

Chemical Analysis Report

NE-DIST-2016-10-13-02

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

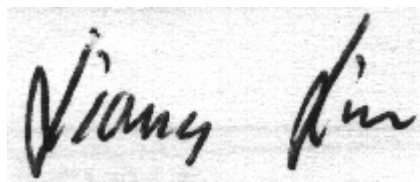
Event Description: **UEC North**
Request ID: **RQ-2016-10-03-29**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 04-NOV-2016 15:13

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 group are included in this report: 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: Deep Creek 1.25 mi.N of Pine Island Rd

Collection Date/Time: 10/12/2016 14:35

Field ID: G5NE0017 10122016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1840574	EPA 180.1 Rev. 2.0	Turbidity	16	A	NTU	P313131	
	EPA 300.0 Rev. 2.1	Chloride	29		mg Cl/L	P313704	
		Sulfate	9.8		mg SO4/L	P313702	
	SM 2120 B	Color (true)	970	A	PCU	P313145	
	SM 2320 B-97	Total Alkalinity	5.9		mg CaCO3/L	P313459	
	SM 2540 C-97	TDS	206		mg/L	P313963	
	SM 2540 D-97	TSS	6	I	mg/L	P313784	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P313463	
1840576	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P313916	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P313910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P313486	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P314060	
	SM 5310 B-00	Organic Carbon	84		mg C/L	P313266	
1840578	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.021		mg P/L	P313140	

Sample Location: Lake Vedra 0.25 above Micklers Landing

Collection Date/Time: 10/12/2016 10:45

Field ID: G5NE0018 10122016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1840575	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P313131	
	EPA 300.0 Rev. 2.1	Chloride	160		mg Cl/L	P313704	
		Sulfate	71		mg SO4/L	P313702	
	SM 2120 B	Color (true)	120	A	PCU	P313143	
	SM 2320 B-97	Total Alkalinity	111		mg CaCO3/L	P313459	
	SM 2540 C-97	TDS	559		mg/L	P313963	
	SM 2540 D-97	TSS	10		mg/L	P313784	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P313463	
1840577	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P313916	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P313910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P313383	
	EPA 365.1 Rev. 2.0	Total-P	0.27		mg P/L	P314060	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P313266	
1840579	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.18		mg P/L	P313142	

Sample Location: Oyster Creek @ Dixie Hwy

Collection Date/Time: 10/12/2016 13:45

Field ID: G5NE0075 10122016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1840580	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P313131	
	SM 2320 B-97	Total Alkalinity	121		mg CaCO3/L	P313459	
	SM 2540 D-97	TSS	16		mg/L	P313785	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P313463	
1840581	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P313916	

Field ID: G5NE0075 10122016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1840581	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P313910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P313486	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P314060	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P313266	
1840582	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.070		mg P/L	P313142	

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: P313131

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P313702

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P313704

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P313916

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P313910

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P313383

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P313486

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314060

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313140

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313142

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

Reference Method: SM 2120 B
Batch ID: P313143

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P313145

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P313459

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

Reference Method: SM 2540 C-97
Batch ID: P313963

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P313784

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P313785

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P313463

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P313266

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313704

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P313916

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P313910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313383

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313486

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314060

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313140

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313142

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

Reference Method: SM 2320 B-97
Batch ID: P313459

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

Reference Method: SM 4500 F-C-97
Batch ID: P313463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P313266

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842448	Sulfate	94.8		P	90 - 110
1842588	Sulfate	95.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1842448	Chloride	97.1		P	90 - 110
1842588	Chloride	99.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P313916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840577	Ammonia-N	97.8	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P313910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840863	Kjeldahl Nitrogen	97.7	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840581	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313486

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840682	NO2NO3-N	93.2	93.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840821	Total-P	99.2	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840511	O-Phosphate-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313142

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840512	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P313463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840531	Fluoride	98.7	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P313266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840470	Organic Carbon	93.2	94.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P313131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840574	Turbidity	0.635	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842588	Sulfate	0.387	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1842588	Chloride	0.207	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P313916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840577	Ammonia-N	0.341	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P313910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840863	Kjeldahl Nitrogen	0.882	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840581	NO2NO3-N	0.803	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840682	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840821	Total-P	1.44	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840511	O-Phosphate-P	0.877	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313142

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840512	O-Phosphate-P	1.18	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P313143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840575	Color (true)	1.40	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P313145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840574	Color (true)	2.35	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P313459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840531	Total Alkalinity	0.438	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P313963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840531	TDS	0.784	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P313784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840531	TSS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P313463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840531	Fluoride	1.43	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P313266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840470	Organic Carbon	0.847	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 180.1 Rev. 2.0
Run ID: A72211
Included Lab Sample IDs: 1840574, 1840575, 1840580

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A72213
Included Lab Sample IDs: 1840578, 1840579, 1840582

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

Reference Method: SM 2120 B
Run ID: A72214
Included Lab Sample IDs: 1840574, 1840575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115
Color (true)	103	105	P/P	85 - 115

Reference Method: SM 5310 B-00
Run ID: A72250
Included Lab Sample IDs: 1840576, 1840577, 1840581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	95.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A72281
Included Lab Sample IDs: 1840577

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A72305
Included Lab Sample IDs: 1840574, 1840575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A72305

Included Lab Sample IDs: 1840574, 1840575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	98.8	101	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A72309

Included Lab Sample IDs: 1840574, 1840575, 1840580

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: A72309

Included Lab Sample IDs: 1840574, 1840575, 1840580

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A72313

Included Lab Sample IDs: 1840576, 1840581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	95.5	94.0	P/P	90 - 110
NO2NO3-N	99.5	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A72438

Included Lab Sample IDs: 1840576, 1840577, 1840581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	99.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A72517

Included Lab Sample IDs: 1840576, 1840577, 1840581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.1	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72522

Included Lab Sample IDs: 1840576, 1840577, 1840581

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	102	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	MS
						SMP	
EPA 180.1 Rev. 2.0	Turbidity					0.635	
EPA 300.0 Rev. 2.1	Chloride	100	99.6	97.1		0.207	
	Sulfate	94.3	95.3	94.8		0.387	
EPA 350.1 Rev. 2.0	Ammonia-N	102	97.8	97.4			0.341
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	97.7	96.8			0.882
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	102	101			0.803
	NO ₂ NO ₃ -N	101	93.2	93.2			0.0
EPA 365.1 Rev. 2.0	Total-P	98.0	99.2	101			1.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	102	103			0.877
	O-Phosphate-P	100	101	102			1.18
SM 2120 B	Color (true)					1.40	
	Color (true)					2.35	
SM 2320 B-97	Total Alkalinity	104				0.438	
SM 2540 C-97	TDS					0.784	
SM 2540 D-97	TSS					0.0	
SM 4500 F-C-97	Fluoride	98.3	98.7	101			1.43
SM 5310 B-00	Organic Carbon	96.0	93.2	94.3			0.847

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1840574, 1840575, 1840580
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1840574, 1840575
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1840574, 1840575
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1840576, 1840577, 1840581
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1840576, 1840577, 1840581
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1840576, 1840577, 1840581
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1840576, 1840577, 1840581
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1840578, 1840579, 1840582
SM 2120 B / E31780	True Color measured at 450 nm	1840574, 1840575
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1840574, 1840575, 1840580
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1840574, 1840575
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1840574, 1840575, 1840580
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1840574, 1840575, 1840580
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1840576, 1840577, 1840581

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	10/13/2016			10/13/2016 15:12	Sima Feizi	1840574, 1840575, 1840580
EPA 300.0 Rev. 2.1	10/13/2016			10/22/2016	Ping Hua	1840574, 1840575
EPA 350.1 Rev. 2.0	10/13/2016			10/25/2016	Sofia Elnemr	1840576, 1840577, 1840581
EPA 351.2 Rev. 2.0	10/13/2016	10/26/2016	Adrian Shelby	10/28/2016	Joseph Suarez	1840576, 1840577, 1840581
EPA 353.2 Rev. 2.0	10/13/2016			10/18/2016	Beverly Y. Sanders	1840577
	10/13/2016			10/19/2016	Beverly Y. Sanders	1840576, 1840581
EPA 365.1 Rev. 2.0	10/13/2016	10/27/2016	Vijayalakshmi Reddy	10/28/2016	Lipi Saha	1840576, 1840577, 1840581
EPA 365.1 Rev. 2.0 dissolved	10/13/2016			10/13/2016 16:14	Julia Storbeck	1840578
	10/13/2016			10/13/2016 16:15	Julia Storbeck	1840579
	10/13/2016			10/13/2016 16:16	Julia Storbeck	1840582
SM 2120 B	10/13/2016			10/13/2016 16:22	Jared I. Manley	1840575
	10/13/2016			10/13/2016 16:41	Jared I. Manley	1840574
SM 2320 B-97	10/13/2016			10/19/2016	Dale L. Simmons	1840574, 1840575, 1840580
SM 2540 C-97	10/13/2016			10/17/2016	Sima Feizi	1840574, 1840575
SM 2540 D-97	10/13/2016			10/17/2016	Sima Feizi	1840574, 1840575, 1840580
SM 4500 F-C-97	10/13/2016			10/19/2016	Dale L. Simmons	1840574, 1840575, 1840580
SM 5310 B-00	10/13/2016			10/15/2016	Julie Michelle Frank	1840576, 1840577, 1840581