

Chemical Analysis Report

NE-DIST-2021-07-28-01

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

Event Description: **Nassau West 1**
Request ID: **RQ-2021-07-26-19**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 23-AUG-2021 10:49



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: St Marys R SR 2 East

Collection Date/Time: 07/27/2021 10:20

Field ID: 19010027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265326	EPA 200.7 Rev. 4.4	Barium	16.7		ug/L	P401825	
		Calcium	3.21		mg/L	P401825	
		Iron	1.95E+03		ug/L	P401825	
		Magnesium	1.02		mg/L	P401825	
		Manganese	19.8		ug/L	P401825	
		Potassium	0.41	I	mg/L	P401825	
		Sodium	3.5		mg/L	P401825	
	EPA 200.8 Rev. 5.4	Zinc	9.7	I	ug/L	P401825	
		Aluminum	819		ug/L	P401825	
		Antimony	0.058	I	ug/L	P401825	
		Arsenic	0.73		ug/L	P401825	
		Beryllium	0.051		ug/L	P401825	
		Boron**	16.2		ug/L	P401825	
		Cadmium	0.024	I	ug/L	P401825	
		Chromium	0.99	I	ug/L	P401825	
		Copper	0.69	I	ug/L	P402167	
		Lead	1.30		ug/L	P401825	
		Nickel	0.95	I	ug/L	P401825	
		Selenium	0.27	I	ug/L	P401825	
		Silver	0.010	U	ug/L	P401825	
		Thallium	0.10	U	ug/L	P401825	
	SM 2340B	Hardness	12.2		mg/L	P401825	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 08/05/2021.

Sample Location: Unnamed Stream @ CR 121

Collection Date/Time: 07/27/2021 10:50

Field ID: 19010127

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265308	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P401655	
	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P401934	
		Sulfate	0.41	I	mg SO4/L	P401935	
	SM 2120 B-2011	Color (true)	410		PCU	P401659	
	SM 2320 B-2011	Total Alkalinity	1.4	I	mg CaCO3/L	P401738	
	SM 2540 C-2011	TDS	92		mg/L	P402088	
	SM 2540 D-2011	TSS	3	I	mg/L	P401831	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401740	
2265310	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P402123	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P402634	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401696	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P401761	
	SM 5310 B-2011	Organic Carbon	32		mg C/L	P402250	
2265312	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P401651	
2265323	EPA 200.7 Rev. 4.4	Barium	14.0		ug/L	P401825	
		Calcium	4.19		mg/L	P401825	
		Iron	2.18E+03		ug/L	P401825	
		Magnesium	0.75		mg/L	P401825	
		Manganese	13.6		ug/L	P401825	
		Potassium	0.30	U	mg/L	P401825	
		Sodium	4.1		mg/L	P401825	
	EPA 200.8 Rev. 5.4	Zinc	9.3	I	ug/L	P401825	
		Aluminum	501		ug/L	P401825	
		Antimony	0.050	U	ug/L	P401825	
		Arsenic	0.69		ug/L	P401825	
		Beryllium	0.038	I	ug/L	P401825	
		Boron**	17.5		ug/L	P401825	
		Cadmium	0.020	U	ug/L	P401825	
		Chromium	0.80	I	ug/L	P401825	
		Copper	0.40	U	ug/L	P402167	
		Lead	0.40	I	ug/L	P402167	
		Nickel	0.97	I	ug/L	P401825	
		Selenium	0.20	U	ug/L	P401825	
		Silver	0.010	U	ug/L	P401825	
		Thallium	0.10	U	ug/L	P401825	
	SM 2340B	Hardness	13.5		mg/L	P401825	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: St Marys R @ Stokes Rd

Collection Date/Time: 07/27/2021 12:00

Field ID: 19010093

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265309	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P401655	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P401934	
		Sulfate	0.42	I	mg SO4/L	P401935	
		Color (true)	610		PCU	P401659	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P401738	
	SM 2540 C-2011	TDS	111		mg/L	P402088	
	SM 2540 D-2011	TSS	2	I	mg/L	P401831	
2265311	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401740	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P402122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P402634	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P401696	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P401761	
2265313	SM 5310 B-2011	Organic Carbon	48		mg C/L	P402250	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P401651	
2265324	EPA 200.7 Rev. 4.4	Barium	15.9		ug/L	P401825	
		Calcium	2.76		mg/L	P401825	
		Iron	1.97E+03		ug/L	P401825	
		Magnesium	0.96		mg/L	P401825	
		Manganese	18.7		ug/L	P401825	
		Potassium	0.35	I	mg/L	P401825	
		Sodium	3.4		mg/L	P401825	
	EPA 200.8 Rev. 5.4	Zinc	23		ug/L	P401825	
		Aluminum	822		ug/L	P401825	
		Antimony	0.053	I	ug/L	P401825	
		Arsenic	0.72		ug/L	P401825	
		Beryllium	0.050		ug/L	P401825	
		Boron**	15.3		ug/L	P401825	
		Cadmium	0.025	I	ug/L	P401825	
		Chromium	0.91	I	ug/L	P401825	
		Copper	4.37		ug/L	P402167	
		Lead	1.37		ug/L	P401825	
		Nickel	0.98	I	ug/L	P401825	
		Selenium	0.20	U	ug/L	P401825	
		Silver	0.010	U	ug/L	P401825	
		Thallium	0.10	U	ug/L	P401825	
		Hardness	10.9		mg/L	P401825	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: The copper and lead result was confirmed in the undigested sample on 08/05/2021.

Sample Location: Unnamed Drain to Brandy Branch at US301

Collection Date/Time: 07/27/2021 12:45

Field ID: G4NE0302

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2265314	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P401655	
	EPA 300.0 Rev. 2.1	Chloride	9.5		mg Cl/L	P401934	
		Sulfate	0.69		mg SO4/L	P401935	
		Color (true)	630		PCU	P401659	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P401738	
	SM 2540 C-2011	TDS	128		mg/L	P402089	
	SM 2540 D-2011	TSS	2	IA	mg/L	P401832	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401740	
2265315	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P402179	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P402523	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401698	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P402011	
	SM 5310 B-2011	Organic Carbon	55		mg C/L	P402250	
2265316	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P401651	
2265325	EPA 200.7 Rev. 4.4	Barium	15.7		ug/L	P401825	
		Calcium	2.81		mg/L	P401825	
		Iron	2.39E+03		ug/L	P401825	
		Magnesium	0.89		mg/L	P401825	
		Manganese	13.7		ug/L	P401825	
		Potassium	0.30	U	mg/L	P401825	
		Sodium	5.7		mg/L	P401825	
	EPA 200.8 Rev. 5.4	Zinc	16	I	ug/L	P401825	
		Aluminum	844		ug/L	P401825	
		Antimony	0.050	U	ug/L	P401825	
		Arsenic	0.58		ug/L	P401825	
		Beryllium	0.070		ug/L	P401825	
		Boron**	17.0		ug/L	P401825	
		Cadmium	0.022	I	ug/L	P401825	
		Chromium	0.89	I	ug/L	P401825	
		Copper	2.33		ug/L	P402167	
		Lead	0.99		ug/L	P401825	
		Nickel	1.3	I	ug/L	P401825	
		Selenium	0.21	I	ug/L	P401825	
		Silver	0.010	U	ug/L	P401825	
		Thallium	0.10	U	ug/L	P401825	
	SM 2340B	Hardness	10.7		mg/L	P401825	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 08/05/2021.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P401655

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401825

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401825

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
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	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 200.8 Rev. 5.4
Batch ID: P402167

Component	Result	Code	Units
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401934

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401935

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402122

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402123

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402179

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402523

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402634

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401696

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401698

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401761

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402011

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: P401651

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

Reference Method: SM 2120 B-2011
Batch ID: P401659

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P401738

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

Reference Method: SM 2540 C-2011
Batch ID: P402088

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P402089

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P401831

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P401832

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P401740

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P402250

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: P401825

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.9		P	85 - 115
Calcium	98.0		P	85 - 115
Iron	100		P	85 - 115
Magnesium	103		P	85 - 115
Manganese	98.9		P	85 - 115
Potassium	95.9		P	85 - 115
Sodium	101		P	85 - 115
Zinc	97.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401825

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	106		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	102		P	85 - 115
Boron	104		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	103		P	85 - 115
Lead	101		P	85 - 115
Nickel	105		P	85 - 115
Selenium	102		P	85 - 115
Silver	102		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402167

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	95.8		P	85 - 115
Lead	96.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401934

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: P401935

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402122

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402123

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402179

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: P402523

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402634

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401696

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401698

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: P401761

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402011

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: P401651

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P401659

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P401738

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

Reference Method: SM 4500 F-C-2011
Batch ID: P401740

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

Reference Method: SM 5310 B-2011
Batch ID: P402250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265614	Barium	98.7	97.1	P/P	80 - 120
2265614	Calcium	103		P	80 - 120
2265614	Iron	103	102	P/P	80 - 120
2265614	Magnesium	105	103	P/P	80 - 120
2265614	Manganese	98.5	96.8	P/P	80 - 120
2265614	Potassium	102	102	P/P	80 - 120
2265614	Sodium	103	103	P/P	80 - 120
2265614	Zinc	99.3	97.1	P/P	80 - 120
2265686	Barium	102		P	80 - 120
2265686	Calcium	103		P	80 - 120
2265686	Iron	104		P	80 - 120
2265686	Magnesium	106		P	80 - 120
2265686	Manganese	101		P	80 - 120
2265686	Potassium	102		P	80 - 120
2265686	Sodium	105		P	80 - 120
2265686	Zinc	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265614	Aluminum	104	104	P/P	80 - 120
2265614	Antimony	105	106	P/P	80 - 120
2265614	Arsenic	99.4	100	P/P	80 - 120
2265614	Beryllium	105	104	P/P	80 - 120
2265614	Boron	106	105	P/P	80 - 120
2265614	Cadmium	102	100	P/P	80 - 120
2265614	Chromium	102	103	P/P	80 - 120
2265614	Lead	99.7	99.6	P/P	80 - 120
2265614	Nickel	102	103	P/P	80 - 120
2265614	Selenium	98.6	99.1	P/P	80 - 120
2265614	Silver	101	102	P/P	80 - 120
2265614	Thallium	108	109	P/P	80 - 120
2265686	Aluminum	97.9		P	80 - 120
2265686	Antimony	103		P	80 - 120
2265686	Arsenic	101		P	80 - 120
2265686	Beryllium	103		P	80 - 120
2265686	Boron	102		P	80 - 120
2265686	Cadmium	102		P	80 - 120
2265686	Chromium	102		P	80 - 120
2265686	Lead	100		P	80 - 120
2265686	Nickel	105		P	80 - 120
2265686	Selenium	96.8		P	80 - 120
2265686	Silver	102		P	80 - 120
2265686	Thallium	108		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2264638	Copper	93.1	92.4	P/P	80 - 120
2264638	Lead	93.4	92.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265323	Copper	94.1		P	80 - 120
2265323	Lead	94.1		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265297	Chloride	98.5		P	90 - 110
2265476	Chloride	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265297	Sulfate	99.5		P	90 - 110
2265476	Sulfate	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402122

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265506	Ammonia-N	100	98.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402123

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265153	Ammonia-N	98.8	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265956	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265365	Kjeldahl Nitrogen	104	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401696

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265204	NO2NO3-N	98.5	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401698

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265332	NO2NO3-N	99.5	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265289	Total-P	108	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265120	Total-P	105	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265333	O-Phosphate-P	99.9	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P401740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265297	Fluoride	101	98.6	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P402250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2265289	Organic Carbon	97.0	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P401655

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265263	Turbidity	3.16	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401825

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265614	Barium	1.62	Spike	P	0 - 20
2265614	Calcium	0.558	Spike	P	0 - 20
2265614	Iron	0.970	Spike	P	0 - 20
2265614	Magnesium	1.03	Spike	P	0 - 20
2265614	Manganese	1.69	Spike	P	0 - 20
2265614	Potassium	0.0957	Spike	P	0 - 20
2265614	Sodium	0.189	Spike	P	0 - 20
2265614	Zinc	2.19	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401825

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265614	Aluminum	0.368	Spike	P	0 - 20
2265614	Antimony	0.239	Spike	P	0 - 20
2265614	Arsenic	0.851	Spike	P	0 - 20
2265614	Beryllium	0.132	Spike	P	0 - 20
2265614	Boron	1.34	Spike	P	0 - 20
2265614	Cadmium	1.17	Spike	P	0 - 20
2265614	Chromium	0.861	Spike	P	0 - 20
2265614	Lead	0.128	Spike	P	0 - 20
2265614	Nickel	0.994	Spike	P	0 - 20
2265614	Selenium	0.546	Spike	P	0 - 20
2265614	Silver	0.723	Spike	P	0 - 20
2265614	Thallium	0.942	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402167

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2264638	Copper	0.816	Spike	P	0 - 20
2264638	Lead	0.710	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P401934

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265297	Chloride	0.710	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265297	Sulfate	1.30	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402122

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265506	Ammonia-N	1.64	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265153	Ammonia-N	0.300	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P402179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265956	Ammonia-N	0.394	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265365	Kjeldahl Nitrogen	1.05	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265207	Kjeldahl Nitrogen	0.826	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401696

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265204	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265332	NO2NO3-N	0.916	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265289	Total-P	0.163	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265120	Total-P	0.787	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P401651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265333	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P401659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265364	Color (true)	5.30	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P401738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265297	Total Alkalinity	0.188	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P402088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265061	TDS	4.20	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P402089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265381	TDS	2.33	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P401740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265297	Fluoride	1.88	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P402250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2265289	Organic Carbon	0.458	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: A106883

Included Lab Sample IDs: 2265312, 2265313, 2265316

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106884

Included Lab Sample IDs: 2265308, 2265309, 2265314

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

Reference Method: SM 2120 B-2011

Run ID: A106885

Included Lab Sample IDs: 2265308, 2265309, 2265314

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106916

Included Lab Sample IDs: 2265310, 2265311, 2265315

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

Reference Method: SM 2320 B-2011

Run ID: A106931

Included Lab Sample IDs: 2265308, 2265309, 2265314

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

Reference Method: SM 4500 F-C-2011

Run ID: A106931

Included Lab Sample IDs: 2265308, 2265309, 2265314

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106978

Included Lab Sample IDs: 2265310, 2265311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.8	95.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107013

Included Lab Sample IDs: 2265323, 2265324, 2265325, 2265326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107013

Included Lab Sample IDs: 2265323, 2265324, 2265325, 2265326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	104	105	P/P	90 - 110
Arsenic	103	104	P/P	90 - 110
Beryllium	103	104	P/P	90 - 110
Boron	102	102	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	103	103	P/P	90 - 110
Nickel	105	105	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Silver	95.6	96.2	P/P	90 - 110
Thallium	107	108	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107025

Included Lab Sample IDs: 2265308, 2265309, 2265314

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Sulfate	100	99.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107030

Included Lab Sample IDs: 2265323, 2265324, 2265325, 2265326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	97.6	99.2	P/P	90 - 110
Barium	99.2	99.0	P/P	90 - 110
Calcium	100	98.2	P/P	90 - 110
Calcium	98.2	100	P/P	90 - 110
Iron	100	98.8	P/P	90 - 110
Iron	98.8	100	P/P	90 - 110
Magnesium	98.1	99.8	P/P	90 - 110
Magnesium	99.6	98.1	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Potassium	98.9	99.2	P/P	90 - 110
Potassium	99.2	102	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Sodium	101	103	P/P	90 - 110
Zinc	102	103	P/P	90 - 110
Zinc	99.6	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107042

Included Lab Sample IDs: 2265324, 2265325, 2265326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	101	97.8	P/P	90 - 110
Lead	97.8	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107092

Included Lab Sample IDs: 2265315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107098

Included Lab Sample IDs: 2265310, 2265311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	99.3	P/P	90 - 110
Ammonia-N	98.1	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107121

Included Lab Sample IDs: 2265315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	98.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107149

Included Lab Sample IDs: 2265310, 2265311, 2265315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.6	P/P	90 - 110
Organic Carbon	97.6	97.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107160

Included Lab Sample IDs: 2265323, 2265324, 2265325, 2265326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	95.1	92.8	P/P	90 - 110
Lead	95.6	93.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107302

Included Lab Sample IDs: 2265315

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107354

Included Lab Sample IDs: 2265310, 2265311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	98.8	P/P	90 - 110
Kjeldahl Nitrogen	98.8	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			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						3.16	
EPA 200.7 Rev. 4.4	Barium	98.9	98.7	97.1	102			1.62
	Calcium	98.0	103	103				0.558
	Iron	100	103	102	104			0.970
	Magnesium	103	105	103	106			1.03
	Manganese	98.9	98.5	96.8	101			1.69
	Potassium	95.9	102	102	102			0.0957
	Sodium	101	103	103	105			0.189
	Zinc	97.8	99.3	97.1	100			2.19
EPA 200.8 Rev. 5.4	Aluminum	103	97.9	104	104			0.368
	Antimony	106	103	105	106			0.239
	Arsenic	102	101	99.4	100			0.851
	Beryllium	102	103	105	104			0.132
	Boron	104	102	106	105			1.34
	Cadmium	103	102	102	100			1.17
	Chromium	103	102	102	103			0.861
	Copper	95.8	93.1	92.4	94.1			0.816
	Lead	101	100	99.7	99.6			0.128
	Lead	96.4	93.4	92.7	94.1			0.710
	Nickel	105	105	102	103			0.994
	Selenium	102	96.8	98.6	99.1			0.546
	Silver	102	102	101	102			0.723
	Thallium	106	108	108	109			0.942
EPA 300.0 Rev. 2.1	Chloride	99.6	98.5	95.8			0.710	
	Sulfate	101	99.5	98.0			1.30	
EPA 350.1 Rev. 2.0	Ammonia-N	102	100	98.2				1.64
	Ammonia-N	98.6	98.8	99.2				0.300
	Ammonia-N	101	102	101				0.394
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	104	106				1.05
	Kjeldahl Nitrogen	103						0.826
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	98.5	97.5				1.02
	NO ₂ NO ₃ -N	100	99.5	98.0				0.916
EPA 365.1 Rev. 2.0	Total-P	109	108	107				0.163
	Total-P	105	105	106				0.787
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4	99.9	99.9				0.0
SM 2120 B-2011	Color (true)	101					5.30	
SM 2320 B-2011	Total Alkalinity	102					0.188	
SM 2540 C-2011	TDS						4.20	
	TDS						2.33	
SM 4500 F-C-2011	Fluoride	102	101	98.6				1.88
SM 5310 B-2011	Organic Carbon	97.6	97.0	97.6				0.458

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2265308, 2265309, 2265314
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2265323, 2265324, 2265325, 2265326
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2265323, 2265324, 2265325, 2265326
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2265308, 2265309, 2265314
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2265308, 2265309, 2265314
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2265310, 2265311, 2265315

Reference Method Descriptions

Method	Description	Associated Samples
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2265310, 2265311, 2265315
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2265310, 2265311, 2265315
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2265310, 2265311, 2265315
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2265312, 2265313, 2265316
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2265308, 2265309, 2265314
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2265308, 2265309, 2265314
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2265323, 2265324, 2265325, 2265326
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2265308, 2265309, 2265314
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2265308, 2265309, 2265314
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2265308, 2265309, 2265314
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2265310, 2265311, 2265315

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	07/28/2021			07/28/2021 16:34	Sarah A Nixon	2265308, 2265309, 2265314
EPA 200.7 Rev. 4.4	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 13:55	Betina Topolski	2265323
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 14:03	Betina Topolski	2265324
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 14:09	Betina Topolski	2265325
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 14:44	Betina Topolski	2265326
EPA 200.8 Rev. 5.4	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/03/2021 19:17	Alexander Thompson	2265323
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/03/2021 19:27	Alexander Thompson	2265324
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/03/2021 19:37	Alexander Thompson	2265325
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/03/2021 19:46	Alexander Thompson	2265326
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 12:37	Alexander Thompson	2265324
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 12:43	Alexander Thompson	2265325
	07/28/2021	08/02/2021 14:50	Elliott D. Healy	08/04/2021 13:32	Alexander Thompson	2265326
	07/28/2021	08/09/2021 13:00	Elliott D. Healy	08/10/2021 14:07	Alexander Thompson	2265324
	07/28/2021	08/09/2021 13:00	Elliott D. Healy	08/10/2021 14:13	Alexander Thompson	2265325
	07/28/2021	08/09/2021 13:00	Elliott D. Healy	08/10/2021 14:19	Alexander Thompson	2265326
	07/28/2021	08/09/2021 13:00	Elliott D. Healy	08/10/2021 14:41	Alexander Thompson	2265323
EPA 300.0 Rev. 2.1	07/28/2021			08/02/2021 23:42	Lipi Saha	2265308
	07/28/2021			08/02/2021 23:54	Lipi Saha	2265309
	07/28/2021			08/03/2021 00:07	Lipi Saha	2265314
EPA 350.1 Rev. 2.0	07/28/2021			08/06/2021 13:41	Roberta Tatti	2265311
	07/28/2021			08/06/2021 14:05	Roberta Tatti	2265310
	07/28/2021			08/09/2021 14:19	Ping Hua	2265315
EPA 351.2 Rev. 2.0	07/28/2021	08/16/2021 13:00	Benjamin T. Nordmann	08/17/2021 09:13	Virginia P. Brown	2265315
	07/28/2021	08/18/2021 14:21	Benjamin T. Nordmann	08/19/2021 11:38	Virginia P. Brown	2265310
	07/28/2021	08/18/2021 14:21	Benjamin T. Nordmann	08/19/2021 11:43	Virginia P. Brown	2265311
EPA 353.2 Rev. 2.0	07/28/2021			07/29/2021 10:05	Beverly Y. Sanders	2265310
	07/28/2021			07/29/2021 10:06	Beverly Y. Sanders	2265311
	07/28/2021			07/29/2021 10:22	Beverly Y. Sanders	2265315
EPA 365.1 Rev. 2.0	07/28/2021	07/30/2021 15:31	Simonne.V. Calhoun	08/02/2021 12:27	Shengyu Ding	2265310
	07/28/2021	07/30/2021 15:31	Simonne.V. Calhoun	08/02/2021 12:28	Shengyu Ding	2265311
	07/28/2021	08/05/2021 15:45	Simonne.V. Calhoun	08/06/2021 12:38	Shengyu Ding	2265315
EPA 365.1 Rev. 2.0 dissolved	07/28/2021			07/28/2021 14:55	Ping Hua	2265312
	07/28/2021			07/28/2021 14:56	Ping Hua	2265313, 2265316
SM 2120 B-2011	07/28/2021			07/28/2021 17:23	Benjamin T. Nordmann	2265308
	07/28/2021			07/28/2021 17:24	Benjamin T. Nordmann	2265309
	07/28/2021			07/28/2021 17:25	Benjamin T. Nordmann	2265314
SM 2320 B-2011	07/28/2021			07/29/2021 19:56	Sarah A Nixon	2265308
	07/28/2021			07/29/2021 20:04	Sarah A Nixon	2265309
	07/28/2021			07/29/2021 20:10	Sarah A Nixon	2265314
SM 2340B	07/28/2021			08/04/2021 13:55	Betina Topolski	2265323

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340B	07/28/2021			08/04/2021 14:03	Betina Topolski	2265324
	07/28/2021			08/04/2021 14:09	Betina Topolski	2265325
	07/28/2021			08/04/2021 14:44	Betina Topolski	2265326
SM 2540 C-2011	07/28/2021			07/30/2021 15:15	Yijie Li	2265308, 2265309, 2265314
SM 2540 D-2011	07/28/2021			07/30/2021 15:15	Yijie Li	2265308, 2265309, 2265314
SM 4500 F-C-2011	07/28/2021			07/29/2021 19:56	Sarah A Nixon	2265308
	07/28/2021			07/29/2021 20:04	Sarah A Nixon	2265309
	07/28/2021			07/29/2021 20:10	Sarah A Nixon	2265314
SM 5310 B-2011	07/28/2021			08/10/2021 01:44	Madeline Gruver	2265310
	07/28/2021			08/10/2021 01:58	Madeline Gruver	2265311
	07/28/2021			08/10/2021 02:40	Madeline Gruver	2265315