

Chemical Analysis Report

CEN-DIST-2019-10-23-01

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

Event Description: **Molly / Lindley + LVIs**
Request ID: **RQ-2019-10-21-60**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 07-NOV-2019 15:39

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 by the Florida Department of Health Environmental Laboratory Certification Program 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 Lindley @ Center of North Lobe

Collection Date/Time: 10/22/2019 13:28

Field ID: G2CE0220

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130754	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P373060	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P373694	
		Sulfate	20		mg SO4/L	P373697	
	SM 2120 B	Color (true)	16	A	PCU	P373101	
	SM 2320 B-97	Total Alkalinity	9.1		mg CaCO3/L	P373214	
	SM 2540 C-97	TDS	73		mg/L	P373595	
	SM 2540 D-97	TSS	2	I	mg/L	P373650	
	SM 4500 F-C-97	Fluoride	0.061	I	mg F/L	P373219	
2130756	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P373453	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P373239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P373196	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P373251	
	SM 5310 B-00	Organic Carbon	6.6		mg C/L	P373176	
2130758	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P373032	

Sample Location: Lake Molly @ Center

Collection Date/Time: 10/22/2019 11:42

Field ID: G2CE0221

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130755	EPA 180.1 Rev. 2.0	Turbidity	2.9	A	NTU	P373061	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P373694	
		Sulfate	7.8		mg SO4/L	P373697	
	SM 2120 B	Color (true)	26		PCU	P373101	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P373309	
	SM 2540 C-97	TDS	112		mg/L	P373596	
	SM 2540 D-97	TSS	3	I	mg/L	P373651	
	SM 4500 F-C-97	Fluoride	0.048	I	mg F/L	P373312	
2130757	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P373453	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P373240	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P373196	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P373251	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P373176	
2130759	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P373032	

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: P373060

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373061

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373694

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373240

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

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

Reference Method: SM 2120 B
Batch ID: P373101

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P373214

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

Reference Method: SM 2320 B-97
Batch ID: P373309

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

Reference Method: SM 2540 C-97
Batch ID: P373595

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P373596

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P373650

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P373651

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P373312

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P373176

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: P373694

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373240

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

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

Reference Method: SM 2120 B
Batch ID: P373101

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P373214

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P373309

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.3		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P373312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.7		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P373176

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130642	Chloride	102		P	90 - 110
2130755	Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130642	Sulfate	101		P	90 - 110
2130755	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130756	Ammonia-N	99.3	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130688	Kjeldahl Nitrogen	99.0	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130984	Kjeldahl Nitrogen	102	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130697	NO2NO3-N	95.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130756	Total-P	96.6	95.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130758	O-Phosphate-P	97.2	98.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130536	Fluoride	95.2	94.7	P/P	89 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P373312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2131021	Fluoride	97.2	96.0	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P373176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130647	Organic Carbon	96.7	93.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130643	Turbidity	5.68	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130755	Turbidity	2.41	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130642	Chloride	0.169	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130642	Sulfate	0.0791	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130756	Ammonia-N	0.211	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130688	Kjeldahl Nitrogen	0.359	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130984	Kjeldahl Nitrogen	0.774	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130697	NO2NO3-N	0.922	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130756	Total-P	1.54	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130758	O-Phosphate-P	1.33	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P373101

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130754	Color (true)	1.98	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P373214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130536	Total Alkalinity	0.201	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P373309

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131021	Total Alkalinity	0.251	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P373595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130644	TDS	1.17	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P373596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130983	TDS	7.69	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P373650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130644	TSS	6.45	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130536	Fluoride	0.477	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P373312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2131021	Fluoride	0.946	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P373176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130647	Organic Carbon	2.57	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95195

Included Lab Sample IDs: 2130758, 2130759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.5	P/P	90 - 110
O-Phosphate-P	99.2	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95209

Included Lab Sample IDs: 2130754, 2130755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A95227

Included Lab Sample IDs: 2130754, 2130755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	101	P/P	90 - 115

Reference Method: SM 5310 B-00

Run ID: A95259

Included Lab Sample IDs: 2130756, 2130757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95272

Included Lab Sample IDs: 2130756, 2130757

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

Reference Method: SM 2320 B-97

Run ID: A95274

Included Lab Sample IDs: 2130754

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

Reference Method: SM 4500 F-C-97

Run ID: A95274

Included Lab Sample IDs: 2130754

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

Reference Method: SM 2320 B-97

Run ID: A95300

Included Lab Sample IDs: 2130755

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

Reference Method: SM 2320 B-97
 Run ID: A95300
 Included Lab Sample IDs: 2130755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97
 Run ID: A95300
 Included Lab Sample IDs: 2130755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Run ID: A95312
 Included Lab Sample IDs: 2130756, 2130757

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

Reference Method: EPA 351.2 Rev. 2.0
 Run ID: A95324
 Included Lab Sample IDs: 2130756, 2130757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.7	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A95359
 Included Lab Sample IDs: 2130756, 2130757

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

Reference Method: EPA 300.0 Rev. 2.1
 Run ID: A95482
 Included Lab Sample IDs: 2130754, 2130755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	105	P/P	90 - 110
Chloride	105	106	P/P	90 - 110
Sulfate	104	104	P/P	90 - 110
Sulfate	104	105	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					5.68	
	Turbidity					2.41	
EPA 300.0 Rev. 2.1	Chloride	103	102	98.3		0.169	
	Sulfate	102	101	98.8		0.0791	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	99.3	99.5			0.211
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	99.0	99.6			0.359
	Kjeldahl Nitrogen	99.6	102	103			0.774
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.5	95.0	96.0			0.922
EPA 365.1 Rev. 2.0	Total-P	96.1	96.6	95.1			1.54
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	97.2	98.5			1.33
SM 2120 B	Color (true)	101				1.98	
SM 2320 B-97	Total Alkalinity	104				0.201	
	Total Alkalinity	104				0.251	
SM 2540 C-97	TDS					1.17	
	TDS					7.69	
SM 2540 D-97	TSS					6.45	
SM 4500 F-C-97	Fluoride	95.3	95.2	94.7			0.477
	Fluoride	94.7	97.2	96.0			0.946
SM 5310 B-00	Organic Carbon	94.0	96.7	93.8			2.57

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2130754, 2130755
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2130754, 2130755
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2130754, 2130755
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2130756, 2130757
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2130756, 2130757
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2130756, 2130757
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2130756, 2130757
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2130758, 2130759
SM 2120 B / E31780	True Color measured at 450 nm	2130754, 2130755
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2130754, 2130755
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2130754, 2130755
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2130754, 2130755
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2130754, 2130755
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2130756, 2130757

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	10/23/2019			10/23/2019 15:29	Blanca Fach	2130754, 2130755
EPA 300.0 Rev. 2.1	10/23/2019			11/01/2019 13:52	Jhamieka S. Greenwood	2130755
	10/23/2019			11/01/2019 16:17	Jhamieka S. Greenwood	2130754
EPA 350.1 Rev. 2.0	10/23/2019			10/29/2019 11:25	Ping Hua	2130756
	10/23/2019			10/29/2019 13:43	Ping Hua	2130757
EPA 351.2 Rev. 2.0	10/23/2019	10/28/2019 13:27	Sima Feizi	10/29/2019 18:51	Jhamieka S. Greenwood	2130756
	10/23/2019	10/28/2019 13:27	Sima Feizi	10/29/2019 19:00	Jhamieka S. Greenwood	2130757
EPA 353.2 Rev. 2.0	10/23/2019			10/28/2019 09:13	Beverly Y. Sanders	2130756
	10/23/2019			10/28/2019 09:14	Beverly Y. Sanders	2130757
EPA 365.1 Rev. 2.0	10/23/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 13:34	Lipi Saha	2130756
	10/23/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 13:35	Lipi Saha	2130757
EPA 365.1 Rev. 2.0 dissolved	10/23/2019			10/23/2019 14:58	Virginia P. Brown	2130758
	10/23/2019			10/23/2019 15:33	Virginia P. Brown	2130759
SM 2120 B	10/23/2019			10/23/2019 17:19	Madeline Funaro	2130754
	10/23/2019			10/23/2019 17:20	Madeline Funaro	2130755
SM 2320 B-97	10/23/2019			10/26/2019 10:44	Dale L. Simmons	2130754
	10/23/2019			10/28/2019 21:32	Dale L. Simmons	2130755
SM 2540 C-97	10/23/2019			10/25/2019 14:21	Yijie Li	2130754, 2130755
SM 2540 D-97	10/23/2019			10/25/2019 14:21	Yijie Li	2130754, 2130755
SM 4500 F-C-97	10/23/2019			10/26/2019 10:44	Dale L. Simmons	2130754
	10/23/2019			10/28/2019 21:32	Dale L. Simmons	2130755
SM 5310 B-00	10/23/2019			10/26/2019 07:00	Madeline Funaro	2130756
	10/23/2019			10/26/2019 07:16	Madeline Funaro	2130757