

Chemical Analysis Report

SO-DIST-2017-04-27-02

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-2017-04-24-05**
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: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 22-MAY-2017 11:21



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: 04/26/2017 12:40

Field ID: G1SD042617-1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1893474	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P324191	
	SM 2320 B-97	Total Alkalinity	134		mg CaCO3/L	P324857	
	SM 2540 D-97	TSS	17	A	mg/L	P324593	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P324859	
1893480	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P324254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P324288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324317	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P324325	
	SM 5310 B-00	Organic Carbon	3.4		mg C/L	P324235	
1893486	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P324184	

Sample Location: 3259M-ENRE-9 Channel to Everglades City

Collection Date/Time: 04/26/2017 12:00

Field ID: G1SD042617-2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1893475	EPA 180.1 Rev. 2.0	Turbidity	10	A	NTU	P324192	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P324857	
	SM 2540 D-97	TSS	14		mg/L	P324593	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P324859	
1893481	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P324254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P324288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324317	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P324325	
	SM 5310 B-00	Organic Carbon	4.4		mg C/L	P324235	
1893487	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P324184	

Sample Location: 3259M-ENRE-10 Off 1/10000 Islands

Collection Date/Time: 04/26/2017 11:40

Field ID: G1SD042617-3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1893476	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P324192	
	SM 2320 B-97	Total Alkalinity	146		mg CaCO3/L	P324857	
	SM 2540 D-97	TSS	10		mg/L	P324593	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P324859	
1893482	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P324254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P324288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324318	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P324325	
	SM 5310 B-00	Organic Carbon	4.0		mg C/L	P324235	
1893488	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P324184	

Sample Location: 3259M-ENRE-8 Off Tripod Key

Collection Date/Time: 04/26/2017 10:40

Field ID: G1SD042617-4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1893477	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P324192	
	SM 2320 B-97	Total Alkalinity	139		mg CaCO3/L	P324857	
	SM 2540 D-97	TSS	17		mg/L	P324593	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P324859	
1893483	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P324254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P324288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324318	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P324325	
	SM 5310 B-00	Organic Carbon	3.9		mg C/L	P324235	
1893489	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P324184	

Sample Location: 8065-ENRE6

Collection Date/Time: 04/26/2017 11:00

Field ID: G1SD042617-5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1893478	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P324192	
	SM 2320 B-97	Total Alkalinity	132		mg CaCO3/L	P324857	
	SM 2540 D-97	TSS	17		mg/L	P324593	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P324859	
1893484	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P324254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P324288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324318	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P324325	
	SM 5310 B-00	Organic Carbon	3.4		mg C/L	P324235	
1893490	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324184	

Sample Location: 8065-ENRE6 (DUP)

Collection Date/Time: 04/26/2017 11:05

Field ID: G1SD042617-6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1893479	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P324192	
	SM 2320 B-97	Total Alkalinity	134		mg CaCO3/L	P324857	
	SM 2540 D-97	TSS	18		mg/L	P324593	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P324859	
1893485	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P324254	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P324288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324318	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P324325	
	SM 5310 B-00	Organic Carbon	3.4		mg C/L	P324235	
1893491	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P324184	

**Quality Assurance Report
Method Blank Results**

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324191

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324192

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324254

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324317

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324318

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324325

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324184

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

Reference Method: SM 2320 B-97
Batch ID: P324857

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P324593

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P324859

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P324235

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: P324254

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324317

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324318

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324325

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324184

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 dissolved
Batch ID: P324184

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

Reference Method: SM 2320 B-97
Batch ID: P324857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P324859

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P324235

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324254

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893480	Ammonia-N	97.1	94.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893480	Kjeldahl Nitrogen	101	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892511	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893483	NO2NO3-N	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324325

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: P324325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893480	Total-P	91.3	92.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893486	O-Phosphate-P	96.3	97.3	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P324859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1893587	Fluoride	97.2	97.8	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P324235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892395	Organic Carbon	96.8	96.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893425	Turbidity	1.53	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P324192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893475	Turbidity	2.90	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P324254

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893480	Ammonia-N	2.13	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P324288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893480	Kjeldahl Nitrogen	2.14	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892511	NO2NO3-N	0.894	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893483	NO2NO3-N	1.86	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P324325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893480	Total-P	1.62	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P324184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893486	O-Phosphate-P	0.951	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P324857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893587	Total Alkalinity	0.618	Sample	P	0 - 4.8

Reference Method: SM 2540 D-97
Batch ID: P324593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893474	TSS	2.30	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P324859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1893587	Fluoride	0.483	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P324235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892395	Organic Carbon	0.127	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: A76048

Included Lab Sample IDs: 1893486, 1893487, 1893488, 1893489, 1893490, 1893491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.2	98.1	P/P	90 - 110
O-Phosphate-P	97.9	97.9	P/P	90 - 110
O-Phosphate-P	98.1	99.0	P/P	90 - 110
O-Phosphate-P	99.0	98.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A76055

Included Lab Sample IDs: 1893474, 1893475, 1893476, 1893477, 1893478, 1893479

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

Reference Method: SM 5310 B-00

Run ID: A76068

Included Lab Sample IDs: 1893480, 1893481, 1893482, 1893483, 1893484, 1893485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	103	P/P	90 - 110
Organic Carbon	98.8	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A76070

Included Lab Sample IDs: 1893480, 1893481, 1893482, 1893483, 1893484, 1893485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	91.0	90.7	P/P	90 - 110
Ammonia-N	92.0	91.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76094

Included Lab Sample IDs: 1893480, 1893481, 1893482, 1893483, 1893484, 1893485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76141

Included Lab Sample IDs: 1893480, 1893481, 1893482, 1893483, 1893484, 1893485

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76141

Included Lab Sample IDs: 1893480, 1893481, 1893482, 1893483, 1893484, 1893485

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76173

Included Lab Sample IDs: 1893480, 1893481, 1893482, 1893483, 1893484, 1893485

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	96.2	P/P	90 - 110
Total-P	97.2	97.0	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76258

Included Lab Sample IDs: 1893474, 1893475, 1893476, 1893477, 1893478, 1893479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	104	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76258

Included Lab Sample IDs: 1893474, 1893475, 1893476, 1893477, 1893478, 1893479

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.0	99.0	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					1.53	
	Turbidity					2.90	
EPA 350.1 Rev. 2.0	Ammonia-N	96.0	97.1	94.7			2.13
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	103	101			2.14
EPA 353.2 Rev. 2.0	NO2NO3-N	106	104	105			0.894
	NO2NO3-N	106	106	108			1.86
EPA 365.1 Rev. 2.0	Total-P	101	91.3	92.9			1.62
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.2	96.3	97.3			0.951
SM 2320 B-97	Total Alkalinity	103				0.618	
SM 2540 D-97	TSS					2.30	
SM 4500 F-C-97	Fluoride	94.9	97.2	97.8			0.483
SM 5310 B-00	Organic Carbon	101	96.8	96.6			0.127

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1893486, 1893487, 1893488, 1893489, 1893490, 1893491
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1893480, 1893481, 1893482, 1893483, 1893484, 1893485

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	04/27/2017			04/27/2017 16:59	Sima Feizi	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
EPA 350.1 Rev. 2.0	04/27/2017			04/27/2017	Julie Michelle Frank	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 351.2 Rev. 2.0	04/27/2017	05/01/2017	Adrian Shelby	05/03/2017	Joseph Suarez	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 353.2 Rev. 2.0	04/27/2017			05/01/2017	Beverly Y. Sanders	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 365.1 Rev. 2.0	04/27/2017	05/01/2017	Vijayalakshmi Reddy	05/02/2017	Lipi Saha	1893480, 1893481, 1893482, 1893483, 1893484, 1893485
EPA 365.1 Rev. 2.0 dissolved	04/27/2017			04/27/2017 15:45	Anthony C. Onicha	1893486
	04/27/2017			04/27/2017 16:26	Anthony C. Onicha	1893487
	04/27/2017			04/27/2017 16:28	Anthony C. Onicha	1893489
	04/27/2017			04/27/2017 16:29	Anthony C. Onicha	1893490
	04/27/2017			04/27/2017 16:36	Anthony C. Onicha	1893491
	04/27/2017			04/27/2017 16:55	Anthony C. Onicha	1893488
SM 2320 B-97	04/27/2017			05/08/2017	Dale L. Simmons	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
SM 2540 D-97	04/27/2017			05/01/2017	Sima Feizi	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
SM 4500 F-C-97	04/27/2017			05/08/2017	Dale L. Simmons	1893474, 1893475, 1893476, 1893477, 1893478, 1893479
SM 5310 B-00	04/27/2017			04/28/2017	Julie Michelle Frank	1893480, 1893481, 1893482, 1893483, 1893484, 1893485