

Chemical Analysis Report

CEN-DIST-2023-04-06-02

Florida DEP Laboratory
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DOH Accreditation E31780

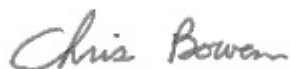
Event Description: **Run 11**
Request ID: **RQ-2023-04-03-32**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 01-MAY-2023 11:45



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: LAKE LORNA DOONE AT CENTER

Collection Date/Time: 04/05/2023 10:25

Field ID: G4CE0239

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2398781	DEP SOP: NU-094-1	Color (true)	11	A	PCU	P428143	
	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P428153	
	EPA 300.0 Rev. 2.1	Chloride	9.6	A	mg Cl/L	P428563	
		Sulfate	6.2	A	mg SO4/L	P428566	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P428356	
	SM 2540 C-2015	TDS	95		mg/L	P428500	
	SM 2540 D-2015	TSS	2	U	mg/L	P428673	
	SM 4500-F- C-2011	Fluoride	0.048	I	mg F/L	P428725	
2398784	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P428202	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P428585	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P428306	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P428243	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P428293	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high 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: LAKE JANE AT CENTER

Collection Date/Time: 04/05/2023 11:05

Field ID: G4CE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2398782	DEP SOP: NU-094-1	Color (true)	34		PCU	P428143	
	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P428153	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P428563	
		Sulfate	18		mg SO4/L	P428566	
	SM 2320 B-2011	Total Alkalinity	67		mg CaCO3/L	P428356	
	SM 2540 C-2015	TDS	157		mg/L	P428500	
	SM 2540 D-2015	TSS	9	I	mg/L	P428673	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P428725	
2398785	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P428203	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P428585	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P428306	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P428243	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P428293	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high 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: LAKE WALKER AT CENTER

Collection Date/Time: 04/05/2023 11:45

Field ID: G4CE0238

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2398783	DEP SOP: NU-094-1	Color (true)	25		PCU	P428143	
	EPA 180.1 Rev. 2.0	Turbidity	9.2		NTU	P428153	
	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P428563	
		Sulfate	0.56		mg SO4/L	P428566	
	SM 2320 B-2011	Total Alkalinity	52		mg CaCO3/L	P428356	
	SM 2540 C-2015	TDS	88		mg/L	P428500	
	SM 2540 D-2015	TSS	18		mg/L	P428673	
	SM 4500-F- C-2011	Fluoride	0.057	I	mg F/L	P428725	
2398786	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P428203	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P428878	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P428306	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P428243	
	SM 5310 B-2011	Organic Carbon	9.2		mg C/L	P428293	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE CATHERINE AT CENTER

Collection Date/Time: 04/05/2023 12:35

Field ID: G4CE0240

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2398792	EPA 200.7 Rev. 4.4	Calcium	23.3		mg/L	P428188	
		Iron	30	U	ug/L	P428188	
		Magnesium	2.66		mg/L	P428188	
		Potassium	1.2		mg/L	P428188	
		Sodium	8.0		mg/L	P428188	
		Strontium	67.7		ug/L	P428188	
		Tin	3.0	U	ug/L	P428188	
		Titanium	0.75	U	ug/L	P428188	
		Vanadium	2.0	U	ug/L	P428188	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P428188	
		Aluminum	16	I	ug/L	P428188	
		Antimony	0.59		ug/L	P428188	
		Arsenic	0.81		ug/L	P428188	
		Barium	11.6		ug/L	P428188	
		Beryllium	0.010	U	ug/L	P428188	
		Boron	37.4		ug/L	P428188	
		Cadmium	0.020	U	ug/L	P428188	
		Chromium	0.40	U	ug/L	P428188	
		Cobalt	0.025	I	ug/L	P428188	
		Copper	0.66	I	ug/L	P428188	
		Lead	0.20	U	ug/L	P428188	
		Manganese	5.22		ug/L	P428188	
		Molybdenum	1.06		ug/L	P428188	
		Nickel	0.50	U	ug/L	P428188	
		Selenium	0.20	U	ug/L	P428188	
		Silver	0.010	U	ug/L	P428188	
		Thallium	0.10	U	ug/L	P428188	
	SM 2340 B-2011	Hardness	69.1		mg/L	P428188	

Sample Location: FB

Collection Date/Time: 04/05/2023 13:00

Field ID: FB_04052023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2398787	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P428143	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P428153	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P428563	
		Sulfate	0.20	U	mg SO4/L	P428566	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P428356	
	SM 2540 C-2015	TDS	15	U	mg/L	P428500	
	SM 2540 D-2015	TSS	2	U	mg/L	P428673	
2398788	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P428725	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P428452	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P428878	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P428306	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P428243	
2398793	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P428293	
	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P428188	
		Iron	30	U	ug/L	P428188	
		Magnesium	0.040	U	mg/L	P428188	
		Potassium	0.30	U	mg/L	P428188	
		Sodium	0.50	U	mg/L	P428188	
		Strontium	2.0	U	ug/L	P428188	
		Tin	3.0	U	ug/L	P428188	
		Titanium	0.75	U	ug/L	P428188	
		Vanadium	2.0	U	ug/L	P428188	
		Zinc	5.0	U	ug/L	P428188	
		Aluminum	5.0	U	ug/L	P428188	
		Antimony	0.050	U	ug/L	P428188	
		Arsenic	0.050	U	ug/L	P428188	
		Barium	0.20	U	ug/L	P428188	
		Beryllium	0.010	U	ug/L	P428188	
		Boron	2.0	U	ug/L	P428188	
	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P428188	
		Chromium	0.40	U	ug/L	P428188	
		Cobalt	0.020	U	ug/L	P428188	
		Copper	0.40	U	ug/L	P428188	
		Lead	0.20	U	ug/L	P428188	
		Manganese	0.10	U	ug/L	P428188	
		Molybdenum	0.15	U	ug/L	P428188	
		Nickel	0.50	U	ug/L	P428188	
		Selenium	0.20	U	ug/L	P428188	
		Silver	0.010	U	ug/L	P428188	
		Thallium	0.10	U	ug/L	P428188	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P428143

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428153

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P428188

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428188

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	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
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.011	I	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428563

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428566

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428202

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428203

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428452

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428585

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428878

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428306

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428243

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

Reference Method: SM 2320 B-2011
Batch ID: P428356

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P428500

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P428673

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P428725

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P428293

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: P428143

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.5		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428153

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P428188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	106		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	106		P	85 - 115
Sodium	110		P	85 - 115
Strontium	105		P	85 - 115
Tin	105		P	85 - 115
Titanium	104		P	85 - 115
Vanadium	104		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428188

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	104		P	85 - 115
Barium	106		P	85 - 115
Beryllium	96.1		P	85 - 115
Boron	104		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	104		P	85 - 115
Copper	103		P	85 - 115
Lead	105		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	104		P	85 - 115
Selenium	102		P	85 - 115
Silver	105		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428563

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428202

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428203

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428452

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428585

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428878

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428306

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428243

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

Reference Method: SM 2320 B-2011
Batch ID: P428356

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.9		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P428500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.7		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P428673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.7		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P428725

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P428293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P428188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398664	Calcium	104		P	80 - 120
2398664	Iron	106	105	P/P	80 - 120
2398664	Magnesium	108	105	P/P	80 - 120
2398664	Potassium	111	111	P/P	80 - 120
2398664	Sodium	109	110	P/P	80 - 120
2398664	Strontium	105	105	P/P	80 - 120
2398664	Tin	102	104	P/P	80 - 120
2398664	Titanium	103	104	P/P	80 - 120
2398664	Vanadium	103	104	P/P	80 - 120
2398664	Zinc	103	105	P/P	80 - 120
2398886	Calcium	103		P	80 - 120
2398886	Iron	105		P	80 - 120
2398886	Magnesium	106		P	80 - 120
2398886	Potassium	105		P	80 - 120
2398886	Sodium	111		P	80 - 120
2398886	Strontium	106		P	80 - 120
2398886	Tin	104		P	80 - 120
2398886	Titanium	106		P	80 - 120
2398886	Vanadium	108		P	80 - 120
2398886	Zinc	107		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P428188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398664	Aluminum	102	103	P/P	80 - 120
2398664	Antimony	104	105	P/P	80 - 120
2398664	Arsenic	102	103	P/P	80 - 120
2398664	Barium	103	104	P/P	80 - 120
2398664	Beryllium	99.2	95.7	P/P	80 - 120
2398664	Boron	100	102	P/P	80 - 120
2398664	Cadmium	99.7	103	P/P	80 - 120
2398664	Chromium	102	103	P/P	80 - 120
2398664	Cobalt	102	103	P/P	80 - 120
2398664	Copper	100	101	P/P	80 - 120
2398664	Lead	104	103	P/P	80 - 120
2398664	Manganese	100	101	P/P	80 - 120
2398664	Molybdenum	103	103	P/P	80 - 120
2398664	Nickel	102	103	P/P	80 - 120
2398664	Selenium	101	101	P/P	80 - 120
2398664	Silver	105	106	P/P	80 - 120
2398664	Thallium	104	105	P/P	80 - 120
2398886	Aluminum	101		P	80 - 120
2398886	Antimony	103		P	80 - 120
2398886	Arsenic	99.3		P	80 - 120
2398886	Barium	102		P	80 - 120
2398886	Beryllium	95.0		P	80 - 120
2398886	Boron	102		P	80 - 120
2398886	Cadmium	101		P	80 - 120
2398886	Chromium	98.7		P	80 - 120
2398886	Cobalt	99.2		P	80 - 120
2398886	Copper	96.2		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398886	Lead	101		P	80 - 120
2398886	Manganese	100		P	80 - 120
2398886	Molybdenum	102		P	80 - 120
2398886	Nickel	98.8		P	80 - 120
2398886	Selenium	97.6		P	80 - 120
2398886	Silver	107		P	80 - 120
2398886	Thallium	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398781	Chloride	101		P	90 - 110
2398782	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398781	Sulfate	97.4		P	90 - 110
2398782	Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428202

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398653	Ammonia-N	94.6	94.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398785	Ammonia-N	96.0	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398864	Ammonia-N	98.0	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398879	Kjeldahl Nitrogen	104	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398753	NO2NO3-N	102	94.8	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398784	Total-P	101	101	P/P	90 - 110

Reference Method: SM 5310 B-2011
Batch ID: P428293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398289	Organic Carbon	94.2	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P428143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398781	Color (true)	6.89	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P428188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398664	Calcium	0.869	Spike	P	0 - 20
2398664	Iron	0.990	Spike	P	0 - 20
2398664	Magnesium	1.63	Spike	P	0 - 20
2398664	Potassium	0.496	Spike	P	0 - 20
2398664	Sodium	0.234	Spike	P	0 - 20
2398664	Strontium	0.490	Spike	P	0 - 20
2398664	Tin	1.87	Spike	P	0 - 20
2398664	Titanium	0.361	Spike	P	0 - 20
2398664	Vanadium	0.597	Spike	P	0 - 20
2398664	Zinc	2.00	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398664	Aluminum	0.354	Spike	P	0 - 20
2398664	Antimony	1.55	Spike	P	0 - 20
2398664	Arsenic	0.480	Spike	P	0 - 20
2398664	Barium	0.691	Spike	P	0 - 20
2398664	Beryllium	3.60	Spike	P	0 - 20
2398664	Boron	1.15	Spike	P	0 - 20
2398664	Cadmium	3.15	Spike	P	0 - 20
2398664	Chromium	0.870	Spike	P	0 - 20
2398664	Cobalt	0.192	Spike	P	0 - 20
2398664	Copper	1.22	Spike	P	0 - 20
2398664	Lead	0.444	Spike	P	0 - 20
2398664	Manganese	0.788	Spike	P	0 - 20
2398664	Molybdenum	0.774	Spike	P	0 - 20
2398664	Nickel	1.09	Spike	P	0 - 20
2398664	Selenium	0.595	Spike	P	0 - 20
2398664	Silver	1.41	Spike	P	0 - 20
2398664	Thallium	0.961	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398781	Chloride	1.33	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398781	Sulfate	1.52	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398653	Ammonia-N	0.212	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398785	Ammonia-N	1.72	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398864	Ammonia-N	1.76	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428585

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398776	Kjeldahl Nitrogen	2.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398879	Kjeldahl Nitrogen	4.52	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398753	NO2NO3-N	6.42	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398784	Total-P	0.304	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P428356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399083	Total Alkalinity	0.0851	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P428500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398646	TDS	2.74	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P428725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398585	Fluoride	0.473	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P428293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398289	Organic Carbon	1.28	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A118419

Included Lab Sample IDs: 2398781, 2398782, 2398783, 2398787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 110
Color (true)	99.4	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118422

Included Lab Sample IDs: 2398781, 2398782, 2398783, 2398787

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118446

Included Lab Sample IDs: 2398784, 2398785, 2398786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.8	97.7	P/P	90 - 110
Ammonia-N	97.7	97.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A118482

Included Lab Sample IDs: 2398792, 2398793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	101	P/P	90 - 110
Aluminum	99.4	100	P/P	90 - 110
Antimony	102	103	P/P	90 - 110
Antimony	103	102	P/P	90 - 110
Arsenic	101	99.8	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Barium	101	99.0	P/P	90 - 110
Barium	102	100	P/P	90 - 110
Beryllium	96.8	98.9	P/P	90 - 110
Beryllium	98.6	97.3	P/P	90 - 110
Boron	103	103	P/P	90 - 110
Boron	95.8	98.7	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Cadmium	99.3	99.0	P/P	90 - 110
Chromium	99.3	95.7	P/P	90 - 110
Chromium	99.6	99.7	P/P	90 - 110
Cobalt	100	100	P/P	90 - 110
Cobalt	99.4	96.3	P/P	90 - 110
Copper	101	98.9	P/P	90 - 110
Copper	98.5	95.7	P/P	90 - 110
Lead	100	102	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Manganese	101	96.7	P/P	90 - 110
Manganese	95.9	98.4	P/P	90 - 110
Molybdenum	100	99.9	P/P	90 - 110
Molybdenum	99.7	99.3	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Nickel	98.6	95.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A118482

Included Lab Sample IDs: 2398792, 2398793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	101	101	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Silver	103	101	P/P	90 - 110
Thallium	101	105	P/P	90 - 110
Thallium	105	103	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A118486

Included Lab Sample IDs: 2398784, 2398785, 2398786, 2398788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.7	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118495

Included Lab Sample IDs: 2398784, 2398785, 2398786, 2398788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118498

Included Lab Sample IDs: 2398785, 2398786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118506

Included Lab Sample IDs: 2398784, 2398788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	104	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A118519

Included Lab Sample IDs: 2398781, 2398782, 2398783, 2398787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.5	95.3	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A118539

Included Lab Sample IDs: 2398792, 2398793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Calcium	104	101	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Iron	103	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A118539

Included Lab Sample IDs: 2398792, 2398793

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	101	102	P/P	90 - 110
Magnesium	103	102	P/P	90 - 110
Potassium	103	104	P/P	90 - 110
Potassium	104	103	P/P	90 - 110
Sodium	105	105	P/P	90 - 110
Sodium	106	104	P/P	90 - 110
Strontium	105	105	P/P	90 - 110
Strontium	106	105	P/P	90 - 110
Tin	104	102	P/P	90 - 110
Tin	104	103	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Vanadium	102	103	P/P	90 - 110
Vanadium	103	103	P/P	90 - 110
Zinc	104	105	P/P	90 - 110
Zinc	106	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118557

Included Lab Sample IDs: 2398788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118603

Included Lab Sample IDs: 2398781, 2398782, 2398783, 2398787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.4	99.3	P/P	90 - 110
Chloride	99.3	99.4	P/P	90 - 110
Sulfate	97.9	98.9	P/P	90 - 110
Sulfate	98.9	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118660

Included Lab Sample IDs: 2398784, 2398785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	101	P/P	90 - 110
Kjeldahl Nitrogen	96.7	103	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A118673

Included Lab Sample IDs: 2398781, 2398782, 2398783, 2398787

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

Quality Assurance Report

Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118759

Included Lab Sample IDs: 2398786, 2398788

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.4	91.5	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
DEP SOP: NU-094-1	Color (true)	98.5					6.89	
EPA 180.1 Rev. 2.0	Turbidity	100						
EPA 200.7 Rev. 4.4	Calcium	104	104	103				0.869
	Iron	106	106	105	105			0.990
	Magnesium	108	108	105	106			1.63
	Potassium	106	111	111	105			0.496
	Sodium	110	109	110	111			0.234
	Strontium	105	105	105	106			0.490
	Tin	105	102	104	104			1.87
	Titanium	104	106	103	104			0.361
	Vanadium	104	103	104	108			0.597
	Zinc	107	103	105	107			2.00
EPA 200.8 Rev. 5.4	Aluminum	104	102	103	101			0.354
	Antimony	105	104	105	103			1.55
	Arsenic	104	102	103	99.3			0.480
	Barium	106	103	104	102			0.691
	Beryllium	96.1	99.2	95.7	95.0			3.60
	Boron	104	100	102	102			1.15
	Cadmium	103	99.7	103	101			3.15
	Chromium	102	102	103	98.7			0.870
	Cobalt	104	102	103	99.2			0.192
	Copper	103	100	101	96.2			1.22
	Lead	105	104	103	101			0.444
	Manganese	99.2	100	101	100			0.788
	Molybdenum	102	103	103	102			0.774
	Nickel	104	102	103	98.8			1.09
	Selenium	102	101	101	97.6			0.595
	Silver	105	105	106	107			1.41
	Thallium	104	104	105	101			0.961
EPA 300.0 Rev. 2.1	Chloride	101	101	101			1.33	
	Sulfate	98.1	97.4	96.6			1.52	
EPA 350.1 Rev. 2.0	Ammonia-N	95.0	94.6	94.4				0.212
	Ammonia-N	95.4	96.0	97.8				1.72
	Ammonia-N	95.8	98.0	100				1.76
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.6						2.46
	Kjeldahl Nitrogen	96.9	104	99.2				4.52
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	94.8				6.42
EPA 365.1 Rev. 2.0	Total-P	99.4	101	101				0.304
SM 2320 B-2011	Total Alkalinity	95.9					0.0851	
SM 2540 C-2015	TDS	97.7					2.74	
SM 2540 D-2015	TSS	91.7						
SM 4500-F- C-2011	Fluoride	99.4						0.473
SM 5310 B-2011	Organic Carbon	92.4	94.2	95.5				1.28

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2398781, 2398782, 2398783, 2398787
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2398781, 2398782, 2398783, 2398787
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2398792, 2398793
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2398792, 2398793

Reference Method Descriptions

Method	Description	Associated Samples
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2398781, 2398782, 2398783, 2398787
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2398781, 2398782, 2398783, 2398787
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2398784, 2398785, 2398786, 2398788
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2398784, 2398785, 2398786, 2398788
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2398784, 2398785, 2398786, 2398788
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2398784, 2398785, 2398786, 2398788
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2398781, 2398782, 2398783, 2398787
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2398792
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2398781, 2398782, 2398783, 2398787
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2398781, 2398782, 2398783, 2398787
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2398781, 2398782, 2398783, 2398787
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2398784, 2398785, 2398786, 2398788

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	04/06/2023			04/06/2023 14:46	Alexis Price	2398781, 2398782
	04/06/2023			04/06/2023 14:47	Alexis Price	2398783
	04/06/2023			04/06/2023 14:54	Alexis Price	2398787
EPA 180.1 Rev. 2.0	04/06/2023			04/06/2023 14:13	Anna M. Plaviak	2398781
	04/06/2023			04/06/2023 14:14	Anna M. Plaviak	2398782
	04/06/2023			04/06/2023 14:15	Anna M. Plaviak	2398783
EPA 200.7 Rev. 4.4	04/06/2023			04/06/2023 14:16	Anna M. Plaviak	2398787
	04/06/2023	04/07/2023 11:35	George D Taylor	04/12/2023 19:29	McKinley C Carter	2398793
	04/06/2023	04/07/2023 11:35	George D Taylor	04/12/2023 22:55	McKinley C Carter	2398792
EPA 200.8 Rev. 5.4	04/06/2023	04/07/2023 11:35	George D Taylor	04/10/2023 14:39	Emily M Philpot	2398793
	04/06/2023	04/07/2023 11:35	George D Taylor	04/10/2023 18:22	Emily M Philpot	2398792
EPA 300.0 Rev. 2.1	04/06/2023			04/13/2023 06:31	Anna M. Plaviak	2398781
	04/06/2023			04/13/2023 07:01	Anna M. Plaviak	2398782
	04/06/2023			04/13/2023 10:47	Anna M. Plaviak	2398783
EPA 350.1 Rev. 2.0	04/06/2023			04/13/2023 11:02	Anna M. Plaviak	2398787
	04/06/2023			04/07/2023 13:03	Khloe J Berg	2398784
	04/06/2023			04/07/2023 13:15	Khloe J Berg	2398785
EPA 351.2 Rev. 2.0	04/06/2023			04/07/2023 13:19	Khloe J Berg	2398786
	04/06/2023			04/13/2023 11:51	Khloe J Berg	2398788
	04/06/2023	04/18/2023 09:03	Simonne.V. Calhoun	04/19/2023 13:19	Samantha L Bates	2398784
EPA 353.2 Rev. 2.0	04/06/2023	04/18/2023 09:03	Simonne.V. Calhoun	04/19/2023 13:57	Samantha L Bates	2398785
	04/06/2023	04/24/2023 10:23	Dana G. Hughes	04/25/2023 12:25	Samantha L Bates	2398786
	04/06/2023	04/24/2023 10:23	Dana G. Hughes	04/25/2023 12:26	Samantha L Bates	2398788
EPA 365.1 Rev. 2.0	04/06/2023			04/11/2023 10:14	Beverly Y. Sanders	2398784
	04/06/2023			04/11/2023 10:15	Beverly Y. Sanders	2398785
	04/06/2023			04/11/2023 10:16	Beverly Y. Sanders	2398786
SM 2320 B-2011	04/06/2023			04/11/2023 10:17	Beverly Y. Sanders	2398788
	04/06/2023	04/10/2023 17:45	Alexis Price	04/11/2023 11:34	Simonne.V. Calhoun	2398785
	04/06/2023	04/10/2023 17:45	Alexis Price	04/11/2023 11:35	Simonne.V. Calhoun	2398786
SM 2340 B-2011	04/06/2023	04/10/2023 17:45	Alexis Price	04/11/2023 12:49	Simonne.V. Calhoun	2398788
	04/06/2023	04/10/2023 17:45	Alexis Price	04/11/2023 12:51	Simonne.V. Calhoun	2398784
	04/06/2023			04/12/2023 02:24	Dale L. Simmons	2398781
SM 2540 C-2015	04/06/2023			04/12/2023 02:38	Dale L. Simmons	2398782
	04/06/2023			04/12/2023 02:52	Dale L. Simmons	2398783
	04/06/2023			04/12/2023 03:01	Dale L. Simmons	2398787
SM 2540 D-2015	04/06/2023			04/12/2023 22:55	McKinley C Carter	2398792
SM 4500-F- C-2011	04/06/2023			04/11/2023 14:15	Blanca Fach	2398781, 2398782, 2398783, 2398787
	04/06/2023			04/07/2023 14:45	Dana G. Hughes	2398781, 2398782, 2398783, 2398787
	04/06/2023			04/19/2023 16:44	Dale L. Simmons	2398781
	04/06/2023			04/19/2023 16:49	Dale L. Simmons	2398782

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500-F- C-2011	04/06/2023			04/19/2023 16:55	Dale L. Simmons	2398783
	04/06/2023			04/19/2023 17:00	Dale L. Simmons	2398787
SM 5310 B-2011	04/06/2023			04/10/2023 21:15	Elise M. Gillis	2398784
	04/06/2023			04/10/2023 21:29	Elise M. Gillis	2398785
	04/06/2023			04/10/2023 21:44	Elise M. Gillis	2398786
	04/06/2023			04/10/2023 21:57	Elise M. Gillis	2398788