

Chemical Analysis Report

SE-DIST-2016-10-12-01

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

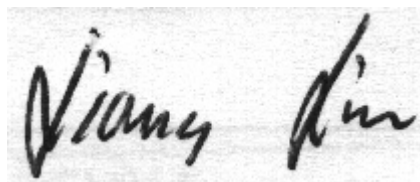
Event Description: **SMP-5 mile creek Run**
Request ID: **RQ-2016-10-10-09**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 04-NOV-2016 11:06

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: FIVE MILE CREEK @ EDWARDS RD.

Collection Date/Time: 10/11/2016 11:55

Field ID: 28010022

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1839963	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P313039	
	EPA 300.0 Rev. 2.1	Chloride	110		mg Cl/L	P313286	
		Sulfate	45		mg SO4/L	P313439	
	SM 2120 B	Color (true)	120		PCU	P313027	
	SM 2320 B-97	Total Alkalinity	150		mg CaCO3/L	P313160	
	SM 2540 C-97	TDS	438		mg/L	P313715	
	SM 2540 D-97	TSS	6	I	mg/L	P313836	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P313163	
1839966	EPA 350.1 Rev. 2.0	Ammonia-N	0.080		mg N/L	P313792	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P314204	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P313319	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P313811	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P313155	
1839969	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.21		mg P/L	P313033	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: FIVE MILE CREEK @ KIRBY LOOP RD.

Collection Date/Time: 10/11/2016 12:10

Field ID: 28010133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1839964	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P313039	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P313286	
		Sulfate	47		mg SO4/L	P313439	
	SM 2120 B	Color (true)	120		PCU	P313027	
	SM 2320 B-97	Total Alkalinity	155		mg CaCO3/L	P313160	
	SM 2540 C-97	TDS	428		mg/L	P313715	
	SM 2540 D-97	TSS	5	I	mg/L	P313836	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P313163	
1839967	EPA 350.1 Rev. 2.0	Ammonia-N	0.084		mg N/L	P313792	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P314204	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P313319	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P313811	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P313155	
1839970	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.22		mg P/L	P313033	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

SM 2540 C-97: The reported result is consistent with the laboratory conductivity, 771 umhos/cm.

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

Sample Location: FIVE MILE CREEK @ OKEECHOBEE RD.

Collection Date/Time: 10/11/2016 12:35

Field ID: 28010001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1839965	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P313039	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P313286	
		Sulfate	48		mg SO4/L	P313439	
	SM 2120 B	Color (true)	130		PCU	P313027	
	SM 2320 B-97	Total Alkalinity	158		mg CaCO3/L	P313160	
	SM 2540 C-97	TDS	451		mg/L	P313715	
	SM 2540 D-97	TSS	6	I	mg/L	P313836	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P313163	
1839968	EPA 350.1 Rev. 2.0	Ammonia-N	0.086		mg N/L	P313792	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P314204	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P313319	
	EPA 365.1 Rev. 2.0	Total-P	0.33		mg P/L	P313811	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P313155	
1839971	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.23		mg P/L	P313033	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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: P313039

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P313286

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P313439

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P313792

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P314204

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313319

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P313811

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313033

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

Reference Method: SM 2120 B
Batch ID: P313027

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P313160

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

Reference Method: SM 2540 C-97
Batch ID: P313715

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P313836

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P313163

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P313155

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: P313286

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313439

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P313792

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: P314204

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313319

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P313811

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P313160

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

Reference Method: SM 4500 F-C-97
Batch ID: P313163

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P313155

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1838599	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313439

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1838599	Sulfate	94.5		P	90 - 110
1838686	Sulfate	95.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P313792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1839959	Ammonia-N	103	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840040	Kjeldahl Nitrogen	99.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313319

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1839961	NO2NO3-N	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P313811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1839960	Total-P	101	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840042	O-Phosphate-P	97.5	98.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P313163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1840039	Fluoride	99.4	98.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P313155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1839891	Organic Carbon	93.1	91.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P313039

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839958	Turbidity	5.58	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1838599	Chloride	0.671	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P313439

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1838599	Sulfate	0.171	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P313792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839959	Ammonia-N	0.823	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840040	Kjeldahl Nitrogen	1.31	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P313319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839961	NO2NO3-N	1.85	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P313811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839960	Total-P	5.39	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840042	O-Phosphate-P	0.647	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P313027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839956	Color (true)	4.22	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P313160

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840039	Total Alkalinity	0.339	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P313715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839958	TDS	4.44	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P313163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1840039	Fluoride	0.513	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P313155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1839891	Organic Carbon	1.44	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: SM 2120 B

Run ID: A72183

Included Lab Sample IDs: 1839963, 1839964, 1839965

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A72185

Included Lab Sample IDs: 1839969, 1839970, 1839971

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.8	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A72186

Included Lab Sample IDs: 1839963, 1839964, 1839965

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A72200

Included Lab Sample IDs: 1839963, 1839964, 1839965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	100	P/P	90 - 110
Chloride	99.9	102	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A72223

Included Lab Sample IDs: 1839966, 1839967, 1839968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.5	98.3	P/P	90 - 110
Organic Carbon	98.3	98.5	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A72224

Included Lab Sample IDs: 1839963, 1839964, 1839965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A72224

Included Lab Sample IDs: 1839963, 1839964, 1839965

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

Reference Method: SM 4500 F-C-97

Run ID: A72224

Included Lab Sample IDs: 1839963, 1839964, 1839965

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A72260

Included Lab Sample IDs: 1839966, 1839967, 1839968

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A72305

Included Lab Sample IDs: 1839963, 1839964, 1839965

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	98.7	98.7	P/P	90 - 110
Sulfate	99.7	98.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A72413

Included Lab Sample IDs: 1839966, 1839967, 1839968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72429

Included Lab Sample IDs: 1839966, 1839967, 1839968

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A72551

Included Lab Sample IDs: 1839966, 1839967, 1839968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	105	P/P	90 - 110
Kjeldahl Nitrogen	105	103	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				5.58	
EPA 300.0 Rev. 2.1	Chloride	100	100		0.671	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 300.0 Rev. 2.1	Sulfate	98.8	94.5	95.1		0.171	
EPA 350.1 Rev. 2.0	Ammonia-N	103	103	106			0.823
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	99.5	101			1.31
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	103	104	102			1.85
EPA 365.1 Rev. 2.0	Total-P	100	101	95.5			5.39
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	97.5	98.4			0.647
SM 2120 B	Color (true)					4.22	
SM 2320 B-97	Total Alkalinity	103				0.339	
SM 2540 C-97	TDS					4.44	
SM 4500 F-C-97	Fluoride	98.0	99.4	98.7			0.513
SM 5310 B-00	Organic Carbon	95.8	93.1	91.7			1.44

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1839963, 1839964, 1839965
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1839963, 1839964, 1839965
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1839963, 1839964, 1839965
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1839966, 1839967, 1839968
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1839966, 1839967, 1839968
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1839966, 1839967, 1839968
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1839966, 1839967, 1839968
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1839969, 1839970, 1839971
SM 2120 B / E31780	True Color measured at 450 nm	1839963, 1839964, 1839965
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1839963, 1839964, 1839965
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1839963, 1839964, 1839965
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1839963, 1839964, 1839965
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1839963, 1839964, 1839965
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1839966, 1839967, 1839968

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	10/12/2016			10/12/2016 15:09	Sima Feizi	1839963, 1839964, 1839965
EPA 300.0 Rev. 2.1	10/12/2016			10/15/2016	Ping Hua	1839963, 1839964, 1839965
	10/12/2016			10/19/2016	Ping Hua	1839963, 1839964, 1839965
EPA 350.1 Rev. 2.0	10/12/2016			10/24/2016	Sofia Elnemr	1839966, 1839967, 1839968
EPA 351.2 Rev. 2.0	10/12/2016	10/31/2016	Adrian Shelby	11/01/2016	Joseph Suarez	1839966, 1839967, 1839968
EPA 353.2 Rev. 2.0	10/12/2016			10/17/2016	Beverly Y. Sanders	1839966, 1839967, 1839968
EPA 365.1 Rev. 2.0	10/12/2016	10/25/2016	Vijayalakshmi Reddy	10/25/2016	Lipi Saha	1839966, 1839967, 1839968
EPA 365.1 Rev. 2.0 dissolved	10/12/2016			10/12/2016 15:44	Julia Storbeck	1839969
	10/12/2016			10/12/2016 15:45	Julia Storbeck	1839970
	10/12/2016			10/12/2016 15:46	Julia Storbeck	1839971
SM 2120 B	10/12/2016			10/12/2016 15:20	Jared I. Manley	1839963
	10/12/2016			10/12/2016 15:21	Jared I. Manley	1839964, 1839965
SM 2320 B-97	10/12/2016			10/14/2016	Dale L. Simmons	1839963, 1839964, 1839965
SM 2540 C-97	10/12/2016			10/15/2016	Yijie Li	1839963, 1839964, 1839965
SM 2540 D-97	10/12/2016			10/15/2016	Yijie Li	1839963, 1839964, 1839965
SM 4500 F-C-97	10/12/2016			10/14/2016	Dale L. Simmons	1839963, 1839964, 1839965
SM 5310 B-00	10/12/2016			10/14/2016	Julie Michelle Frank	1839966, 1839967, 1839968