

Chemical Analysis Report

SO-DIST-2017-05-24-01

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

Event Description: **SMP: 10,000 Isles**
Request ID: **RQ-2017-05-22-03**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901
Attn: Ben Paswater

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Certified by: Colin Wright, Program Administrator

Date Certified: 14-JUN-2017 09:57

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical 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: 3278P @ #4 SOUTH OF GOODLAND

Collection Date/Time: 05/23/2017 12:50

Field ID: G1SD052317-1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1901226	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P325793	
	SM 2320 B-97	Total Alkalinity	138		mg CaCO3/L	P325954	
	SM 2540 D-97	TSS	7	IA	mg/L	P326271	
	SM 4500 F-C-97	Fluoride	1.4		mg F/L	P325958	
1901230	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P326127	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P325867	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326084	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P325872	
	SM 5310 B-00	Organic Carbon	4.2		mg C/L	P326193	
1901234	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P325778	

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: 3259M-ENRE-8 OFF TRIPOD KEY

Collection Date/Time: 05/23/2017 11:10

Field ID: G1SD052317-4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1901227	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P325793	
	SM 2320 B-97	Total Alkalinity	138		mg CaCO3/L	P325954	
	SM 2540 D-97	TSS	13		mg/L	P326271	
	SM 4500 F-C-97	Fluoride	1.4		mg F/L	P325958	
1901231	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P325921	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P325869	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326084	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P325872	
	SM 5310 B-00	Organic Carbon	3.6		mg C/L	P326193	
1901235	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325778	

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: 8065-ENRE6

Collection Date/Time: 05/23/2017 12:20

Field ID: G1SD052317-5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1901228	EPA 180.1 Rev. 2.0	Turbidity	23		NTU	P325793	
	SM 2320 B-97	Total Alkalinity	142		mg CaCO3/L	P325954	
	SM 2540 D-97	TSS	26		mg/L	P326271	
	SM 4500 F-C-97	Fluoride	1.4		mg F/L	P325958	
1901232	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P325921	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P325869	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326084	
	EPA 365.1 Rev. 2.0	Total-P	0.051	J	mg P/L	P325876	MS
	SM 5310 B-00	Organic Carbon	3.7		mg C/L	P326193	
1901236	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P325778	

Field ID: G1SD052317-5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. EPA 365.1 Rev. 2.0: Refer to the narrative for an explanation of QC Codes.							

Sample Location: 8065-ENRE6 DUP

Collection Date/Time: 05/23/2017 12:25

Field ID: G1SD052317-6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1901229	EPA 180.1 Rev. 2.0	Turbidity	23		NTU	P325793	
	SM 2320 B-97	Total Alkalinity	143		mg CaCO3/L	P325954	
	SM 2540 D-97	TSS	27		mg/L	P326271	
	SM 4500 F-C-97	Fluoride	1.4		mg F/L	P325958	
1901233	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P325921	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P325869	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P326084	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P325876	MS
	SM 5310 B-00	Organic Carbon	3.5		mg C/L	P326193	
1901237	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P325778	
	dissolved						

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: P325793

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P325921

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P326127

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P325867

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P325869

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325869

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326084

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: P325872

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325876

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325778

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

Reference Method: SM 2320 B-97
Batch ID: P325954

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

Reference Method: SM 2540 D-97
Batch ID: P326271

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325958

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P326193

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326127

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325867

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325869

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326084

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325872

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325876

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325778

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

Reference Method: SM 2320 B-97
Batch ID: P325954

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P325958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.8		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P326193

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325921

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901231	Ammonia-N	105	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901230	Ammonia-N	108	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325867

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901198	Kjeldahl Nitrogen	96.6	94.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325869

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901231	Kjeldahl Nitrogen	98.1	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901213	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901199	Total-P	94.7	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325876

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901232	Total-P	89.2	93.8	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901235	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P325958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1901339	Fluoride	94.4	96.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P326193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1900849	Organic Carbon	97.8	96.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P325793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901162	Turbidity	0.643	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P325921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901231	Ammonia-N	0.876	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901230	Ammonia-N	0.236	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325867

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901198	Kjeldahl Nitrogen	1.62	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P325869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901231	Kjeldahl Nitrogen	1.23	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901213	NO2NO3-N	0.766	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901199	Total-P	0.815	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P325876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901232	Total-P	4.77	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P325778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901235	O-Phosphate-P	1.18	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P325954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901339	Total Alkalinity	0.861	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P325958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1901339	Fluoride	1.00	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P326193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1900849	Organic Carbon	1.25	Spike	P	0 - 20

Quality Assurance Report Precision

* 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: A76655

Included Lab Sample IDs: 1901234, 1901235, 1901236, 1901237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	101	P/P	90 - 110
O-Phosphate-P	100	99.3	P/P	90 - 110
O-Phosphate-P	101	99.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A76659

Included Lab Sample IDs: 1901226, 1901227, 1901228, 1901229

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76718

Included Lab Sample IDs: 1901231, 1901232, 1901233

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	99.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76730

Included Lab Sample IDs: 1901226, 1901227, 1901228, 1901229

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	106	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76730

Included Lab Sample IDs: 1901226, 1901227, 1901228, 1901229

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	94.3	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76779

Included Lab Sample IDs: 1901230

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76795

Included Lab Sample IDs: 1901231, 1901232, 1901233

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76795

Included Lab Sample IDs: 1901231, 1901232, 1901233

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	103	P/P	90 - 110
Kjeldahl Nitrogen	98.4	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76797

Included Lab Sample IDs: 1901230, 1901231, 1901232, 1901233

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76805

Included Lab Sample IDs: 1901230, 1901231, 1901232, 1901233

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	93.2	94.5	P/P	90 - 110
Total-P	94.5	94.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76815

Included Lab Sample IDs: 1901230

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

Reference Method: SM 5310 B-00

Run ID: A76846

Included Lab Sample IDs: 1901230, 1901231, 1901232, 1901233

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	99.6	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				0.643	
EPA 350.1 Rev. 2.0	Ammonia-N	96.3	105 106			0.876
	Ammonia-N	103	108 108			0.236
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	96.6 94.6			1.62
	Kjeldahl Nitrogen	101	98.1 99.6			1.23
EPA 353.2 Rev. 2.0	NO2NO3-N	102	104 103			0.766
EPA 365.1 Rev. 2.0	Total-P	103	94.7 95.4			0.815
	Total-P	106	89.2 93.8			4.77
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	101 102			1.18

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
					LCS	
SM 2320 B-97	Total Alkalinity	104			0.861	
SM 4500 F-C-97	Fluoride	94.8	94.4	96.4		1.00
SM 5310 B-00	Organic Carbon	97.2	97.8	96.4		1.25

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1901226, 1901227, 1901228, 1901229
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1901230, 1901231, 1901232, 1901233
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1901230, 1901231, 1901232, 1901233
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1901230, 1901231, 1901232, 1901233
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1901230, 1901231, 1901232, 1901233
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1901234, 1901235, 1901236, 1901237
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1901226, 1901227, 1901228, 1901229
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1901226, 1901227, 1901228, 1901229
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1901226, 1901227, 1901228, 1901229
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1901230, 1901231, 1901232, 1901233

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	05/24/2017			05/24/2017 16:45	Sima Feizi	1901226, 1901227, 1901228, 1901229
EPA 350.1 Rev. 2.0	05/24/2017			05/26/2017	Julia Storbeck	1901231, 1901232, 1901233
	05/24/2017			06/01/2017	Julie Michelle Frank	1901230
EPA 351.2 Rev. 2.0	05/24/2017	05/26/2017	Adrian Shelby	05/31/2017	Joseph Suarez	1901230
	05/24/2017	05/26/2017	Adrian Shelby	06/01/2017	Joseph Suarez	1901231, 1901232, 1901233
EPA 353.2 Rev. 2.0	05/24/2017			06/01/2017	Beverly Y. Sanders	1901230, 1901231, 1901232, 1901233
EPA 365.1 Rev. 2.0	05/24/2017	05/26/2017	Adrian Shelby	05/31/2017	Lipi Saha	1901230, 1901231, 1901232, 1901233
EPA 365.1 Rev. 2.0 dissolved	05/24/2017			05/24/2017 15:00	Julia Storbeck	1901235
	05/24/2017			05/24/2017 15:07	Julia Storbeck	1901236
	05/24/2017			05/24/2017 15:08	Julia Storbeck	1901237
	05/24/2017			05/24/2017 15:33	Julia Storbeck	1901234
SM 2320 B-97	05/24/2017			05/27/2017	Dale L. Simmons	1901226, 1901227, 1901228, 1901229
SM 2540 D-97	05/24/2017			05/26/2017	Yijie Li	1901226, 1901227, 1901228, 1901229
SM 4500 F-C-97	05/24/2017			05/27/2017	Dale L. Simmons	1901226, 1901227, 1901228, 1901229
SM 5310 B-00	05/24/2017			06/03/2017	Julie Michelle Frank	1901230, 1901231, 1901232, 1901233