Chemical Analysis Report

SE-DIST-2020-12-04-01

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

Event Description: **SMP- Sebastian Park**
Request ID: **RQ-2020-10-19-22**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 28-DEC-2020 11:27

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 groups are included in this report: Metals and 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: Sebastian 50m Downstream Of S-157 **Collection Date/Time: 12/03/2020 12:20**

Field ID: G5SE0083 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2211140	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P390799	
	EPA 300.0 Rev. 2.1	Bromide	5.8		mg Br/L	P391241	
	SM 2320 B-2011	Total Alkalinity	134		mg CaCO3/L	P390810	
	SM 2540 D-2011	TSS	3	I	mg/L	P391151	
	SM 4500 F-C-2011	Fluoride	0.30		mg F/L	P390815	
2211141	EPA 350.1 Rev. 2.0	Ammonia-N	0.091		mg N/L	P391079	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P391034	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P390889	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P390981	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P390898	
2211142	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P390719	
2211146	EPA 200.7 Rev. 4.4	Chromium	4.0	U	ug/L	P390919	
		Iron	710		ug/L	P390919	
		Manganese	14	I	ug/L	P390919	
		Zinc	20	U	ug/L	P390919	
	EPA 200.8 Rev. 5.4	Aluminum	47	I	ug/L	P390919	
		Antimony	0.20	U	ug/L	P390919	
		Arsenic	1.02		ug/L	P390919	
		Beryllium	0.040	U	ug/L	P390919	
		Cadmium	0.080	U	ug/L	P390919	
		Copper	1.6	U	ug/L	P390919	
		Lead	0.80	U	ug/L	P390919	
		Nickel	2.0	U	ug/L	P390919	
		Selenium	0.80	U	ug/L	P390919	
		Silver	0.040	U	ug/L	P390919	
		Thallium	0.40	U	ug/L	P390919	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Bromide: Batch relative percent difference and matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2011: 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: P390799

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390919

Component	Result	Code	Units
Chromium	1.0	U	ug/L
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390919

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391241

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391079

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391034

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390889

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390981

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390719

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

Reference Method: SM 2320 B-2011
Batch ID: P390810

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

Reference Method: SM 2540 D-2011
Batch ID: P391151

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P390815

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P390898

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390919

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	103		P	85 - 115
Iron	104		P	85 - 115
Manganese	105		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390919

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.6		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	98.5		P	85 - 115
Beryllium	95.8		P	85 - 115
Cadmium	96.1		P	85 - 115
Copper	101		P	85 - 115
Lead	103		P	85 - 115
Nickel	94.2		P	85 - 115
Selenium	96.8		P	85 - 115
Silver	108		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391241

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391079

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391034

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390889

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390981

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390719

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

Reference Method: SM 2320 B-2011
Batch ID: P390810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P390815

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P390898

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	102		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209592	Chromium	103	103	P/P	70 - 130
2209592	Iron	104	102	P/P	70 - 130
2209592	Manganese	101	101	P/P	70 - 130
2209592	Zinc	108	109	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209592	Aluminum	107	108	P/P	70 - 130
2209592	Antimony	113	113	P/P	70 - 130
2209592	Arsenic	104	105	P/P	70 - 130
2209592	Beryllium	106	104	P/P	70 - 130
2209592	Cadmium	97.3	97.8	P/P	70 - 130
2209592	Copper	111	112	P/P	70 - 130
2209592	Lead	110	112	P/P	70 - 130
2209592	Nickel	94.6	95.9	P/P	70 - 130
2209592	Selenium	104	105	P/P	70 - 130
2209592	Silver	101	101	P/P	70 - 130
2209592	Thallium	107	109	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211854	Ammonia-N	101	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211433	Kjeldahl Nitrogen	96.9	98.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211057	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390981

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211057	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211157	O-Phosphate-P	100	100	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P390815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210831	Fluoride	101	103	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P390898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2210942	Organic Carbon	99.4	98.6	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211055	Turbidity	5.51	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209592	Chromium	0.544	Spike	P	0 - 20
2209592	Iron	1.31	Spike	P	0 - 20
2209592	Manganese	0.0487	Spike	P	0 - 20
2209592	Zinc	1.49	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209592	Aluminum	1.06	Spike	P	0 - 20
2209592	Antimony	0.0461	Spike	P	0 - 20
2209592	Arsenic	1.25	Spike	P	0 - 20
2209592	Beryllium	1.94	Spike	P	0 - 20
2209592	Cadmium	0.524	Spike	P	0 - 20
2209592	Copper	0.734	Spike	P	0 - 20
2209592	Lead	1.82	Spike	P	0 - 20
2209592	Nickel	1.32	Spike	P	0 - 20
2209592	Selenium	0.550	Spike	P	0 - 20
2209592	Silver	0.202	Spike	P	0 - 20
2209592	Thallium	2.25	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211854	Ammonia-N	1.16	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211433	Kjeldahl Nitrogen	1.90	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211057	NO2NO3-N	0.336	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211057	Total-P	1.10	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211157	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P390810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210831	Total Alkalinity	2.14	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P390815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210831	Fluoride	0.979	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P390898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2210942	Organic Carbon	0.753	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: A102425
Included Lab Sample IDs: 2211142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.1	99.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A102457
Included Lab Sample IDs: 2211140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	103	102	P/P	95 - 105

Reference Method: SM 2320 B-2011
Run ID: A102461
Included Lab Sample IDs: 2211140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.8	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A102461
Included Lab Sample IDs: 2211140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A102485
Included Lab Sample IDs: 2211141

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

Reference Method: SM 5310 B-2011
Run ID: A102488
Included Lab Sample IDs: 2211141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	98.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A102529
Included Lab Sample IDs: 2211146

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	102	99.1	P/P	90 - 110
Iron	98.9	101	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Zinc	105	105	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A102547
Included Lab Sample IDs: 2211141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A102553
Included Lab Sample IDs: 2211141

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A102574
Included Lab Sample IDs: 2211141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	97.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A102600
Included Lab Sample IDs: 2211146

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.0	98.5	P/P	90 - 110
Antimony	103	105	P/P	90 - 110
Arsenic	97.2	95.9	P/P	90 - 110
Cadmium	96.6	96.5	P/P	90 - 110
Copper	106	106	P/P	90 - 110
Lead	99.0	98.6	P/P	90 - 110
Nickel	94.4	91.8	P/P	90 - 110
Selenium	99.7	100	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	101	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A102613
Included Lab Sample IDs: 2211140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	104	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A102629
Included Lab Sample IDs: 2211146

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	104	104	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		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					5.51	
EPA 200.7 Rev. 4.4	Chromium	103	103	103			0.544
	Iron	104	104	102			1.31
	Manganese	105	101	101			0.0487
	Zinc	107	108	109			1.49
EPA 200.8 Rev. 5.4	Aluminum	97.6	107	108			1.06
	Antimony	105	113	113			0.0461
	Arsenic	98.5	104	105			1.25
	Beryllium	95.8	106	104			1.94
	Cadmium	96.1	97.3	97.8			0.524
	Copper	101	111	112			0.734
	Lead	103	110	112			1.82
	Nickel	94.2	94.6	95.9			1.32
	Selenium	96.8	104	105			0.550
	Silver	108	101	101			0.202
	Thallium	106	107	109			2.25
EPA 300.0 Rev. 2.1	Bromide	102					
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	101	99.2			1.16
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.8	96.9	98.9			1.90
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	100			0.336
EPA 365.1 Rev. 2.0	Total-P	106	107	106			1.10
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	100	100			0.0
SM 2320 B-2011	Total Alkalinity	101				2.14	
SM 4500 F-C-2011	Fluoride	98.2	101	103			0.979
SM 5310 B-2011	Organic Carbon	102	99.4	98.6			0.753

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2211140
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2211146
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2211146
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2211140
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2211141
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2211141
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2211141
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2211141
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2211142
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2211140
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2211140
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2211140
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2211141

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	12/04/2020			12/04/2020 16:23	Blanca Fach	2211140
EPA 200.7 Rev. 4.4	12/04/2020	12/09/2020 14:55	Elliott D. Healy	12/10/2020 16:29	Betina Topolski	2211146
EPA 200.8 Rev. 5.4	12/04/2020	12/09/2020 14:55	Elliott D. Healy	12/15/2020 17:15	Alexander Thompson	2211146
	12/04/2020	12/09/2020 14:55	Elliott D. Healy	12/16/2020 23:17	Alexander Thompson	2211146
EPA 300.0 Rev. 2.1	12/04/2020			12/15/2020 23:01	Lipi Saha	2211140
EPA 350.1 Rev. 2.0	12/04/2020			12/13/2020 14:05	Ping Hua	2211141
EPA 351.2 Rev. 2.0	12/04/2020	12/09/2020 12:17	David Boose	12/11/2020 16:35	Julia Storbeck	2211141
EPA 353.2 Rev. 2.0	12/04/2020			12/09/2020 09:43	Beverly Y. Sanders	2211141
EPA 365.1 Rev. 2.0	12/04/2020	12/10/2020 12:58	Yen Ta	12/14/2020 14:00	Lipi Saha	2211141
EPA 365.1 Rev. 2.0 dissolved	12/04/2020			12/04/2020 16:15	Ping Hua	2211142
SM 2320 B-2011	12/04/2020			12/07/2020 20:19	Dale L. Simmons	2211140
SM 2540 D-2011	12/04/2020			12/09/2020 14:21	Yijie Li	2211140
SM 4500 F-C-2011	12/04/2020			12/07/2020 20:19	Dale L. Simmons	2211140
SM 5310 B-2011	12/04/2020			12/09/2020 08:36	David Boose	2211141