Chemical Analysis Report

SE-DIST-2021-08-17-01

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

Event Description: **SMP - 3208C, 3210 pickup**
Request ID: **RQ-2021-08-16-57**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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2199 South Rock Road
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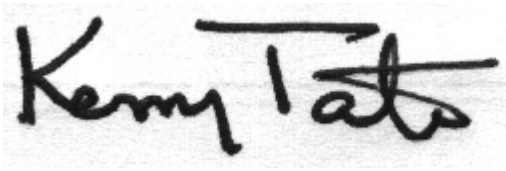
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 10-SEP-2021 09:39



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: Manatee Pocket North **Collection Date/Time: 08/16/2021 13:20**

Field ID: G2SE0063 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269811	EPA 180.1 Rev. 2.0	Turbidity	5.0		NTU	P402587	
	SM 2320 B-2011	Total Alkalinity	115	A	mg CaCO3/L	P402667	
	SM 2540 D-2011	TSS	7	I A	mg/L	P403243	
	SM 4500 F-C-2011	Fluoride	0.59		mg F/L	P402669	
2269812	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P402705	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P403021	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P402873	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P403006	
	SM 5310 B-2011	Organic Carbon	9.2		mg C/L	P402994	
2269813	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P402586	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: South Fork SLR @ Leighton Park **Collection Date/Time: 08/16/2021 13:55**

Field ID: G2SE0013 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2269831	EPA 200.7 Rev. 4.4	Calcium	70.2		mg/L	P402644	
		Iron	520		ug/L	P402644	
		Magnesium	62.9		mg/L	P402644	
		Manganese	21.8		ug/L	P402644	
		Zinc	10	I	ug/L	P402644	
	EPA 200.8 Rev. 5.4	Aluminum	411		ug/L	P402644	
		Antimony	0.12	I	ug/L	P402644	
		Arsenic	2.82		ug/L	P402644	
		Beryllium	0.029	I	ug/L	P402644	
		Cadmium	0.020	U	ug/L	P402644	
		Chromium	1.0	I	ug/L	P402644	
		Copper	2.58		ug/L	P402644	
		Lead	0.98		ug/L	P402644	
		Nickel	0.65	I	ug/L	P402644	
		Selenium	0.21	I	ug/L	P402644	
		Silver	0.010	U	ug/L	P402644	
		Thallium	0.10	U	ug/L	P402644	

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402587

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402644

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402644

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
Chromium	0.40	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 350.1 Rev. 2.0
Batch ID: P402705

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403021

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402873

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403006

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: P402586

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

Reference Method: SM 2320 B-2011
Batch ID: P402667

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

Reference Method: SM 2540 D-2011
Batch ID: P403243

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402669

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P402994

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: P402644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	109		P	85 - 115
Magnesium	109		P	85 - 115
Manganese	104		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	98.3		P	85 - 115
Beryllium	96.2		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	97.2		P	85 - 115
Copper	97.2		P	85 - 115
Lead	101		P	85 - 115
Nickel	97.1		P	85 - 115
Selenium	97.3		P	85 - 115
Silver	104		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402705

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403021

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402873

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403006

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402586

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P402667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P402669

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P402994

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.5		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269481	Calcium	107	109	P/P	80 - 120
2269481	Iron	110	110	P/P	80 - 120
2269481	Magnesium	110	111	P/P	80 - 120
2269481	Manganese	106	106	P/P	80 - 120
2269481	Zinc	107	106	P/P	80 - 120
2269912	Calcium	100		P	80 - 120
2269912	Iron	109		P	80 - 120
2269912	Magnesium	106		P	80 - 120
2269912	Manganese	104		P	80 - 120
2269912	Zinc	106		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269481	Aluminum	101	102	P/P	80 - 120
2269481	Antimony	102	105	P/P	80 - 120
2269481	Arsenic	99.2	99.6	P/P	80 - 120
2269481	Beryllium	99.8	99.8	P/P	80 - 120
2269481	Cadmium	102	103	P/P	80 - 120
2269481	Chromium	98.4	100	P/P	80 - 120
2269481	Copper	97.3	99.0	P/P	80 - 120
2269481	Lead	103	104	P/P	80 - 120
2269481	Nickel	96.9	97.9	P/P	80 - 120
2269481	Selenium	96.7	98.1	P/P	80 - 120
2269481	Silver	103	105	P/P	80 - 120
2269481	Thallium	105	107	P/P	80 - 120
2269912	Aluminum	102		P	80 - 120
2269912	Antimony	104		P	80 - 120
2269912	Arsenic	99.3		P	80 - 120
2269912	Beryllium	95.5		P	80 - 120
2269912	Cadmium	103		P	80 - 120
2269912	Chromium	101		P	80 - 120
2269912	Copper	98.0		P	80 - 120
2269912	Lead	103		P	80 - 120
2269912	Nickel	99.8		P	80 - 120
2269912	Selenium	96.8		P	80 - 120
2269912	Silver	104		P	80 - 120
2269912	Thallium	108		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2268798	Ammonia-N	97.4	91.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403021

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270026	Kjeldahl Nitrogen	90.2	92.9	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402873

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269812	NO2NO3-N	99.9	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269813	O-Phosphate-P	99.0	98.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P402669

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2269375	Fluoride	98.2	98.2	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P402994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270029	Organic Carbon	95.5	95.9	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269741	Turbidity	1.38	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269481	Calcium	1.14	Spike	P	0 - 20
2269481	Iron	0.616	Spike	P	0 - 20
2269481	Magnesium	1.02	Spike	P	0 - 20
2269481	Manganese	0.0902	Spike	P	0 - 20
2269481	Zinc	0.492	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269481	Aluminum	0.889	Spike	P	0 - 20
2269481	Antimony	2.64	Spike	P	0 - 20
2269481	Arsenic	0.369	Spike	P	0 - 20
2269481	Beryllium	0.000884	Spike	P	0 - 20
2269481	Cadmium	1.54	Spike	P	0 - 20
2269481	Chromium	2.08	Spike	P	0 - 20
2269481	Copper	1.73	Spike	P	0 - 20
2269481	Lead	1.08	Spike	P	0 - 20
2269481	Nickel	0.989	Spike	P	0 - 20
2269481	Selenium	1.40	Spike	P	0 - 20
2269481	Silver	2.46	Spike	P	0 - 20
2269481	Thallium	1.80	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402705

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2268798	Ammonia-N	4.82	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270026	Kjeldahl Nitrogen	2.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402873

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269812	NO2NO3-N	0.502	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403006

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271788	Total-P	2.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269813	O-Phosphate-P	0.368	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P402667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269811	Total Alkalinity	1.66	Sample	P	0 - 5.2

Reference Method: SM 4500 F-C-2011
Batch ID: P402669

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2269375	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P402994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270029	Organic Carbon	0.336	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: A107297
Included Lab Sample IDs: 2269813

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	98.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A107298
Included Lab Sample IDs: 2269811

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

Reference Method: SM 2320 B-2011
Run ID: A107332
Included Lab Sample IDs: 2269811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.7	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A107332
Included Lab Sample IDs: 2269811

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A107342
Included Lab Sample IDs: 2269812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A107373
Included Lab Sample IDs: 2269831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	102	P/P	90 - 110
Antimony	101	100	P/P	90 - 110
Arsenic	97.3	96.3	P/P	90 - 110
Beryllium	93.7	92.8	P/P	90 - 110
Cadmium	99.4	100	P/P	90 - 110
Chromium	95.7	96.3	P/P	90 - 110
Copper	94.9	94.5	P/P	90 - 110
Lead	99.4	98.9	P/P	90 - 110
Nickel	94.4	94.3	P/P	90 - 110
Selenium	97.4	99.1	P/P	90 - 110
Silver	97.4	97.8	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A107416
Included Lab Sample IDs: 2269831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.8	100	P/P	90 - 110
Iron	97.9	101	P/P	90 - 110
Magnesium	96.7	100	P/P	90 - 110
Manganese	100	98.8	P/P	90 - 110
Zinc	98.0	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A107426
Included Lab Sample IDs: 2269812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A107473
Included Lab Sample IDs: 2269812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A107508
Included Lab Sample IDs: 2269812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.1	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A107514
Included Lab Sample IDs: 2269812

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	105	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						1.38	
EPA 200.7 Rev. 4.4	Calcium	107	107	109	100			1.14
	Iron	109	110	110	109			0.616
	Magnesium	109	110	111	106			1.02
	Manganese	104	106	106	104			0.0902
	Zinc	104	107	106	106			0.492
EPA 200.8 Rev. 5.4	Aluminum	100	102	102	101			0.889
	Antimony	102	102	105	104			2.64
	Arsenic	98.3	99.2	99.6	99.3			0.369
	Beryllium	96.2	99.8	99.8	95.5			0.0008
	Cadmium	101	102	103	103			1.54
	Chromium	97.2	98.4	100	101			2.08
	Copper	97.2	97.3	99.0	98.0			1.73
	Lead	101	103	104	103			1.08
	Nickel	97.1	96.9	97.9	99.8			0.989
	Selenium	97.3	96.7	98.1	96.8			1.40
	Silver	104	103	105	104			2.46
	Thallium	103	105	107	108			1.80
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	97.4	91.0				4.82
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	90.2	92.9				2.06
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	99.9	99.4				0.502
EPA 365.1 Rev. 2.0	Total-P	105						2.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.6	99.0	98.5				0.368
SM 2320 B-2011	Total Alkalinity	102					1.66	
SM 4500 F-C-2011	Fluoride	100	98.2	98.2				0.0
SM 5310 B-2011	Organic Carbon	96.5	95.5	95.9				0.336

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2269811
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2269831
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2269831
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2269812
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2269812
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2269812
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2269812
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2269813
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2269811
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2269811
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2269811
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2269812

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	08/17/2021			08/17/2021 15:11	Sarah A Nixon	2269811
EPA 200.7 Rev. 4.4	08/17/2021	08/18/2021 15:35	Elliott D. Healy	08/24/2021 01:28	Josef B Mick	2269831
EPA 200.8 Rev. 5.4	08/17/2021	08/18/2021 15:35	Elliott D. Healy	08/20/2021 15:24	Alexander Thompson	2269831
EPA 350.1 Rev. 2.0	08/17/2021			08/19/2021 12:31	Roberta Tatti	2269812
EPA 351.2 Rev. 2.0	08/17/2021	08/26/2021 13:43	Benjamin T. Nordmann	08/27/2021 11:32	Virginia P. Brown	2269812
EPA 353.2 Rev. 2.0	08/17/2021			08/24/2021 10:26	Beverly Y. Sanders	2269812
EPA 365.1 Rev. 2.0	08/17/2021	08/26/2021 14:30	Simonne.V. Calhoun	08/27/2021 11:10	Shengyu Ding	2269812
EPA 365.1 Rev. 2.0 dissolved	08/17/2021			08/17/2021 15:14	James L Waggerby	2269813
SM 2320 B-2011	08/17/2021			08/19/2021 00:08	Dale L. Simmons	2269811
SM 2540 D-2011	08/17/2021			08/23/2021 09:37	Yijie Li	2269811
SM 4500 F-C-2011	08/17/2021			08/18/2021 23:42	Dale L. Simmons	2269811
SM 5310 B-2011	08/17/2021			08/24/2021 09:21	Madeline Gruver	2269812