4.4	Calcium	14.0		mg/L	P341089	
		Iron	260		ug/L	P341089	
		Magnesium	5.26		mg/L	P341089	
		Potassium	7.7		mg/L	P341089	
		Sodium	20.2		mg/L	P341089	
		Zinc	5.0	U	ug/L	P341089	
	EPA 200.8 Rev. 5.4	Arsenic	1.08		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	0.55	I	ug/L	P341089	
		Copper	1.29		ug/L	P341089	
		Lead	0.34		ug/L	P341089	
		Nickel	0.46	I	ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE TILDEN @ 165M NE OF CENTER

Collection Date/Time: 03/05/2018 12:51

Field ID: G1CE0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972148	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P341076	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P341226	
		Sulfate	10		mg SO4/L	P341230	
	SM 2120 B	Color (true)	340		PCU	P341029	
	SM 2320 B-97	Total Alkalinity	36		mg CaCO3/L	P341454	
	SM 2540 C-97	TDS	168		mg/L	P341469	
	SM 2540 D-97	TSS	3	I	mg/L	P341377	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P341459	
1972152	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P341408	

Field ID: G1CE0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972152	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P341177	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.077		mg N/L	P341203	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P341268	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P341325	
1972156	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.079		mg P/L	P341052	
1972176	EPA 200.7 Rev. 4.4	Calcium	14.1		mg/L	P341089	
		Iron	260		ug/L	P341089	
		Magnesium	5.32		mg/L	P341089	
		Potassium	7.7		mg/L	P341089	
		Sodium	20.5		mg/L	P341089	
		Zinc	5.0	U	ug/L	P341089	
	EPA 200.8 Rev. 5.4	Arsenic	1.11		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	0.64	I	ug/L	P341089	
		Copper	1.30		ug/L	P341089	
		Lead	0.35		ug/L	P341089	
		Nickel	0.49	I	ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE TILDEN @ 150M SE OF CENTER

Collection Date/Time: 03/05/2018 13:00

Field ID: G1CE0089

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972149	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P341076	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P341226	
		Sulfate	10		mg SO4/L	P341230	
	SM 2120 B	Color (true)	340		PCU	P341029	
	SM 2320 B-97	Total Alkalinity	36		mg CaCO3/L	P341454	
	SM 2540 C-97	TDS	173		mg/L	P341469	
	SM 2540 D-97	TSS	3	I	mg/L	P341377	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P341459	
1972153	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P341408	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P341177	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.078		mg N/L	P341203	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P341268	
	SM 5310 B-00	Organic Carbon	25		mg C/L	P341325	
1972157	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.079		mg P/L	P341054	
1972177	EPA 200.7 Rev. 4.4	Calcium	14.0		mg/L	P341089	
		Iron	260		ug/L	P341089	
		Magnesium	5.23		mg/L	P341089	
		Potassium	7.7		mg/L	P341089	
		Sodium	20.4		mg/L	P341089	

Field ID: G1CE0089

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972177	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P341089	
	EPA 200.8 Rev. 5.4	Arsenic	1.11		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	0.88	I	ug/L	P341089	
		Copper	1.31		ug/L	P341089	
		Lead	0.37		ug/L	P341089	
		Nickel	0.59	I	ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE TILDEN @ 225M S OF CENTER

Collection Date/Time: 03/05/2018 13:10

Field ID: G1CE0090

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972150	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P341076	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P341226	
		Sulfate	10		mg SO4/L	P341230	
	SM 2120 B	Color (true)	340		PCU	P341029	
	SM 2320 B-97	Total Alkalinity	36		mg CaCO3/L	P341454	
	SM 2540 C-97	TDS	173		mg/L	P341469	
	SM 2540 D-97	TSS	4	I	mg/L	P341377	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P341459	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P341403	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P341177	
1972154	EPA 353.2 Rev. 2.0	NO2NO3-N	0.077		mg N/L	P341203	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P341268	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P341325	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.080		mg P/L	P341054	
	dissolved						
1972178	EPA 200.7 Rev. 4.4	Calcium	13.9		mg/L	P341089	
		Iron	270		ug/L	P341089	
		Magnesium	5.26		mg/L	P341089	
		Potassium	7.7		mg/L	P341089	
		Sodium	20.4		mg/L	P341089	
		Zinc	5.0	U	ug/L	P341089	
	EPA 200.8 Rev. 5.4	Arsenic	1.11		ug/L	P341089	
		Cadmium	0.020	U	ug/L	P341089	
		Chromium	2.6		ug/L	P341089	
		Copper	1.33		ug/L	P341089	
		Lead	0.35		ug/L	P341089	
		Nickel	1.27		ug/L	P341089	
		Silver	0.010	U	ug/L	P341089	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE FELTER @ CENTER

Collection Date/Time: 03/05/2018 11:33

Field ID: G1CE0042

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972159	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P341076	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P341226	
		Sulfate	3.0		mg SO4/L	P341230	
	SM 2120 B	Color (true)	110		PCU	P341030	
	SM 2320 B-97	Total Alkalinity	22		mg CaCO3/L	P341454	
	SM 2540 C-97	TDS	111		mg/L	P341469	
	SM 2540 D-97	TSS	3	I	mg/L	P341377	
	SM 4500 F-C-97	Fluoride	0.084	I	mg F/L	P341459	
1972161	EPA 350.1 Rev. 2.0	Ammonia-N	0.25		mg N/L	P341493	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P341177	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P341203	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P341268	
	SM 5310 B-00	Organic Carbon	31		mg C/L	P341325	
1972163	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P341054	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: MIRROR LAKE @ CENTER OF NORTH LOBE

Collection Date/Time: 03/05/2018 10:45

Field ID: G1CE0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1972160	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P341076	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P341226	
		Sulfate	26		mg SO4/L	P341230	
	SM 2120 B	Color (true)	11	A	PCU	P341030	
	SM 2320 B-97	Total Alkalinity	14		mg CaCO3/L	P341454	
	SM 2540 C-97	TDS	103		mg/L	P341469	
	SM 2540 D-97	TSS	2	I	mg/L	P341377	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P341459	
1972162	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P341403	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P341298	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P341203	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P341268	
	SM 5310 B-00	Organic Carbon	7.2		mg C/L	P341325	
1972164	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P341054	

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: P341076

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341076

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341089

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: P341089

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341226

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341230

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341403

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341408

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: P341493

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341177

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341298

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341203

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341268

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341052

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341055

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

Reference Method: SM 2120 B
Batch ID: P341022

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P341029

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P341030

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P341454

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

Reference Method: SM 2540 C-97
Batch ID: P341469

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P341377

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P341459

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P341325

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: P341089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	108		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	106		P	85 - 115
Sodium	103		P	85 - 115
Zinc	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.0		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.3		P	85 - 115
Copper	96.8		P	85 - 115
Lead	106		P	85 - 115
Nickel	96.9		P	85 - 115
Silver	89.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341226

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341403

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341408

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341493

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.5		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341177

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341298

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341203

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341268

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: P341052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341054

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341055

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

Reference Method: SM 2320 B-97
Batch ID: P341454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.8		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P341459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.8		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P341325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341089

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971848	Calcium	104		P	80 - 120
1971848	Iron	110		P	80 - 120
1971848	Magnesium	105		P	80 - 120
1971848	Potassium	107		P	80 - 120
1971848	Sodium	103		P	80 - 120
1971848	Zinc	101		P	80 - 120
1972137	Calcium	107		P	80 - 120
1972137	Iron	108	110	P/P	80 - 120
1972137	Magnesium	107		P	80 - 120
1972137	Potassium	107	110	P/P	80 - 120
1972137	Sodium	105		P	80 - 120
1972137	Zinc	100	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971848	Arsenic	100		P	80 - 120
1971848	Cadmium	102		P	80 - 120
1971848	Chromium	97.8		P	80 - 120
1971848	Copper	96.9		P	80 - 120
1971848	Lead	107		P	80 - 120
1971848	Nickel	96.4		P	80 - 120
1971848	Silver	89.6		P	80 - 120
1972137	Arsenic	101	101	P/P	80 - 120
1972137	Cadmium	105	103	P/P	80 - 120
1972137	Chromium	98.1	98.2	P/P	80 - 120
1972137	Copper	97.9	98.5	P/P	80 - 120
1972137	Lead	109	110	P/P	80 - 120
1972137	Nickel	98.1	97.9	P/P	80 - 120
1972137	Silver	90.4	90.0	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972112	Chloride	94.8		P	90 - 110
1972159	Chloride	96.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972112	Sulfate	95.9		P	90 - 110
1972159	Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972162	Ammonia-N	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972107	Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341493

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972284	Ammonia-N	98.9	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972275	Kjeldahl Nitrogen	93.9	92.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972114	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972276	Total-P	101	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972010	O-Phosphate-P	96.6	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341054

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972108	O-Phosphate-P	96.1	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972155	O-Phosphate-P	95.5	98.8	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P341459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972110	Fluoride	95.7	96.3	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P341325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972106	Organic Carbon	108		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P341076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972110	Turbidity	1.11	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P341089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972137	Calcium	1.51	Spike	P	0 - 20
1972137	Iron	2.11	Spike	P	0 - 20
1972137	Magnesium	2.28	Spike	P	0 - 20
1972137	Potassium	1.63	Spike	P	0 - 20
1972137	Sodium	1.33	Spike	P	0 - 20
1972137	Zinc	0.612	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P341089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972137	Arsenic	0.0864	Spike	P	0 - 20
1972137	Cadmium	1.99	Spike	P	0 - 20
1972137	Chromium	0.171	Spike	P	0 - 20
1972137	Copper	0.534	Spike	P	0 - 20
1972137	Lead	0.528	Spike	P	0 - 20
1972137	Nickel	0.217	Spike	P	0 - 20
1972137	Silver	0.473	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972112	Chloride	4.35	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P341230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972112	Sulfate	5.70	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972162	Ammonia-N	0.968	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972107	Ammonia-N	0.324	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P341493

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972284	Ammonia-N	0.869	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341177

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972114	Kjeldahl Nitrogen	1.77	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P341298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972275	Kjeldahl Nitrogen	1.30	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P341203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972114	NO2NO3-N	0.418	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P341268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972276	Total-P	2.67	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972010	O-Phosphate-P	0.928	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972108	O-Phosphate-P	2.77	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P341055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972155	O-Phosphate-P	1.90	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P341022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972072	Color (true)	1.88	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P341029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1971968	Color (true)	5.63	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P341030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972160	Color (true)	4.62	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P341454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972110	Total Alkalinity	0.246	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P341469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972113	TDS	6.17	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P341459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972110	Fluoride	0.477	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P341325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1972106	Organic Carbon	0.161	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: SM 2120 B
Run ID: A82460
Included Lab Sample IDs: 1972147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	85 - 115

Reference Method: SM 2120 B
Run ID: A82462
Included Lab Sample IDs: 1972148, 1972149, 1972150, 1972159, 1972160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	98.1	P/P	85 - 115
Color (true)	98.1	101	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A82474
Included Lab Sample IDs: 1972155, 1972156, 1972157, 1972158, 1972163, 1972164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	101	P/P	90 - 110
O-Phosphate-P	98.2	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A82476
Included Lab Sample IDs: 1972147, 1972148, 1972149, 1972150, 1972159, 1972160

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: A82506
Included Lab Sample IDs: 1972151, 1972152, 1972153, 1972154, 1972161, 1972162

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A82509
Included Lab Sample IDs: 1972147, 1972148, 1972149, 1972150, 1972159, 1972160

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A82509

Included Lab Sample IDs: 1972147, 1972148, 1972149, 1972150, 1972159, 1972160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.0	95.5	P/P	90 - 110
Chloride	95.5	98.3	P/P	90 - 110
Sulfate	96.8	96.9	P/P	90 - 110
Sulfate	96.9	99.5	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A82537

Included Lab Sample IDs: 1972151, 1972152, 1972153, 1972154, 1972161, 1972162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82539

Included Lab Sample IDs: 1972151, 1972152, 1972153, 1972154, 1972161

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82540

Included Lab Sample IDs: 1972175, 1972176, 1972177, 1972178

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	99.2	P/P	90 - 110
Cadmium	101	99.9	P/P	90 - 110
Chromium	98.2	96.7	P/P	90 - 110
Copper	99.8	98.2	P/P	90 - 110
Lead	107	106	P/P	90 - 110
Nickel	99.8	97.8	P/P	90 - 110
Silver	104	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A82542

Included Lab Sample IDs: 1972175, 1972176, 1972177, 1972178

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	105	P/P	90 - 110
Calcium	99.8	101	P/P	90 - 110
Iron	101	104	P/P	90 - 110
Iron	99.8	101	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Magnesium	102	106	P/P	90 - 110
Potassium	102	102	P/P	90 - 110
Potassium	102	105	P/P	90 - 110
Sodium	101	105	P/P	90 - 110
Sodium	99.6	101	P/P	90 - 110
Zinc	101	99.2	P/P	90 - 110
Zinc	98.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82548

Included Lab Sample IDs: 1972151, 1972152, 1972153, 1972154

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82550

Included Lab Sample IDs: 1972161

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82557

Included Lab Sample IDs: 1972154, 1972162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	102	P/P	90 - 110
Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82558

Included Lab Sample IDs: 1972151, 1972152, 1972153

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

Reference Method: SM 2320 B-97

Run ID: A82571

Included Lab Sample IDs: 1972147, 1972148, 1972149, 1972150, 1972159, 1972160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.8	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A82571

Included Lab Sample IDs: 1972147, 1972148, 1972149, 1972150, 1972159, 1972160

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A82573

Included Lab Sample IDs: 1972162

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82584

Included Lab Sample IDs: 1972161

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82584

Included Lab Sample IDs: 1972161

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A82587

Included Lab Sample IDs: 1972162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.5	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			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.11	
EPA 200.7 Rev. 4.4	Calcium	105	104	107				1.51
	Iron	108	110	108	110			2.11
	Magnesium	105	105	107				2.28
	Potassium	106	107	107	110			1.63
	Sodium	103	103	105				1.33
	Zinc	101	101	100	101			0.612
EPA 200.8 Rev. 5.4	Arsenic	98.0	100	101	101			0.0864
	Cadmium	100	102	105	103			1.99
	Chromium	98.3	97.8	98.1	98.2			0.171
	Copper	96.8	96.9	97.9	98.5			0.534
	Lead	106	107	109	110			0.528
	Nickel	96.9	96.4	98.1	97.9			0.217
	Silver	89.2	89.6	90.4	90.0			0.473
EPA 300.0 Rev. 2.1	Chloride	95.5	94.8	96.1			4.35	
	Sulfate	97.3	95.9	97.8			5.70	
EPA 350.1 Rev. 2.0	Ammonia-N	101	101	102				0.968
	Ammonia-N	102	104	104				0.324
	Ammonia-N	95.5	98.9	100				0.869
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104						1.77
	Kjeldahl Nitrogen	99.4	93.9	92.6				1.30
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	102	102				0.418
EPA 365.1 Rev. 2.0	Total-P	102	101	97.8				2.67
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	96.6	98.0				0.928
	O-Phosphate-P	101	96.1	98.8				2.77
	O-Phosphate-P	98.1	95.5	98.8				1.90
SM 2120 B	Color (true)						1.88	
	Color (true)						5.63	
	Color (true)						4.62	
SM 2320 B-97	Total Alkalinity	99.8					0.246	
SM 2540 C-97	TDS						6.17	
SM 4500 F-C-97	Fluoride	96.8	95.7	96.3				0.477

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision
				LCS SMP MS
SM 5310 B-00	Organic Carbon	98.6	108	0.161

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1972175, 1972176, 1972177, 1972178
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1972175, 1972176, 1972177, 1972178
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1972151, 1972152, 1972153, 1972154, 1972161, 1972162
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1972151, 1972152, 1972153, 1972154, 1972161, 1972162
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1972151, 1972152, 1972153, 1972154, 1972161, 1972162
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1972151, 1972152, 1972153, 1972154, 1972161, 1972162
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1972155, 1972156, 1972157, 1972158, 1972163, 1972164
SM 2120 B / E31780	True Color measured at 450 nm	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1972151, 1972152, 1972153, 1972154, 1972161, 1972162

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	03/06/2018			03/06/2018 17:11	DeAsia Armster	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
EPA 200.7 Rev. 4.4	03/06/2018	03/07/2018	Elliott D. Healy	03/09/2018	Betina Topolski	1972175, 1972176, 1972177, 1972178
EPA 200.8 Rev. 5.4	03/06/2018	03/07/2018	Elliott D. Healy	03/09/2018	Nadine Brooks	1972175, 1972176, 1972177, 1972178
EPA 300.0 Rev. 2.1	03/06/2018			03/08/2018	Julia Storbeck	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
EPA 350.1 Rev. 2.0	03/06/2018			03/09/2018	Ping Hua	1972151, 1972152, 1972153, 1972154, 1972162
	03/06/2018			03/12/2018	Ping Hua	1972161
EPA 351.2 Rev. 2.0	03/06/2018	03/08/2018	Adrian Shelby	03/09/2018	Joseph Suarez	1972151, 1972152, 1972153, 1972154, 1972161
	03/06/2018	03/09/2018	Adrian Shelby	03/13/2018	Joseph Suarez	1972162
EPA 353.2 Rev. 2.0	03/06/2018			03/08/2018	Lauren Bottorf	1972151, 1972152, 1972153, 1972154, 1972161, 1972162
EPA 365.1 Rev. 2.0	03/06/2018	03/09/2018	Sima Feizi	03/12/2018	Beverly Y. Sanders	1972151, 1972152, 1972153, 1972154, 1972161
	03/06/2018	03/09/2018	Sima Feizi	03/13/2018	Beverly Y. Sanders	1972162
EPA 365.1 Rev. 2.0 dissolved	03/06/2018			03/06/2018 16:28	Megan Treadwell	1972155
	03/06/2018			03/06/2018 17:23	Megan Treadwell	1972156
	03/06/2018			03/06/2018 17:24	Megan Treadwell	1972157
	03/06/2018			03/06/2018 17:25	Megan Treadwell	1972158
	03/06/2018			03/06/2018 17:26	Megan Treadwell	1972163, 1972164
SM 2120 B	03/06/2018			03/06/2018 15:06	Tanya Welborn	1972147
	03/06/2018			03/06/2018 16:43	Tanya Welborn	1972159
	03/06/2018			03/06/2018 16:44	Tanya Welborn	1972160
	03/06/2018			03/06/2018 16:54	Tanya Welborn	1972148
	03/06/2018			03/06/2018 16:55	Tanya Welborn	1972149
	03/06/2018			03/06/2018 16:56	Tanya Welborn	1972150
SM 2320 B-97	03/06/2018			03/13/2018	Dale L. Simmons	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 2540 C-97	03/06/2018			03/07/2018	Yijie Li	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 2540 D-97	03/06/2018			03/07/2018	Yijie Li	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 4500 F-C-97	03/06/2018			03/13/2018	Dale L. Simmons	1972147, 1972148, 1972149, 1972150, 1972159, 1972160
SM 5310 B-00	03/06/2018			03/08/2018	Megan Treadwell	1972151, 1972152, 1972153, 1972154, 1972161, 1972162