

Chemical Analysis Report

NE-DIST-2022-02-08-01

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

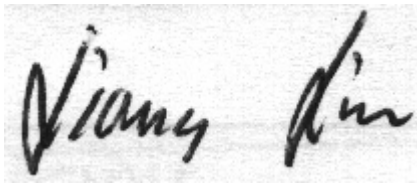
Event Description: **Nassau North 2**
Request ID: **RQ-2022-01-31-17**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 03-MAR-2022 15:01

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

Results for the following analytical 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: Little St Marys River @ SR 115A

Collection Date/Time: 02/07/2022 11:05

Field ID: 19010032

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304394	EPA 200.7 Rev. 4.4	Barium	26.4		ug/L	P409654	
		Calcium	10.8		mg/L	P409654	
		Iron	750		ug/L	P409654	
		Magnesium	3.01		mg/L	P409654	
		Manganese	13.1		ug/L	P409654	
		Potassium	1.6		mg/L	P409654	
		Sodium	10.7		mg/L	P409654	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409654	
		Aluminum	437		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.40		ug/L	P409654	
		Beryllium	0.033	I	ug/L	P409654	
		Boron**	22.2		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.71	I	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.42		ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	39.5		mg/L	P409654	

Sample Location: Creek draining former Hampton Lake 100m above Rd.

Collection Date/Time: 02/07/2022 11:35

Field ID: G4NE0292

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304398	EPA 200.7 Rev. 4.4	Barium	16.4		ug/L	P409654	
		Calcium	4.11		mg/L	P409654	
		Iron	590		ug/L	P409654	
		Magnesium	1.02		mg/L	P409654	
		Manganese	6.5		ug/L	P409654	
		Potassium	0.96	I	mg/L	P409654	
		Sodium	6.2		mg/L	P409654	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409654	
		Aluminum	236		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.26		ug/L	P409654	
		Beryllium	0.021	I	ug/L	P409654	
		Boron**	14.8		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.40	U	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.29	I	ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	14.5		mg/L	P409654	

Sample Location: Pigeon Creek at US 1

Collection Date/Time: 02/07/2022 11:50

Field ID: 19010099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304395	EPA 200.7 Rev. 4.4	Barium	16.0		ug/L	P409654	
		Calcium	3.98		mg/L	P409654	
		Iron	560		ug/L	P409654	
		Magnesium	0.99		mg/L	P409654	
		Manganese	7.2		ug/L	P409654	
		Potassium	1.1	I	mg/L	P409654	
		Sodium	6.4		mg/L	P409654	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409654	
		Aluminum	224		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.27		ug/L	P409654	
		Beryllium	0.019	I	ug/L	P409654	
		Boron**	16.0		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.40	U	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.24	I	ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	14.0		mg/L	P409654	

Sample Location: Pigeon Creek @ Andrews Rd

Collection Date/Time: 02/07/2022 12:10

Field ID: 19010098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304378	DEP SOP: NU-094-1	Color (true)**	130		PCU	P409597	
	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P409582	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P409775	
		Sulfate	2.7		mg SO4/L	P409782	
	SM 2320 B-2011	Total Alkalinity	0.98	I	mg CaCO3/L	P409857	
	SM 2540 C-2011	TDS	50		mg/L	P409978	
	SM 2540 D-2011	TSS	2	U	mg/L	P409970	
2304380	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P409860	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P409955	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P409672	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P409742	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P409631	
2304382	SM 5310 B-2011	Organic Carbon	12		mg C/L	P410066	
2304392	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P409566	
2304392	EPA 200.7 Rev. 4.4	Barium	11.7		ug/L	P409654	
		Calcium	2.07		mg/L	P409654	
		Iron	690		ug/L	P409654	
		Magnesium	0.78		mg/L	P409654	
		Manganese	9.5		ug/L	P409654	
		Potassium	1.2	I	mg/L	P409654	
		Sodium	7.3		mg/L	P409654	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409654	
		Aluminum	243		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.25		ug/L	P409654	
		Beryllium	0.019	I	ug/L	P409654	
		Boron**	15.7		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.40	U	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.37	I	ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	8.4		mg/L	P409654	

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: Mills CR @ CR 108

Collection Date/Time: 02/07/2022 13:00

Field ID: 19010096

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304396	EPA 200.7 Rev. 4.4	Barium	15.4		ug/L	P409654	
		Calcium	1.98		mg/L	P409654	
		Iron	960		ug/L	P409654	
		Magnesium	0.77		mg/L	P409654	
		Manganese	13.5		ug/L	P409654	
		Potassium	0.55	I	mg/L	P409654	
		Sodium	6.6		mg/L	P409654	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409654	
		Aluminum	362		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.28		ug/L	P409654	
		Beryllium	0.031	I	ug/L	P409654	
		Boron**	13.2		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.47	I	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.38	I	ug/L	P409654	
		Nickel	0.50	I	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	8.1		mg/L	P409654	

Sample Location: Mills Creek at US 301/US1

Collection Date/Time: 02/07/2022 14:10

Field ID: 19020048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304397	EPA 200.7 Rev. 4.4	Barium	15.7		ug/L	P409654	
		Calcium	4.39		mg/L	P409654	
		Iron	750		ug/L	P409654	
		Magnesium	1.46		mg/L	P409654	
		Manganese	11.2		ug/L	P409654	
		Potassium	1.7		mg/L	P409654	
		Sodium	9.1		mg/L	P409654	
		Zinc	5.0	U	ug/L	P409654	
	EPA 200.8 Rev. 5.4	Aluminum	303		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.32		ug/L	P409654	
		Beryllium	0.025	I	ug/L	P409654	
		Boron**	18.4		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.54	I	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.35	I	ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	17.0		mg/L	P409654	

Sample Location: Little St. Marys @ CR 121A

Collection Date/Time: 02/07/2022 10:25

Field ID: 19010046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2304379	DEP SOP: NU-094-1	Color (true)**	140		PCU	P409597	
	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P409582	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P409775	
		Sulfate	14		mg SO4/L	P409782	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P409857	
	SM 2540 C-2011	TDS	120		mg/L	P409978	
	SM 2540 D-2011	TSS	2	I	mg/L	P409970	
2304381	SM 4500 F-C-2011	Fluoride	0.046	I	mg F/L	P409860	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P409955	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P409670	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P409742	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P409631	
2304383	SM 5310 B-2011	Organic Carbon	18		mg C/L	P410066	
2304393	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P409566	
2304393	EPA 200.7 Rev. 4.4	Barium	26.7		ug/L	P409654	
		Calcium	13.4		mg/L	P409654	
		Iron	540		ug/L	P409654	
		Magnesium	4.02		mg/L	P409654	
		Manganese	17.6		ug/L	P409654	
		Potassium	1.4		mg/L	P409654	
		Sodium	11.4		mg/L	P409654	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P409654	
		Aluminum	237		ug/L	P409654	
		Antimony	0.050	U	ug/L	P409654	
		Arsenic	0.33		ug/L	P409654	
		Beryllium	0.026	I	ug/L	P409654	
		Boron**	20.6		ug/L	P409654	
		Cadmium	0.020	U	ug/L	P409654	
		Chromium	0.50	I	ug/L	P409654	
		Copper	0.40	U	ug/L	P409654	
		Lead	0.31	I	ug/L	P409654	
		Nickel	0.50	U	ug/L	P409654	
		Selenium	0.20	U	ug/L	P409654	
		Silver	0.010	U	ug/L	P409654	
		Thallium	0.10	U	ug/L	P409654	
	SM 2340B	Hardness	50.0		mg/L	P409654	

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: DEP SOP: NU-094-1
Batch ID: P409597

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409582

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

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: P409654

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
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: P409775

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

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: P409955

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409670

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409672

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409742

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409631

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409566

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

Reference Method: SM 2320 B-2011
Batch ID: P409857

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

Reference Method: SM 2540 C-2011
Batch ID: P409978

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P409970

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P410066

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P409597

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.2		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.5		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	108		P	85 - 115
Iron	108		P	85 - 115
Magnesium	108		P	85 - 115
Manganese	109		P	85 - 115
Potassium	106		P	85 - 115
Sodium	105		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	101		P	85 - 115
Boron	102		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	100		P	85 - 115
Copper	98.8		P	85 - 115
Lead	99.1		P	85 - 115
Nickel	101		P	85 - 115
Selenium	101		P	85 - 115
Silver	101		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409775

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409955

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409670

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409742

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: P409631

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: P409566

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

Reference Method: SM 2320 B-2011
Batch ID: P409857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P410066

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P409654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304395	Barium	109	105	P/P	80 - 120
2304395	Calcium	108	94.8	P/P	80 - 120
2304395	Iron	105	101	P/P	80 - 120
2304395	Magnesium	105	100	P/P	80 - 120
2304395	Manganese	109	105	P/P	80 - 120
2304395	Potassium	104	99.7	P/P	80 - 120
2304395	Sodium	99.8		P	80 - 120
2304395	Zinc	108	103	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P409654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304395	Aluminum	103	94.6	P/P	80 - 120
2304395	Antimony	104	95.4	P/P	80 - 120
2304395	Arsenic	104	96.1	P/P	80 - 120
2304395	Beryllium	98.4	90.8	P/P	80 - 120
2304395	Boron	105	96.4	P/P	80 - 120
2304395	Cadmium	103	94.0	P/P	80 - 120
2304395	Chromium	104	95.9	P/P	80 - 120
2304395	Copper	102	94.1	P/P	80 - 120
2304395	Lead	100	92.7	P/P	80 - 120
2304395	Nickel	104	94.6	P/P	80 - 120
2304395	Selenium	102	94.1	P/P	80 - 120
2304395	Silver	103	102	P/P	80 - 120
2304395	Thallium	109	102	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304253	Chloride	106		P	90 - 110
2304379	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304253	Sulfate	101		P	90 - 110
2304379	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409955

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304223	Ammonia-N	96.8	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P409670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304254	Kjeldahl Nitrogen	93.5	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2303946	Kjeldahl Nitrogen	105	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304340	NO2NO3-N	97.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304486	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304255	O-Phosphate-P	98.1	99.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304818	Fluoride	98.6	98.6	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P410066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2304418	Organic Carbon	96.0	94.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P409597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304339	Color (true)	0.109	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P409582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304417	Turbidity	2.13	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P409654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304395	Barium	3.39	Spike	P	0 - 20
2304395	Calcium	6.56	Spike	P	0 - 20
2304395	Iron	3.49	Spike	P	0 - 20
2304395	Magnesium	3.77	Spike	P	0 - 20
2304395	Manganese	3.67	Spike	P	0 - 20
2304395	Potassium	3.08	Spike	P	0 - 20
2304395	Sodium	4.06	Spike	P	0 - 20
2304395	Zinc	3.87	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P409654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304395	Aluminum	6.41	Spike	P	0 - 20
2304395	Antimony	8.53	Spike	P	0 - 20
2304395	Arsenic	7.74	Spike	P	0 - 20
2304395	Beryllium	7.70	Spike	P	0 - 20
2304395	Boron	7.32	Spike	P	0 - 20
2304395	Cadmium	9.16	Spike	P	0 - 20
2304395	Chromium	8.27	Spike	P	0 - 20
2304395	Copper	8.30	Spike	P	0 - 20
2304395	Lead	7.69	Spike	P	0 - 20
2304395	Nickel	9.04	Spike	P	0 - 20
2304395	Selenium	8.24	Spike	P	0 - 20
2304395	Silver	1.27	Spike	P	0 - 20
2304395	Thallium	6.73	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304253	Chloride	0.448	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304253	Sulfate	0.537	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409955

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304223	Ammonia-N	2.10	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304254	Kjeldahl Nitrogen	6.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P409672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2303946	Kjeldahl Nitrogen	2.25	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P409742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304340	NO2NO3-N	0.514	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P409631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304486	Total-P	0.419	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P409566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304255	O-Phosphate-P	1.48	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P409857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304818	Total Alkalinity	0.689	Sample	P	0 - 5.2

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P409978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304253	TDS	6.70	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P409860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304818	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2304418	Organic Carbon	0.604	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: A110286

Included Lab Sample IDs: 2304382, 2304383

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110291

Included Lab Sample IDs: 2304378, 2304379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A110296

Included Lab Sample IDs: 2304378, 2304379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110358

Included Lab Sample IDs: 2304380, 2304381

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110365

Included Lab Sample IDs: 2304380, 2304381

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110370

Included Lab Sample IDs: 2304378, 2304379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	108	P/P	90 - 110
Chloride	108	107	P/P	90 - 110
Sulfate	104	105	P/P	90 - 110
Sulfate	105	105	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110397

Included Lab Sample IDs: 2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	102	P/P	90 - 110
Aluminum	102	102	P/P	90 - 110
Antimony	98.7	99.1	P/P	90 - 110
Antimony	99.1	98.4	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110397

Included Lab Sample IDs: 2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	98.0	98.8	P/P	90 - 110
Beryllium	98.4	98.0	P/P	90 - 110
Boron	101	98.0	P/P	90 - 110
Boron	98.4	101	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Cadmium	102	100	P/P	90 - 110
Chromium	100	102	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Copper	100	102	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	96.8	97.2	P/P	90 - 110
Lead	97.2	96.6	P/P	90 - 110
Nickel	101	102	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Selenium	102	99.9	P/P	90 - 110
Silver	94.3	94.8	P/P	90 - 110
Silver	94.8	93.1	P/P	90 - 110
Thallium	105	105	P/P	90 - 110
Thallium	105	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110402

Included Lab Sample IDs: 2304380, 2304381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.5	98.8	P/P	90 - 110
Kjeldahl Nitrogen	94.6	95.7	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110414

Included Lab Sample IDs: 2304378, 2304379

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	94.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110414

Included Lab Sample IDs: 2304378, 2304379

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110426

Included Lab Sample IDs: 2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	104	P/P	90 - 110
Barium	105	102	P/P	90 - 110
Calcium	101	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110426

Included Lab Sample IDs: 2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.5	101	P/P	90 - 110
Iron	100	102	P/P	90 - 110
Iron	102	100	P/P	90 - 110
Magnesium	101	99.0	P/P	90 - 110
Magnesium	99.0	101	P/P	90 - 110
Manganese	104	105	P/P	90 - 110
Manganese	107	104	P/P	90 - 110
Potassium	98.4	99.8	P/P	90 - 110
Potassium	99.5	98.4	P/P	90 - 110
Sodium	100	102	P/P	90 - 110
Sodium	102	100	P/P	90 - 110
Zinc	101	103	P/P	90 - 110
Zinc	104	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110454

Included Lab Sample IDs: 2304380, 2304381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110496

Included Lab Sample IDs: 2304380, 2304381

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.0	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
DEP SOP: NU-094-1	Color (true)	99.2			0.109	
EPA 180.1 Rev. 2.0	Turbidity	96.5			2.13	
EPA 200.7 Rev. 4.4	Barium	108	109	105		3.39
	Calcium	108	108	94.8		6.56
	Iron	108	105	101		3.49
	Magnesium	108	105	100		3.77
	Manganese	109	109	105		3.67
	Potassium	106	104	99.7		3.08
	Sodium	105	99.8			4.06
	Zinc	105	108	103		3.87
EPA 200.8 Rev. 5.4	Aluminum	101	103	94.6		6.41
	Antimony	102	104	95.4		8.53
	Arsenic	102	104	96.1		7.74
	Beryllium	101	98.4	90.8		7.70
	Boron	102	105	96.4		7.32
	Cadmium	101	103	94.0		9.16
	Chromium	100	104	95.9		8.27
	Copper	98.8	102	94.1		8.30
	Lead	99.1	100	92.7		7.69
	Nickel	101	104	94.6		9.04
	Selenium	101	102	94.1		8.24
	Silver	101	103	102		1.27
	Thallium	106	109	102		6.73
EPA 300.0 Rev. 2.1	Chloride	106	106	107	0.448	
	Sulfate	106	101	102	0.537	
EPA 350.1 Rev. 2.0	Ammonia-N	103	96.8	99.4		2.10
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0	93.5	101		6.35
	Kjeldahl Nitrogen	108	105	109		2.25
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5	97.0	97.5		0.514
EPA 365.1 Rev. 2.0	Total-P	104	104	104		0.419
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4	98.1	99.8		1.48
SM 2320 B-2011	Total Alkalinity	99.5			0.689	
SM 2540 C-2011	TDS				6.70	
SM 4500 F-C-2011	Fluoride	98.2	98.6	98.6		0.0
SM 5310 B-2011	Organic Carbon	94.5	96.0	94.8		0.604

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2304378, 2304379
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2304378, 2304379
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2304378, 2304379
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2304378, 2304379
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2304380, 2304381
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2304380, 2304381
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2304380, 2304381
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2304380, 2304381
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2304382, 2304383

Reference Method Descriptions

Method	Description	Associated Samples
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2304378, 2304379
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2304392, 2304393, 2304394, 2304395, 2304396, 2304397, 2304398
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2304378, 2304379
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2304378, 2304379
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2304378, 2304379
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2304380, 2304381

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	02/08/2022			02/08/2022 16:33	Anna M. Plaviak	2304378
	02/08/2022			02/08/2022 16:34	Anna M. Plaviak	2304379
EPA 180.1 Rev. 2.0	02/08/2022			02/08/2022 15:42	Khloe J Berg	2304378
	02/08/2022			02/08/2022 15:45	Khloe J Berg	2304379
EPA 200.7 Rev. 4.4	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 22:08	Josef B Mick	2304392
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 22:16	Josef B Mick	2304393
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 22:24	Josef B Mick	2304394
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 23:03	Josef B Mick	2304395
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 23:31	Josef B Mick	2304396
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 23:39	Josef B Mick	2304397
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/15/2022 23:46	Josef B Mick	2304398
EPA 200.8 Rev. 5.4	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 18:53	Alexander Thompson	2304392
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 19:02	Alexander Thompson	2304393
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 19:12	Alexander Thompson	2304394
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 19:21	Alexander Thompson	2304395
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 20:19	Alexander Thompson	2304396
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 20:28	Alexander Thompson	2304397
	02/08/2022	02/10/2022 10:51	Megan Whitefoot	02/11/2022 20:38	Alexander Thompson	2304398
EPA 300.0 Rev. 2.1	02/08/2022			02/12/2022 01:44	James L Waggeberby	2304379
	02/08/2022			02/12/2022 04:08	James L Waggeberby	2304378
EPA 350.1 Rev. 2.0	02/08/2022			02/16/2022 15:33	Ping Hua	2304380
	02/08/2022			02/16/2022 15:34	Ping Hua	2304381
EPA 351.2 Rev. 2.0	02/08/2022	02/11/2022 10:40	Samantha L Bates	02/14/2022 17:15	Alexandra J Mattheus	2304380
	02/08/2022	02/11/2022 10:44	Alexandra J Mattheus	02/14/2022 18:02	Alexandra J Mattheus	2304381
EPA 353.2 Rev. 2.0	02/08/2022			02/11/2022 10:10	Beverly Y. Sanders	2304380
	02/08/2022			02/11/2022 10:11	Beverly Y. Sanders	2304381
EPA 365.1 Rev. 2.0	02/08/2022	02/10/2022 14:00	Simonne.V. Calhoun	02/11/2022 15:26	Shengyu Ding	2304380
	02/08/2022	02/10/2022 14:00	Simonne.V. Calhoun	02/11/2022 15:27	Shengyu Ding	2304381
EPA 365.1 Rev. 2.0 dissolved	02/08/2022			02/08/2022 14:20	James L Waggeberby	2304382
	02/08/2022			02/08/2022 14:21	James L Waggeberby	2304383
SM 2320 B-2011	02/08/2022			02/15/2022 00:41	Dale L. Simmons	2304378
SM 2340B	02/08/2022			02/15/2022 00:54	Dale L. Simmons	2304379
	02/08/2022			02/15/2022 22:08	Josef B Mick	2304392
	02/08/2022			02/15/2022 22:16	Josef B Mick	2304393
	02/08/2022			02/15/2022 22:24	Josef B Mick	2304394
	02/08/2022			02/15/2022 23:03	Josef B Mick	2304395
	02/08/2022			02/15/2022 23:31	Josef B Mick	2304396
	02/08/2022			02/15/2022 23:39	Josef B Mick	2304397
SM 2540 C-2011	02/08/2022			02/15/2022 23:46	Josef B Mick	2304398
	02/08/2022			02/09/2022 14:36	Yijie Li	2304378, 2304379

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2011	02/08/2022			02/09/2022 14:36	Yijie Li	2304378, 2304379
SM 4500 F-C-2011	02/08/2022			02/15/2022 00:41	Dale L. Simmons	2304378
	02/08/2022			02/15/2022 00:54	Dale L. Simmons	2304379
SM 5310 B-2011	02/08/2022			02/18/2022 08:24	Khloe J Berg	2304380
	02/08/2022			02/18/2022 08:42	Khloe J Berg	2304381