

Chemical Analysis Report

NE-DIST-2020-08-27-03

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

Event Description: **Moses Creek**
Request ID: **RQ-2020-08-17-22**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 17-SEP-2020 09:31

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

Case Narrative

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

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Moses Creek at Preserve Dock

Collection Date/Time: 08/26/2020 09:50

Field ID: G5NE0004

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2192771	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P386639	
	EPA 300.0 Rev. 2.1	Bromide	0.86		mg Br/L	P387262	MS
	SM 2320 B-2011	Total Alkalinity	60		mg CaCO3/L	P386788	
	SM 2540 D-2011	TSS	7	I	mg/L	P386814	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P386792	
2192772	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P387020	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P386770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P386778	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P386680	
	SM 5310 B-2011	Organic Carbon	44		mg C/L	P386726	
2192773	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.078		mg P/L	P386648	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Unnamed Drain @ Eagles Nest Rd.

Collection Date/Time: 08/26/2020 11:50

Field ID: 27010079

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2192774	EPA 180.1 Rev. 2.0	Turbidity	6.5		NTU	P386641	
	EPA 300.0 Rev. 2.1	Chloride	100		mg Cl/L	P387061	
		Sulfate	10		mg SO4/L	P387066	
	SM 2120 B-2011	Color (true)	360		PCU	P386654	
	SM 2320 B-2011	Total Alkalinity	76		mg CaCO3/L	P386788	
	SM 2540 C-2011	TDS	370		mg/L	P386808	
	SM 2540 D-2011	TSS	10		mg/L	P386812	
2192775	SM 4500 F-C-2011	Fluoride	0.084	I	mg F/L	P386792	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P387020	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P386770	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P386778	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P386680	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P386726	
2192776	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.083		mg P/L	P386651	

Ref. Method and Comment:

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: P386639

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386641

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386770

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386680

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386648

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

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

Reference Method: SM 2120 B-2011
Batch ID: P386654

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P386788

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

Reference Method: SM 2540 C-2011
Batch ID: P386808

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386812

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386814

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P386726

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: P387061

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386770

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386680

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386648

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.9		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P386654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P386788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P386726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192838	Chloride	99.8		P	90 - 110
2193005	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192838	Sulfate	98.8		P	90 - 110
2193005	Sulfate	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192715	Bromide	91.5	89.4	P/F	90 - 110
2192716	Bromide	87.1		F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192843	Ammonia-N	99.4	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386770

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192445	Kjeldahl Nitrogen	101	99.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192748	NO2NO3-N	96.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192710	Total-P	106	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386648

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192447	O-Phosphate-P	97.1	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192837	O-Phosphate-P	99.4	99.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192663	Fluoride	98.9	97.1	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P386726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2192444	Organic Carbon	95.2	94.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386639

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192715	Turbidity	6.17	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P386641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192658	Turbidity	9.25	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193005	Chloride	0.302	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2193005	Sulfate	0.678	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192715	Bromide	1.76	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192843	Ammonia-N	0.804	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P386770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192445	Kjeldahl Nitrogen	0.923	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P386778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192748	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P386680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192710	Total-P	3.27	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386648

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192447	O-Phosphate-P	0.103	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P386651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192837	O-Phosphate-P	0.145	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P386654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192663	Color (true)	0.129	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P386788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192663	Total Alkalinity	0.197	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P386808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192663	TDS	0.673	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P386792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192663	Fluoride	1.43	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P386726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2192444	Organic Carbon	0.640	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100685

Included Lab Sample IDs: 2192771, 2192774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100687

Included Lab Sample IDs: 2192773, 2192776

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	100	P/P	90 - 110
O-Phosphate-P	99.4	98.3	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A100689

Included Lab Sample IDs: 2192774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 115

Reference Method: SM 5310 B-2011

Run ID: A100718

Included Lab Sample IDs: 2192772, 2192775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.0	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100726

Included Lab Sample IDs: 2192772, 2192775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100742

Included Lab Sample IDs: 2192772, 2192775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100747

Included Lab Sample IDs: 2192771, 2192774

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

Reference Method: SM 4500 F-C-2011

Run ID: A100747

Included Lab Sample IDs: 2192771, 2192774

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

Reference Method: SM 4500 F-C-2011

Run ID: A100747

Included Lab Sample IDs: 2192771, 2192774

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100780

Included Lab Sample IDs: 2192772, 2192775

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	94.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100832

Included Lab Sample IDs: 2192772, 2192775

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100843

Included Lab Sample IDs: 2192774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	101	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100925

Included Lab Sample IDs: 2192771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	95.4	98.8	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	MS
EPA 180.1 Rev. 2.0	Turbidity					6.17	
	Turbidity					9.25	
EPA 300.0 Rev. 2.1	Bromide	96.7	91.5	89.4	87.1		1.76
	Chloride	99.6	99.7	99.8		0.302	
	Sulfate	98.0	96.4	98.8		0.678	
EPA 350.1 Rev. 2.0	Ammonia-N	101	99.4	101			0.804
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.3	101	99.4			0.923
EPA 353.2 Rev. 2.0	NO2NO3-N	101	96.8				0.0
EPA 365.1 Rev. 2.0	Total-P	104	106	109			3.27
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5	97.1	97.2			0.103
	O-Phosphate-P	99.9	99.4	99.2			0.145
SM 2120 B-2011	Color (true)	98.8				0.129	
SM 2320 B-2011	Total Alkalinity	102				0.197	
SM 2540 C-2011	TDS					0.673	
SM 4500 F-C-2011	Fluoride	98.7	98.9	97.1			1.43
SM 5310 B-2011	Organic Carbon	94.2	95.2	94.5			0.640

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2192771, 2192774
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2192771
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2192774
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2192774
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2192772, 2192775
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2192772, 2192775
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2192772, 2192775
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2192772, 2192775
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2192773, 2192776
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2192774
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2192771, 2192774
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2192774
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2192771, 2192774
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2192771, 2192774
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2192772, 2192775

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	08/27/2020			08/27/2020 15:06	Yen Ta	2192771, 2192774
EPA 300.0 Rev. 2.1	08/27/2020			09/05/2020 06:28	Julia Storbeck	2192774
	08/27/2020			09/09/2020 23:13	Lipi Saha	2192771
EPA 350.1 Rev. 2.0	08/27/2020			09/05/2020 13:29	Ping Hua	2192772
	08/27/2020			09/05/2020 13:30	Ping Hua	2192775
EPA 351.2 Rev. 2.0	08/27/2020	09/01/2020 11:35	Sima Feizi	09/02/2020 10:37	Virginia P. Brown	2192772
	08/27/2020	09/01/2020 11:35	Sima Feizi	09/02/2020 10:39	Virginia P. Brown	2192775
EPA 353.2 Rev. 2.0	08/27/2020			09/01/2020 10:25	Beverly Y. Sanders	2192772
	08/27/2020			09/01/2020 10:26	Beverly Y. Sanders	2192775
EPA 365.1 Rev. 2.0	08/27/2020	08/28/2020 12:36	Yen Ta	08/31/2020 10:12	Benjamin T. Nordmann	2192772
	08/27/2020	08/28/2020 12:36	Yen Ta	08/31/2020 10:13	Benjamin T. Nordmann	2192775
EPA 365.1 Rev. 2.0 dissolved	08/27/2020			08/27/2020 15:51	Virginia P. Brown	2192773
	08/27/2020			08/27/2020 16:33	Virginia P. Brown	2192776
SM 2120 B-2011	08/27/2020			08/27/2020 16:32	Madeline Gruver	2192774
SM 2320 B-2011	08/27/2020			08/28/2020 18:45	Dale L. Simmons	2192771
	08/27/2020			08/28/2020 18:58	Dale L. Simmons	2192774
SM 2540 C-2011	08/27/2020			08/28/2020 17:05	Madeline Gruver	2192774
SM 2540 D-2011	08/27/2020			08/28/2020 19:46	Madeline Gruver	2192771, 2192774
SM 4500 F-C-2011	08/27/2020			08/28/2020 18:45	Dale L. Simmons	2192771
	08/27/2020			08/28/2020 18:58	Dale L. Simmons	2192774
SM 5310 B-2011	08/27/2020			08/30/2020 09:58	Ping Hua	2192772
	08/27/2020			08/30/2020 10:10	Ping Hua	2192775