

Chemical Analysis Report

NE-DIST-2021-04-21-01

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

Event Description: **Nassau North 2021**

Request ID: **RQ-2021-04-19-28**

Customer: **NE-DIST**

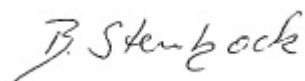
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 13-MAY-2021 15:57



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: Creek Draining Former Hampton Lake 100m Above Rd.

Collection Date/Time: 04/20/2021 11:40

Field ID: G4NE0292

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241255	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P396929	
	EPA 300.0 Rev. 2.1	Chloride	9.9		mg Cl/L	P397124	
		Sulfate	4.9		mg SO4/L	P397127	
	SM 2120 B-2011	Color (true)	210		PCU	P396933	
	SM 2320 B-2011	Total Alkalinity	3.3		mg CaCO3/L	P397029	
	SM 2540 C-2011	TDS	75		mg/L	P397415	
	SM 2540 D-2011	TSS	2	I	mg/L	P397163	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P397030	
2241257	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P397511	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P397109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P397176	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P397014	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P397240	
2241259	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P396925	
2241286	EPA 200.7 Rev. 4.4	Barium	18.9		ug/L	P397606	
		Calcium	4.07		mg/L	P397606	
		Iron	1.11E+03		ug/L	P397606	
		Magnesium	1.00		mg/L	P397606	
		Manganese	16.1		ug/L	P397606	
		Potassium	0.98	I	mg/L	P397606	
		Sodium	7.1		mg/L	P397606	
	EPA 200.8 Rev. 5.4	Zinc	5.8	I	ug/L	P397606	
		Aluminum	380		ug/L	P397606	
		Antimony	0.061	I	ug/L	P397606	
		Arsenic	0.43		ug/L	P397606	
		Beryllium	0.025	I	ug/L	P397606	
		Boron**	19.1		ug/L	P397606	
		Cadmium	0.020	U	ug/L	P397606	
		Chromium	0.46	I	ug/L	P397606	
		Copper	0.40	U	ug/L	P397606	
		Lead	0.49		ug/L	P397606	
		Nickel	0.50	U	ug/L	P397606	
		Selenium	0.20	U	ug/L	P397606	
		Silver	0.010	U	ug/L	P397606	
		Thallium	0.10	U	ug/L	P397606	
	SM 2340B	Hardness	14.3		mg/L	P397606	

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: Field Blank

Collection Date/Time: 04/20/2021 11:46

Field ID: FB_04202021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241256	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P396929	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P397124	
		Sulfate	0.20	U	mg SO4/L	P397127	
		Color (true)	2.5	U	PCU	P396934	
	SM 2120 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P397029	
	SM 2540 C-2011	TDS	15	U	mg/L	P397413	
	SM 2540 D-2011	TSS	2	U	mg/L	P397161	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P397030	
2241258	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P397511	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P397109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P397176	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P397014	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P397240	
2241260	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P396925	
2241287	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P397606	
		Calcium	0.075	U	mg/L	P397606	
		Iron	30	U	ug/L	P397606	
		Magnesium	0.040	U	mg/L	P397606	
		Manganese	1.0	U	ug/L	P397606	
		Potassium	0.30	U	mg/L	P397606	
		Sodium	0.50	U	mg/L	P397606	
		Zinc	5.0	U	ug/L	P397606	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P397606	
		Antimony	0.050	U	ug/L	P397606	
		Arsenic	0.050	U	ug/L	P397606	
		Beryllium	0.010	U	ug/L	P397606	
		Boron**	2.0	U	ug/L	P397606	
		Cadmium	0.020	U	ug/L	P397606	
		Chromium	0.40	U	ug/L	P397606	
		Copper	0.40	U	ug/L	P397606	
		Lead	0.20	U	ug/L	P397606	
		Nickel	0.50	U	ug/L	P397606	
		Selenium	0.20	U	ug/L	P397606	
		Silver	0.010	U	ug/L	P397606	
		Thallium	0.10	U	ug/L	P397606	
		Hardness	0.35	U	mg/L	P397606	

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: Pigeon Creek at US 1

Collection Date/Time: 04/20/2021 12:00

Field ID: 19010099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241285	EPA 200.7 Rev. 4.4	Barium	17.3		ug/L	P397606	
		Calcium	3.45		mg/L	P397606	
		Iron	1.18E+03		ug/L	P397606	
		Magnesium	0.95		mg/L	P397606	
		Manganese	14.2		ug/L	P397606	
		Potassium	1.1	I	mg/L	P397606	
		Sodium	7.0		mg/L	P397606	
	EPA 200.8 Rev. 5.4	Zinc	5.8	I	ug/L	P397606	
		Aluminum	347		ug/L	P397606	
		Antimony	0.061	I	ug/L	P397606	
		Arsenic	0.38		ug/L	P397606	
		Beryllium	0.024	I	ug/L	P397606	
		Boron**	19.7		ug/L	P397606	
		Cadmium	0.020	U	ug/L	P397606	
		Chromium	0.44	I	ug/L	P397606	
		Copper	0.43	I	ug/L	P397606	
		Lead	0.43		ug/L	P397606	
		Nickel	0.50	U	ug/L	P397606	
		Selenium	0.20	U	ug/L	P397606	
		Silver	0.010	U	ug/L	P397606	
		Thallium	0.10	U	ug/L	P397606	
	SM 2340B	Hardness	12.5		mg/L	P397606	

Sample Location: Pigeon Creek @ Andrews Rd.

Collection Date/Time: 04/20/2021 12:20

Field ID: 19010098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241252	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P396929	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P397124	
		Sulfate	2.0		mg SO4/L	P397127	
		Color (true)	220		PCU	P396933	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P397029	
	SM 2540 C-2011	TDS	78		mg/L	P397414	
	SM 2540 D-2011	TSS	3	I	mg/L	P397162	
2241253	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P397030	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P397510	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		mg N/L	P397109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P397176	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P397014	
2241254	SM 5310 B-2011	Organic Carbon	19		mg C/L	P397240	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P396925	
2241284	EPA 200.7 Rev. 4.4	Barium	14.1		ug/L	P397606	
		Calcium	1.86		mg/L	P397606	
		Iron	1.35E+03		ug/L	P397606	
		Magnesium	0.76		mg/L	P397606	
		Manganese	11.4		ug/L	P397606	
		Potassium	0.81	I	mg/L	P397606	
		Sodium	6.9		mg/L	P397606	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P397606	
		Aluminum	377		ug/L	P397606	
		Antimony	0.074	I	ug/L	P397606	
		Arsenic	0.37		ug/L	P397606	
		Beryllium	0.035	I	ug/L	P397606	
		Boron**	19.0		ug/L	P397606	
		Cadmium	0.020	U	ug/L	P397606	
		Chromium	0.41	I	ug/L	P397606	
		Copper	0.67	I	ug/L	P397606	
		Lead	0.50		ug/L	P397606	
		Nickel	0.50	U	ug/L	P397606	
		Selenium	0.20	U	ug/L	P397606	
		Silver	0.010	U	ug/L	P397606	
		Thallium	0.10	U	ug/L	P397606	
		Hardness	7.8		mg/L	P397606	

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 05/11/2021.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P396929

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P397606

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: P397606

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: P397124

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P397127

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397511

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397014

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

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

Reference Method: SM 2120 B-2011
Batch ID: P396933

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P396934

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P397029

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

Reference Method: SM 2540 C-2011
Batch ID: P397413

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P397414

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P397415

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P397161

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P397162

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P397163

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P397240

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: P397606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.2		P	85 - 115
Calcium	107		P	85 - 115
Iron	105		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	101		P	85 - 115
Potassium	103		P	85 - 115
Sodium	105		P	85 - 115
Zinc	99.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P397606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.5		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	85.4		P	85 - 115
Boron	99.0		P	85 - 115
Cadmium	95.6		P	85 - 115
Chromium	95.8		P	85 - 115
Copper	95.6		P	85 - 115
Lead	93.3		P	85 - 115
Nickel	97.5		P	85 - 115
Selenium	100		P	85 - 115
Silver	98.5		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P397124

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P397127

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397511

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

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: P397014

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.9		P	90 - 110

Reference Method: SM 2120 B-2011
Batch ID: P396933

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.9		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P396934

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

Reference Method: SM 2320 B-2011
Batch ID: P397029

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

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P397240

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P397606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240961	Barium	98.5	96.2	P/P	80 - 120
2240961	Calcium	104		P	80 - 120
2240961	Iron	106	104	P/P	80 - 120
2240961	Magnesium	98.5		P	80 - 120
2240961	Manganese	101	99.4	P/P	80 - 120
2240961	Potassium	102	101	P/P	80 - 120
2240961	Sodium	103		P	80 - 120
2240961	Zinc	99.8	97.8	P/P	80 - 120
2240990	Barium	101		P	80 - 120
2240990	Calcium	108		P	80 - 120
2240990	Iron	105		P	80 - 120
2240990	Magnesium	105		P	80 - 120
2240990	Manganese	103		P	80 - 120
2240990	Potassium	109		P	80 - 120
2240990	Sodium	105		P	80 - 120
2240990	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P397606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240961	Aluminum	90.4	94.3	P/P	80 - 120
2240961	Antimony	100	104	P/P	80 - 120
2240961	Arsenic	94.5	100	P/P	80 - 120
2240961	Beryllium	101	90.1	P/P	80 - 120
2240961	Boron	93.4	97.1	P/P	80 - 120
2240961	Cadmium	96.3	106	P/P	80 - 120
2240961	Chromium	95.0	98.1	P/P	80 - 120
2240961	Copper	92.6	96.9	P/P	80 - 120
2240961	Lead	92.4	104	P/P	80 - 120
2240961	Nickel	92.0	94.8	P/P	80 - 120
2240961	Selenium	95.6	101	P/P	80 - 120
2240961	Silver	96.1	98.7	P/P	80 - 120
2240961	Thallium	101	107	P/P	80 - 120
2240990	Aluminum	93.1		P	80 - 120
2240990	Antimony	99.3		P	80 - 120
2240990	Arsenic	97.1		P	80 - 120
2240990	Beryllium	89.1		P	80 - 120
2240990	Boron	98.1		P	80 - 120
2240990	Cadmium	100		P	80 - 120
2240990	Chromium	97.4		P	80 - 120
2240990	Copper	99.2		P	80 - 120
2240990	Lead	94.8		P	80 - 120
2240990	Nickel	95.4		P	80 - 120
2240990	Selenium	96.7		P	80 - 120
2240990	Silver	103		P	80 - 120
2240990	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P397124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P397124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241184	Chloride	98.9		P	90 - 110
2241315	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P397127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241184	Sulfate	98.6		P	90 - 110
2241315	Sulfate	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241209	Ammonia-N	96.8	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397511

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241316	Ammonia-N	93.8	95.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241157	Kjeldahl Nitrogen	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241212	NO2NO3-N	99.8	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241186	Total-P	107	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241300	O-Phosphate-P	97.0	96.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241298	Fluoride	98.2	98.9	P/P	94 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P397240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241209	Organic Carbon	98.5	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P396929

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241184	Turbidity	4.52	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P397606

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240961	Barium	2.35	Spike	P	0 - 20
2240961	Calcium	1.44	Spike	P	0 - 20
2240961	Iron	1.24	Spike	P	0 - 20
2240961	Magnesium	1.34	Spike	P	0 - 20
2240961	Manganese	2.04	Spike	P	0 - 20
2240961	Potassium	1.06	Spike	P	0 - 20
2240961	Sodium	0.730	Spike	P	0 - 20
2240961	Zinc	2.04	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P397606

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240961	Aluminum	4.18	Spike	P	0 - 20
2240961	Antimony	4.16	Spike	P	0 - 20
2240961	Arsenic	5.86	Spike	P	0 - 20
2240961	Beryllium	11.7	Spike	P	0 - 20
2240961	Boron	3.33	Spike	P	0 - 20
2240961	Cadmium	9.83	Spike	P	0 - 20
2240961	Chromium	3.10	Spike	P	0 - 20
2240961	Copper	4.56	Spike	P	0 - 20
2240961	Lead	11.9	Spike	P	0 - 20
2240961	Nickel	2.97	Spike	P	0 - 20
2240961	Selenium	5.30	Spike	P	0 - 20
2240961	Silver	2.62	Spike	P	0 - 20
2240961	Thallium	6.02	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P397124

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241315	Chloride	0.530	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P397127

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241315	Sulfate	0.298	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241209	Ammonia-N	0.985	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241316	Ammonia-N	1.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241157	Kjeldahl Nitrogen	0.223	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241212	NO2NO3-N	1.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241186	Total-P	1.59	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241300	O-Phosphate-P	0.477	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P396933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241150	Color (true)	1.24	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P396934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241314	Color (true)	0.696	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P397029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241298	Total Alkalinity	0.205	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P397413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240920	TDS	5.35	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P397414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240949	TDS	2.68	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P397415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241312	TDS	1.01	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241298	Fluoride	0.486	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P397240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241209	Organic Carbon	0.107	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104869

Included Lab Sample IDs: 2241252, 2241255, 2241256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	99.6	P/P	90 - 110
Sulfate	98.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104886

Included Lab Sample IDs: 2241254, 2241259, 2241260

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104887

Included Lab Sample IDs: 2241252, 2241255, 2241256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A104888

Included Lab Sample IDs: 2241252, 2241255, 2241256

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

Reference Method: SM 2320 B-2011

Run ID: A104923

Included Lab Sample IDs: 2241252, 2241255, 2241256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.5	99.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104923

Included Lab Sample IDs: 2241252, 2241255, 2241256

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104993

Included Lab Sample IDs: 2241253, 2241257, 2241258

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104995

Included Lab Sample IDs: 2241253, 2241257, 2241258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110
NO2NO3-N	102	99.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A105018

Included Lab Sample IDs: 2241253, 2241257, 2241258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.3	96.5	P/P	90 - 110
Organic Carbon	96.5	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A105021

Included Lab Sample IDs: 2241253, 2241257, 2241258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	97.6	P/P	90 - 110
Kjeldahl Nitrogen	98.2	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A105117

Included Lab Sample IDs: 2241253, 2241257, 2241258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	97.8	P/P	90 - 110
Ammonia-N	98.5	97.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A105239

Included Lab Sample IDs: 2241284, 2241285, 2241286, 2241287

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	103	P/P	90 - 110
Barium	103	101	P/P	95 - 105
Barium	103	102	P/P	90 - 110
Calcium	101	99.7	P/P	95 - 105
Calcium	101	104	P/P	90 - 110
Calcium	104	102	P/P	90 - 110
Iron	100	102	P/P	90 - 110
Iron	100	99.7	P/P	95 - 105
Iron	102	102	P/P	90 - 110
Magnesium	100	99.4	P/P	95 - 105
Magnesium	102	102	P/P	90 - 110
Magnesium	99.3	102	P/P	90 - 110
Manganese	102	104	P/P	90 - 110
Manganese	103	102	P/P	95 - 105
Manganese	104	103	P/P	90 - 110
Potassium	101	101	P/P	95 - 105
Potassium	102	104	P/P	90 - 110
Potassium	104	104	P/P	90 - 110
Sodium	101	101	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A105239

Included Lab Sample IDs: 2241284, 2241285, 2241286, 2241287

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sodium	102	104	P/P	90 - 110
Sodium	104	104	P/P	90 - 110
Zinc	101	101	P/P	95 - 105
Zinc	102	106	P/P	90 - 110
Zinc	106	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A105242

Included Lab Sample IDs: 2241284, 2241285, 2241286, 2241287

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	104	P/P	90 - 110
Aluminum	104	103	P/P	90 - 110
Antimony	105	105	P/P	90 - 110
Antimony	105	104	P/P	90 - 110
Arsenic	104	100	P/P	90 - 110
Arsenic	99.5	99.0	P/P	90 - 110
Beryllium	101	99.9	P/P	90 - 110
Beryllium	98.5	99.6	P/P	90 - 110
Boron	103	101	P/P	90 - 110
Boron	99.9	102	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Chromium	101	99.9	P/P	90 - 110
Copper	100	98.8	P/P	90 - 110
Copper	98.5	97.3	P/P	90 - 110
Nickel	101	98.8	P/P	90 - 110
Nickel	99.5	97.9	P/P	90 - 110
Selenium	102	101	P/P	90 - 110
Selenium	104	103	P/P	90 - 110
Silver	101	99.4	P/P	90 - 110
Silver	101	99.8	P/P	90 - 110
Thallium	101	101	P/P	90 - 110
Thallium	102	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A105268

Included Lab Sample IDs: 2241284, 2241285, 2241286, 2241287

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	101	106	P/P	90 - 110
Lead	96.6	105	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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					4.52	
EPA 200.7 Rev. 4.4	Barium	98.2	98.5	96.2	101		2.35
	Calcium	107	104	108			1.44
	Iron	105	106	104	105		1.24
	Magnesium	101	98.5	105			1.34
	Manganese	101	101	99.4	103		2.04
	Potassium	103	102	101	109		1.06
	Sodium	105	103	105			0.730
	Zinc	99.3	99.8	97.8	104		2.04
EPA 200.8 Rev. 5.4	Aluminum	98.5	90.4	94.3	93.1		4.18
	Antimony	103	100	104	99.3		4.16
	Arsenic	101	94.5	100	97.1		5.86
	Beryllium	85.4	101	90.1	89.1		11.7
	Boron	99.0	93.4	97.1	98.1		3.33
	Cadmium	95.6	96.3	106	100		9.83
	Chromium	95.8	95.0	98.1	97.4		3.10
	Copper	95.6	92.6	96.9	99.2		4.56
	Lead	93.3	92.4	104	94.8		11.9
	Nickel	97.5	92.0	94.8	95.4		2.97
	Selenium	100	95.6	101	96.7		5.30
	Silver	98.5	96.1	98.7	103		2.62
	Thallium	104	101	107	104		6.02
EPA 300.0 Rev. 2.1	Chloride	99.5	99.7	98.9		0.530	
	Sulfate	98.2	99.3	98.6		0.298	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8	96.8	98.4			0.985
	Ammonia-N	97.4	93.8	95.4			1.46
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	100	101			0.223
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	99.8	97.8			1.94
EPA 365.1 Rev. 2.0	Total-P	107	107	109			1.59
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	97.0	96.4			0.477
SM 2120 B-2011	Color (true)	98.9				1.24	
	Color (true)	100				0.696	
SM 2320 B-2011	Total Alkalinity	102				0.205	
SM 2540 C-2011	TDS					5.35	
	TDS					2.68	
	TDS					1.01	
SM 4500 F-C-2011	Fluoride	100	98.2	98.9			0.486
SM 5310 B-2011	Organic Carbon	97.3	98.5	98.6			0.107

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2241252, 2241255, 2241256
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2241284, 2241285, 2241286, 2241287
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2241284, 2241285, 2241286, 2241287
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2241252, 2241255, 2241256
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2241252, 2241255, 2241256
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2241253, 2241257, 2241258
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2241253, 2241257, 2241258
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2241253, 2241257, 2241258
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2241253, 2241257, 2241258

Reference Method Descriptions

Method	Description	Associated Samples
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2241254, 2241259, 2241260
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2241252, 2241255, 2241256
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2241252, 2241255, 2241256
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2241284, 2241285, 2241286, 2241287
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2241252, 2241255, 2241256
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2241252, 2241255, 2241256
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2241252, 2241255, 2241256
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2241253, 2241257, 2241258

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	04/21/2021			04/21/2021 15:18	Yen Ta	2241252, 2241255, 2241256
EPA 200.7 Rev. 4.4	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 13:36	Betina Topolski	2241287
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 17:25	Betina Topolski	2241284
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 18:00	Betina Topolski	2241285
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 18:08	Betina Topolski	2241286
EPA 200.8 Rev. 5.4	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 14:51	McKinley C Carter	2241287
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 17:58	McKinley C Carter	2241284
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 18:05	McKinley C Carter	2241285
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/06/2021 18:13	McKinley C Carter	2241286
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/08/2021 02:37	Alexander Thompson	2241287
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/08/2021 05:11	Alexander Thompson	2241284
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/08/2021 05:16	Alexander Thompson	2241285
	04/21/2021	05/04/2021 13:55	Elliott D. Healy	05/08/2021 05:22	Alexander Thompson	2241286
EPA 300.0 Rev. 2.1	04/21/2021			04/23/2021 23:36	Lipi Saha	2241252
	04/21/2021			04/23/2021 23:48	Lipi Saha	2241255
	04/21/2021			04/24/2021 00:00	Lipi Saha	2241256
EPA 350.1 Rev. 2.0	04/21/2021			05/01/2021 11:26	Ping Hua	2241257
	04/21/2021			05/01/2021 11:35	Ping Hua	2241258
	04/21/2021			05/01/2021 13:24	Ping Hua	2241253
EPA 351.2 Rev. 2.0	04/21/2021	04/25/2021 14:48	Benjamin T. Nordmann	04/27/2021 13:33	Virginia P. Brown	2241253
	04/21/2021	04/25/2021 14:48	Benjamin T. Nordmann	04/27/2021 13:35	Virginia P. Brown	2241257
	04/21/2021	04/25/2021 14:48	Benjamin T. Nordmann	04/27/2021 13:40	Virginia P. Brown	2241258
EPA 353.2 Rev. 2.0	04/21/2021			04/26/2021 16:20	Touraj Touran	2241257
	04/21/2021			04/26/2021 16:21	Touraj Touran	2241258
	04/21/2021			04/26/2021 16:54	Touraj Touran	2241253
EPA 365.1 Rev. 2.0	04/21/2021	04/22/2021 16:03	Yen Ta	04/26/2021 16:20	Shengyu Ding	2241258
	04/21/2021	04/22/2021 16:03	Yen Ta	04/26/2021 16:22	Shengyu Ding	2241253
	04/21/2021	04/22/2021 16:03	Yen Ta	04/26/2021 16:30	Shengyu Ding	2241257
EPA 365.1 Rev. 2.0 dissolved	04/21/2021			04/21/2021 14:30	Blanca Fach	2241254
	04/21/2021			04/21/2021 14:32	Blanca Fach	2241260
	04/21/2021			04/21/2021 14:56	Blanca Fach	2241259
SM 2120 B-2011	04/21/2021			04/21/2021 16:46	Madeline Gruver	2241256
	04/21/2021			04/21/2021 17:01	Madeline Gruver	2241252
	04/21/2021			04/21/2021 17:02	Madeline Gruver	2241255
SM 2320 B-2011	04/21/2021			04/22/2021 22:43	Dale L. Simmons	2241252
	04/21/2021			04/22/2021 22:53	Dale L. Simmons	2241255
	04/21/2021			04/22/2021 23:01	Dale L. Simmons	2241256
SM 2340B	04/21/2021			05/06/2021 13:36	Betina Topolski	2241287
	04/21/2021			05/06/2021 17:25	Betina Topolski	2241284
	04/21/2021			05/06/2021 18:00	Betina Topolski	2241285

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340B	04/21/2021			05/06/2021 18:08	Betina Topolski	2241286
SM 2540 C-2011	04/21/2021			04/23/2021 15:31	Yijie Li	2241252, 2241255, 2241256
SM 2540 D-2011	04/21/2021			04/23/2021 15:31	Yijie Li	2241252, 2241255, 2241256
SM 4500 F-C-2011	04/21/2021			04/22/2021 22:43	Dale L. Simmons	2241252
	04/21/2021			04/22/2021 22:53	Dale L. Simmons	2241255
	04/21/2021			04/22/2021 23:01	Dale L. Simmons	2241256
SM 5310 B-2011	04/21/2021			04/24/2021 03:26	Lauren Lees	2241253
	04/21/2021			04/24/2021 03:37	Lauren Lees	2241257
	04/21/2021			04/24/2021 04:09	Lauren Lees	2241258