

Chemical Analysis Report

CEN-DIST-2023-08-09-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

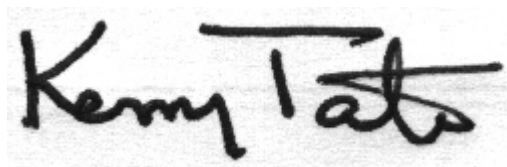
Event Description: **Run 12**
Request ID: **RQ-2023-08-07-46**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 29-AUG-2023 08:32

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the name.

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 TERRACE AT CENTER

Collection Date/Time: 08/08/2023 11:29

Field ID: G4CE0153

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429828	DEP SOP: NU-094-1	Color (true)	13		PCU	P433637	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P433642	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P433892	
		Sulfate	20		mg SO4/L	P433894	
	SM 2320 B-2011	Total Alkalinity	33		mg CaCO3/L	P433830	
	SM 2540 C-2015	TDS	103		mg/L	P434110	
	SM 2540 D-2015	TSS	4	I	mg/L	P434106	
	SM 4500-F- C-2011	Fluoride	0.041	I	mg F/L	P433928	
2429829	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P434067	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P433749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P434368	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P433768	
	SM 5310 B-2011	Organic Carbon	5.1		mg C/L	P433803	
2429830	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P433631	
2429839	EPA 200.7 Rev. 4.4	Calcium	17.6		mg/L	P433806	
		Iron	30	U	ug/L	P433806	
		Magnesium	2.40		mg/L	P433806	
		Potassium	3.0		mg/L	P433806	
		Sodium	10.5		mg/L	P433806	
		Strontium	42.0		ug/L	P433806	
		Tin	3.0	U	ug/L	P433806	
	EPA 200.8 Rev. 5.4	Titanium	0.75	U	ug/L	P433806	
		Vanadium	3.5	I	ug/L	P433806	
		Zinc	5.0	U	ug/L	P433806	
		Aluminum	85		ug/L	P434050	
		Antimony	0.30		ug/L	P433806	
		Arsenic	0.54		ug/L	P433806	
		Barium	12.2		ug/L	P433806	
		Beryllium	0.010	U	ug/L	P433806	
		Boron	26.9		ug/L	P433806	
		Cadmium	0.020	U	ug/L	P433806	
		Chromium	0.40	U	ug/L	P433806	
		Cobalt	0.020	U	ug/L	P433806	
		Copper	3.23		ug/L	P433806	
		Lead	0.20	U	ug/L	P433806	
		Manganese	5.53		ug/L	P433806	
		Molybdenum	0.63		ug/L	P433806	
		Nickel	0.50	U	ug/L	P433806	
		Selenium	0.20	U	ug/L	P433806	
		Silver	0.010	U	ug/L	P433806	
		Thallium	0.10	U	ug/L	P433806	
	SM 2340 B-2011	Hardness	53.8		mg/L	P433806	

Field ID: G4CE0153

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: 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.
EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE WARREN AT CENTER

Collection Date/Time: 08/08/2023 10:04

Field ID: G4CE0236

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429831	DEP SOP: NU-094-1	Color (true)	45		PCU	P433637	
	EPA 180.1 Rev. 2.0	Turbidity	9.2		NTU	P433642	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P433892	
		Sulfate	7.3		mg SO4/L	P433894	
	SM 2320 B-2011	Total Alkalinity	41		mg CaCO3/L	P433830	
	SM 2540 C-2015	TDS	120		mg/L	P434110	
	SM 2540 D-2015	TSS	11	I	mg/L	P434106	
	SM 4500-F- C-2011	Fluoride	0.075	I	mg F/L	P433928	
2429833	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P434067	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P433749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P434369	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P433769	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P433803	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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. The PQL was elevated because of sample matrix interference.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE GILES AT CENTER

Collection Date/Time: 08/08/2023 12:23

Field ID: G4CE0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429825	DEP SOP: NU-094-1	Color (true)	8.3		PCU	P433637	
	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P433642	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P433892	
		Sulfate	17		mg SO4/L	P433894	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P433830	
	SM 2540 C-2015	TDS	98		mg/L	P434110	
	SM 2540 D-2015	TSS	2	I	mg/L	P434106	
	SM 4500-F- C-2011	Fluoride	0.040	I	mg F/L	P433928	
2429826	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P434067	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P433749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P434368	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P433768	
	SM 5310 B-2011	Organic Carbon	4.0		mg C/L	P433803	
2429827	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P433631	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: HOURGLASS LAKE AT CENTER

Collection Date/Time: 08/08/2023 10:59

Field ID: G4CE0178

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429832	DEP SOP: NU-094-1	Color (true)	16	A	PCU	P433638	
	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P433642	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P433892	
		Sulfate	15		mg SO4/L	P433894	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P433830	
	SM 2540 C-2015	TDS	92		mg/L	P434110	
	SM 2540 D-2015	TSS	5	I	mg/L	P434106	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P433928	
2429834	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P434067	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P433749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P434369	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P433769	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P433803	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: 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.

EPA 350.1 Rev. 2.0: 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: P433637

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P433638

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433642

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433806

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: P433806

Component	Result	Code	Units
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	0.010	U	ug/L
Thallium	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434050

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433892

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433894

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434067

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434368

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433768

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P433631

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

Reference Method: SM 2320 B-2011
Batch ID: P433830

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

Reference Method: SM 2540 C-2015
Batch ID: P434110

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P434106

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P433928

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P433803

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: P433637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.0		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P433638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.7		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	94.0		P	85 - 115
Sodium	97.3		P	85 - 115
Strontium	96.4		P	85 - 115
Tin	98.6		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	103		P	85 - 115
Arsenic	99.5		P	85 - 115
Barium	104		P	85 - 115
Beryllium	96.3		P	85 - 115
Boron	104		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.1		P	85 - 115
Cobalt	96.4		P	85 - 115
Copper	95.2		P	85 - 115
Lead	93.9		P	85 - 115
Manganese	99.4		P	85 - 115
Molybdenum	99.6		P	85 - 115
Nickel	96.0		P	85 - 115
Selenium	100		P	85 - 115
Silver	111		P	85 - 115
Thallium	101		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434050

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433892

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433894

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434067

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: P433749

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434368

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

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: P433768

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P433631

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

Reference Method: SM 2320 B-2011
Batch ID: P433830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.2		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P434110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	99.1		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P434106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.4		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P433928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P433806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429374	Calcium	102		P	80 - 120
2429374	Iron	102	103	P/P	80 - 120
2429374	Magnesium	101	103	P/P	80 - 120
2429374	Potassium	91.4	93.0	P/P	80 - 120
2429374	Sodium	98.2		P	80 - 120
2429374	Strontium	94.8	95.5	P/P	80 - 120
2429374	Tin	97.6	95.9	P/P	80 - 120
2429374	Titanium	102	100	P/P	80 - 120
2429374	Vanadium	102	99.9	P/P	80 - 120
2429374	Zinc	101	98.9	P/P	80 - 120
2429871	Calcium	104		P	75 - 125
2429871	Iron	104		P	75 - 125
2429871	Magnesium	102		P	75 - 125
2429871	Potassium	98.3		P	75 - 125
2429871	Sodium	102		P	75 - 125
2429871	Strontium	101		P	75 - 125
2429871	Tin	99.1		P	75 - 125
2429871	Titanium	103		P	75 - 125
2429871	Vanadium	104		P	75 - 125
2429871	Zinc	99.9		P	75 - 125

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P433806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429374	Antimony	105	105	P/P	80 - 120
2429374	Arsenic	98.3	99.5	P/P	80 - 120
2429374	Barium	106	105	P/P	80 - 120
2429374	Beryllium	96.2	98.0	P/P	80 - 120
2429374	Boron	102	101	P/P	80 - 120
2429374	Cadmium	103	104	P/P	80 - 120
2429374	Chromium	97.4	97.4	P/P	80 - 120
2429374	Cobalt	93.8	93.6	P/P	80 - 120
2429374	Copper	94.0	94.1	P/P	80 - 120
2429374	Lead	94.2	94.5	P/P	80 - 120
2429374	Manganese	97.2	100	P/P	80 - 120
2429374	Molybdenum	101	101	P/P	80 - 120
2429374	Nickel	91.7	92.0	P/P	80 - 120
2429374	Selenium	98.4	98.5	P/P	80 - 120
2429374	Silver	110	109	P/P	80 - 120
2429374	Thallium	105	105	P/P	80 - 120
2429871	Antimony	106		P	80 - 120
2429871	Arsenic	99.3		P	80 - 120
2429871	Barium	106		P	80 - 120
2429871	Beryllium	98.4		P	80 - 120
2429871	Boron	104		P	80 - 120
2429871	Cadmium	103		P	80 - 120
2429871	Chromium	98.0		P	80 - 120
2429871	Cobalt	91.5		P	80 - 120
2429871	Copper	89.0		P	80 - 120
2429871	Lead	93.0		P	80 - 120
2429871	Manganese	99.2		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429871	Molybdenum	103		P	80 - 120
2429871	Nickel	89.8		P	80 - 120
2429871	Selenium	97.0		P	80 - 120
2429871	Silver	110		P	80 - 120
2429871	Thallium	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431836	Aluminum	99.6	100	P/P	80 - 120
2431916	Aluminum	99.0		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433892

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429531	Chloride	102		P	90 - 110
2429806	Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429531	Sulfate	99.4		P	90 - 110
2429806	Sulfate	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429844	Kjeldahl Nitrogen	98.3	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434368

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429053	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429833	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429822	Total-P	105	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429833	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P433631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429827	O-Phosphate-P	95.1	97.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P433928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429952	Fluoride	98.4	98.9	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429740	Organic Carbon	93.9	96.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429734	Color (true)	1.42	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P433638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429832	Color (true)	1.70	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429805	Turbidity	8.00	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429374	Calcium	1.21	Spike	P	0 - 20
2429374	Iron	1.24	Spike	P	0 - 20
2429374	Magnesium	1.35	Spike	P	0 - 20
2429374	Potassium	1.26	Spike	P	0 - 20
2429374	Sodium	0.0302	Spike	P	0 - 20
2429374	Strontium	0.713	Spike	P	0 - 20
2429374	Tin	1.69	Spike	P	0 - 20
2429374	Titanium	2.08	Spike	P	0 - 20
2429374	Vanadium	2.05	Spike	P	0 - 20
2429374	Zinc	1.91	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429374	Antimony	0.407	Spike	P	0 - 20
2429374	Arsenic	1.16	Spike	P	0 - 20
2429374	Barium	1.13	Spike	P	0 - 20
2429374	Beryllium	1.89	Spike	P	0 - 20
2429374	Boron	0.628	Spike	P	0 - 20
2429374	Cadmium	1.04	Spike	P	0 - 20
2429374	Chromium	0.0312	Spike	P	0 - 20
2429374	Cobalt	0.120	Spike	P	0 - 20
2429374	Copper	0.0690	Spike	P	0 - 20
2429374	Lead	0.344	Spike	P	0 - 20
2429374	Manganese	2.49	Spike	P	0 - 20
2429374	Molybdenum	0.522	Spike	P	0 - 20
2429374	Nickel	0.306	Spike	P	0 - 20
2429374	Selenium	0.112	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429374	Silver	1.30	Spike	P	0 - 20
2429374	Thallium	0.170	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P434050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431836	Aluminum	0.703	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433892

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429531	Chloride	0.791	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429822	Ammonia-N	0.945	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429844	Kjeldahl Nitrogen	0.478	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434368

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429053	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429833	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429822	Total-P	1.20	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429833	Total-P	1.64	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P433631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429827	O-Phosphate-P	2.18	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P433830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429631	Total Alkalinity	3.31	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P434110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429490	TDS	5.94	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P433928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429952	Fluoride	0.495	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P433803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429740	Organic Carbon	2.42	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: A120923

Included Lab Sample IDs: 2429827, 2429830

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

Reference Method: DEP SOP: NU-094-1

Run ID: A120926

Included Lab Sample IDs: 2429825, 2429828, 2429831, 2429832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.5	98.4	P/P	90 - 110
Color (true)	98.4	97.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A120930

Included Lab Sample IDs: 2429825, 2429828, 2429831, 2429832

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121014

Included Lab Sample IDs: 2429826, 2429829, 2429833, 2429834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	97.1	P/P	90 - 110
Kjeldahl Nitrogen	95.3	103	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A121017

Included Lab Sample IDs: 2429826, 2429829, 2429833, 2429834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121019

Included Lab Sample IDs: 2429826, 2429829, 2429833, 2429834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.2	P/P	90 - 110
Total-P	98.2	98.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A121026

Included Lab Sample IDs: 2429825, 2429828, 2429831, 2429832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.9	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121050

Included Lab Sample IDs: 2429839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	96.8	97.1	P/P	90 - 110
Sodium	99.0	99.7	P/P	90 - 110
Strontium	98.0	99.3	P/P	90 - 110
Tin	102	102	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121054

Included Lab Sample IDs: 2429839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	101	101	P/P	90 - 110
Arsenic	97.5	98.0	P/P	90 - 110
Barium	101	102	P/P	90 - 110
Beryllium	96.9	95.9	P/P	90 - 110
Boron	99.6	103	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	100	102	P/P	90 - 110
Cobalt	93.2	93.9	P/P	90 - 110
Copper	92.1	93.2	P/P	90 - 110
Lead	93.3	92.9	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Molybdenum	98.4	98.9	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	97.0	96.9	P/P	90 - 110
Thallium	99.0	98.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121057

Included Lab Sample IDs: 2429825, 2429828, 2429831, 2429832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.3	101	P/P	90 - 110
Sulfate	97.8	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121067

Included Lab Sample IDs: 2429825, 2429828, 2429831, 2429832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121080

Included Lab Sample IDs: 2429839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	94.1	94.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121131

Included Lab Sample IDs: 2429826, 2429829, 2429833, 2429834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	98.1	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121158

Included Lab Sample IDs: 2429839

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.5	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121245

Included Lab Sample IDs: 2429826, 2429829, 2429833, 2429834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	P/P	90 - 110
NO2NO3-N	99.5	98.5	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			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	97.0				1.42	
	Color (true)	97.8				1.70	
EPA 180.1 Rev. 2.0	Turbidity	99.7				8.00	
EPA 200.7 Rev. 4.4	Calcium	102	102	104			1.21
	Iron	104	102	103	104		1.24
	Magnesium	104	101	103	102		1.35
	Potassium	94.0	91.4	93.0	98.3		1.26
	Sodium	97.3	98.2	102			0.0302
	Strontium	96.4	94.8	95.5	101		0.713
	Tin	98.6	99.1	97.6	95.9		1.69
	Titanium	101	102	100	103		2.08
	Vanadium	100	102	99.9	104		2.05
	Zinc	101	101	98.9	99.9		1.91
EPA 200.8 Rev. 5.4	Aluminum	100	99.6	100	99.0		0.703
	Antimony	103	105	105	106		0.407
	Arsenic	99.5	98.3	99.5	99.3		1.16
	Barium	104	106	105	106		1.13
	Beryllium	96.3	96.2	98.0	98.4		1.89
	Boron	104	102	101	104		0.628
	Cadmium	101	103	104	103		1.04
	Chromium	99.1	97.4	97.4	98.0		0.0312
	Cobalt	96.4	93.8	93.6	91.5		0.120
	Copper	95.2	94.0	94.1	89.0		0.0690
	Lead	93.9	94.2	94.5	93.0		0.344
	Manganese	99.4	97.2	100	99.2		2.49
	Molybdenum	99.6	101	101	103		0.522
	Nickel	96.0	91.7	92.0	89.8		0.306
	Selenium	100	98.4	98.5	97.0		0.112
	Silver	111	110	109	110		1.30
	Thallium	101	105	105	104		0.170
EPA 300.0 Rev. 2.1	Chloride	101	102	99.3		0.791	
	Sulfate	99.5	99.4	99.8			
EPA 350.1 Rev. 2.0	Ammonia-N	95.8					0.945
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	98.3	97.5			0.478
EPA 353.2 Rev. 2.0	NO2NO3-N	100	102	102			0.0
	NO2NO3-N	99.5	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	99.7	105	103			1.20
	Total-P	102	106	104			1.64
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	95.1	97.2			2.18
SM 2320 B-2011	Total Alkalinity	98.2				3.31	
SM 2540 C-2015	TDS	99.1				5.94	
SM 2540 D-2015	TSS	91.4					
SM 4500-F- C-2011	Fluoride	98.7	98.4	98.9			0.495
SM 5310 B-2011	Organic Carbon	92.8	93.9	96.8			2.42

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2429825, 2429828, 2429831, 2429832
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2429825, 2429828, 2429831, 2429832
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2429839

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2429839
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2429825, 2429828, 2429831, 2429832
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2429825, 2429828, 2429831, 2429832
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2429826, 2429829, 2429833, 2429834
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2429826, 2429829, 2429833, 2429834
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2429826, 2429829, 2429833, 2429834
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2429826, 2429829, 2429833, 2429834
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2429827, 2429830
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2429825, 2429828, 2429831, 2429832
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2429839
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2429825, 2429828, 2429831, 2429832
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2429825, 2429828, 2429831, 2429832
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2429825, 2429828, 2429831, 2429832
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2429826, 2429829, 2429833, 2429834

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	08/09/2023			08/09/2023 15:27	Alexis Price	2429825
	08/09/2023			08/09/2023 15:28	Alexis Price	2429828, 2429831
	08/09/2023			08/09/2023 15:33	Alexis Price	2429832
EPA 180.1 Rev. 2.0	08/09/2023			08/09/2023 16:51	Alexis Price	2429825
	08/09/2023			08/09/2023 16:52	Alexis Price	2429828, 2429831
	08/09/2023			08/09/2023 16:53	Alexis Price	2429832
EPA 200.7 Rev. 4.4	08/09/2023	08/14/2023 14:30	George D Taylor	08/15/2023 18:34	Chase Roberts	2429839
EPA 200.8 Rev. 5.4	08/09/2023	08/14/2023 14:30	George D Taylor	08/15/2023 17:56	Emily M Philpot	2429839
	08/09/2023	08/14/2023 14:30	George D Taylor	08/16/2023 15:36	Emily M Philpot	2429839
EPA 300.0 Rev. 2.1	08/09/2023	08/18/2023 13:25	George D Taylor	08/21/2023 16:58	Conrad Hartmann	2429839
	08/09/2023			08/15/2023 17:00	James L Waggeberby	2429825
	08/09/2023			08/15/2023 17:15	James L Waggeberby	2429828
EPA 350.1 Rev. 2.0	08/09/2023			08/15/2023 17:30	James L Waggeberby	2429831
	08/09/2023			08/15/2023 17:45	James L Waggeberby	2429832
	08/09/2023			08/18/2023 15:19	Khloe J Berg	2429826
	08/09/2023			08/18/2023 15:20	Khloe J Berg	2429829
EPA 351.2 Rev. 2.0	08/09/2023			08/18/2023 15:22	Khloe J Berg	2429833
	08/09/2023			08/18/2023 15:23	Khloe J Berg	2429834
	08/09/2023	08/11/2023 14:29	Simonne.V. Calhoun	08/14/2023 11:07	Samantha L Bates	2429826
	08/09/2023	08/11/2023 14:29	Simonne.V. Calhoun	08/14/2023 11:12	Samantha L Bates	2429829
EPA 353.2 Rev. 2.0	08/09/2023	08/11/2023 14:29	Simonne.V. Calhoun	08/14/2023 11:13	Samantha L Bates	2429833
	08/09/2023	08/11/2023 14:29	Simonne.V. Calhoun	08/14/2023 11:14	Samantha L Bates	2429834
	08/09/2023			08/25/2023 09:48	Beverly Y. Sanders	2429826
	08/09/2023			08/25/2023 09:49	Beverly Y. Sanders	2429829
EPA 365.1 Rev. 2.0	08/09/2023			08/25/2023 09:56	Beverly Y. Sanders	2429833
	08/09/2023			08/25/2023 10:02	Beverly Y. Sanders	2429834
	08/09/2023	08/11/2023 14:24	Alexis Price	08/14/2023 13:06	Simonne.V. Calhoun	2429826
	08/09/2023	08/11/2023 14:24	Alexis Price	08/14/2023 13:14	Simonne.V. Calhoun	2429829
EPA 365.1 Rev. 2.0 dissolved	08/09/2023	08/11/2023 14:24	Alexis Price	08/14/2023 13:17	Simonne.V. Calhoun	2429833
	08/09/2023	08/11/2023 14:24	Alexis Price	08/14/2023 13:18	Simonne.V. Calhoun	2429834
	08/09/2023			08/09/2023 14:03	Elise M. Gillis	2429827
	08/09/2023			08/09/2023 14:06	Elise M. Gillis	2429830
SM 2320 B-2011	08/09/2023			08/15/2023 02:35	Chandler E Cox	2429825
	08/09/2023			08/15/2023 02:45	Chandler E Cox	2429828
	08/09/2023			08/15/2023 02:55	Chandler E Cox	2429831
	08/09/2023			08/15/2023 03:04	Chandler E Cox	2429832
SM 2340 B-2011	08/09/2023			08/15/2023 18:34	Chase Roberts	2429839
SM 2540 C-2015	08/09/2023			08/11/2023 15:21	Yijie Li	2429825, 2429828, 2429831, 2429832
SM 2540 D-2015	08/09/2023			08/11/2023 15:21	Yijie Li	2429825, 2429828, 2429831, 2429832
SM 4500-F- C-2011	08/09/2023			08/15/2023 18:18	Dale L. Simmons	2429825

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	08/09/2023			08/15/2023 18:23	Dale L. Simmons	2429828
	08/09/2023			08/15/2023 18:29	Dale L. Simmons	2429831
	08/09/2023			08/15/2023 18:34	Dale L. Simmons	2429832
SM 5310 B-2011	08/09/2023			08/11/2023 21:48	Elise M. Gillis	2429826
	08/09/2023			08/11/2023 22:02	Elise M. Gillis	2429829
	08/09/2023			08/11/2023 22:16	Elise M. Gillis	2429833
	08/09/2023			08/11/2023 22:31	Elise M. Gillis	2429834