

Chemical Analysis Report

CEN-DIST-2023-11-15-01

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

Event Description: **Run 13**
Request ID: **RQ-2023-11-13-14**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 06-DEC-2023 09:07

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light blue rectangular background.

Case Narrative

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

Results for the following analytical groups are included in this report: Metals and Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: LAKE OLIVE AT CENTER

Collection Date/Time: 11/14/2023 09:33

Field ID: G4CE0223

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451570	DEP SOP: NU-094-1	Color (true)	21	A	PCU	P437807	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P438148	
		Sulfate	6.0		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	71		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	111		mg/L	P438344	
	SM 2540 D-2015	TSS	6	I	mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.090	I	mg F/L	P438018	
2451572	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P438430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P438034	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P438096	
	EPA 365.1 Rev. 2.0	Total-P	0.080		mg P/L	P438117	
	SM 5310 B-2011	Organic Carbon	6.4		mg C/L	P437963	

Ref. Method and Comment:

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

Sample Location: LAKE LAWSONA NW OF CENTER

Collection Date/Time: 11/14/2023 10:21

Field ID: G2CE0286

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451581	EPA 200.7 Rev. 4.4	Calcium	18.1		mg/L	P437910	
		Iron	76	I	ug/L	P437910	
		Magnesium	2.96		mg/L	P437910	
		Potassium	1.6		mg/L	P437910	
		Sodium	10.9		mg/L	P437910	
		Strontium	51.5		ug/L	P437910	
		Tin	3.0	U	ug/L	P437910	
		Titanium	2.6	I	ug/L	P437910	
		Vanadium	2.0	U	ug/L	P437910	
		Zinc	7.8	I	ug/L	P437910	
	EPA 200.8 Rev. 5.4	Aluminum	136		ug/L	P437910	
		Antimony	1.37		ug/L	P437910	
		Arsenic	0.97		ug/L	P437910	
		Barium	15.6		ug/L	P437910	
		Beryllium	0.010	U	ug/L	P437910	
		Boron	34.2		ug/L	P437910	
		Cadmium	0.022	I	ug/L	P437910	
		Chromium	0.46	I	ug/L	P437910	
		Cobalt	0.062	I	ug/L	P437910	
		Copper	5.27		ug/L	P437910	
		Lead	4.11		ug/L	P437910	
		Manganese	8.29		ug/L	P437910	
		Molybdenum	1.39		ug/L	P437910	
		Nickel	0.50	U	ug/L	P437910	
		Selenium	0.20	U	ug/L	P437910	
		Silver	0.010	U	ug/L	P437910	
		Thallium	0.10	U	ug/L	P437910	
	SM 2340 B-2011	Hardness	57.5		mg/L	P437910	

Ref. Method and Comment:
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 11/20/2023.

Sample Location: LAKE LUCERNE SW

Collection Date/Time: 11/14/2023 11:06

Field ID: G4CE0202

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451564	DEP SOP: NU-094-1	Color (true)	7.5		PCU	P437807	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	9.1		mg Cl/L	P438148	
		Sulfate	17		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	75		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	99		mg/L	P438344	
	SM 2540 D-2015	TSS	3	I	mg/L	P438340	
2451566	SM 4500-F- C-2011	Fluoride	0.080	I	mg F/L	P438018	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.034		mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036		mg N/L	P438095	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P438117	
2451568	SM 5310 B-2011	Organic Carbon	3.3		mg C/L	P437963	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P437832	

Ref. Method and Comment:

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

Sample Location: LAKE EMERALD AT CENTER

Collection Date/Time: 11/14/2023 11:31

Field ID: G4CE0204

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451565	DEP SOP: NU-094-1	Color (true)	15		PCU	P437807	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P438148	
		Sulfate	42		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	45		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	142	A	mg/L	P438344	
	SM 2540 D-2015	TSS	6	IA	mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.053	I	mg F/L	P438018	
2451567	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P438243	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P438033	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P438096	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P438117	
	SM 5310 B-2011	Organic Carbon	6.1		mg C/L	P437963	
2451569	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P437832	

Ref. Method and Comment:

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

Sample Location: LAKE GEAR AT CENTER

Collection Date/Time: 11/14/2023 12:19

Field ID: G2CE0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451582	EPA 200.7 Rev. 4.4	Calcium	26.4		mg/L	P437910	
		Iron	53	I	ug/L	P437910	
		Magnesium	1.64		mg/L	P437910	
		Potassium	1.9		mg/L	P437910	
		Sodium	9.0		mg/L	P437910	
		Strontium	57.7		ug/L	P437910	
		Tin	3.0	U	ug/L	P437910	
		Titanium	0.75	U	ug/L	P437910	
		Vanadium	2.0	U	ug/L	P437910	
		Zinc	5.0	U	ug/L	P437910	
	EPA 200.8 Rev. 5.4	Aluminum	8.7	I	ug/L	P437910	
		Antimony	0.19	I	ug/L	P437910	
		Arsenic	2.35		ug/L	P437910	
		Barium	10.0		ug/L	P437910	
		Beryllium	0.010	U	ug/L	P437910	
		Boron	27.2		ug/L	P437910	
		Cadmium	0.020	U	ug/L	P437910	
		Chromium	0.40	U	ug/L	P437910	
		Cobalt	0.021	I	ug/L	P437910	
		Copper	1.36		ug/L	P437910	
		Lead	0.20	U	ug/L	P437910	
		Manganese	5.06		ug/L	P437910	
		Molybdenum	0.62		ug/L	P437910	
		Nickel	0.50	U	ug/L	P437910	
		Selenium	0.20	U	ug/L	P437910	
		Silver	0.010	U	ug/L	P437910	
		Thallium	0.10	U	ug/L	P437910	
	SM 2340 B-2011	Hardness	72.7		mg/L	P437910	

Sample Location: LAKE DOWNEY AT CENTER

Collection Date/Time: 11/14/2023 13:00

Field ID: G2CE0227

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2451571	DEP SOP: NU-094-1	Color (true)	33		PCU	P437807	
	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P437852	
	EPA 300.0 Rev. 2.1	Chloride	26		mg Cl/L	P438148	
		Sulfate	3.8		mg SO4/L	P438152	
	SM 2320 B-2011	Total Alkalinity	8.9		mg CaCO3/L	P438014	
	SM 2540 C-2015	TDS	58		mg/L	P438344	
	SM 2540 D-2015	TSS	2	I	mg/L	P438340	
	SM 4500-F- C-2011	Fluoride	0.037	I	mg F/L	P438018	
2451573	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P438430	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P438034	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P438096	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P438117	
	SM 5310 B-2011	Organic Carbon	9.9		mg C/L	P437963	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P437807

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437852

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437910

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: P437910

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	0.019	I	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

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: P438152

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P438014

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

Reference Method: SM 2540 C-2015
Batch ID: P438344

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438340

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P437963

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: P437807

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437852

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	107		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	103		P	85 - 115
Sodium	102		P	85 - 115
Strontium	101		P	85 - 115
Tin	101		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	103		P	85 - 115
Barium	103		P	85 - 115
Beryllium	98.0		P	85 - 115
Boron	99.7		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	100		P	85 - 115
Copper	99.6		P	85 - 115
Lead	97.2		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	102		P	85 - 115
Selenium	103		P	85 - 115
Silver	107		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

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: P438033

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P438014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P438344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.0		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438340

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	107		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

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

Reference Method: SM 5310 B-2011
Batch ID: P437963

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P437910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451123	Calcium	105	106	P/P	80 - 120
2451123	Iron	106	107	P/P	80 - 120
2451123	Magnesium	106	107	P/P	80 - 120
2451123	Potassium	102	101	P/P	80 - 120
2451123	Sodium	101		P	80 - 120
2451123	Strontium	101	101	P/P	80 - 120
2451123	Tin	100	101	P/P	80 - 120
2451123	Titanium	102	102	P/P	80 - 120
2451123	Vanadium	104	104	P/P	80 - 120
2451123	Zinc	102	103	P/P	80 - 120
2451582	Calcium	102		P	80 - 120
2451582	Iron	105		P	80 - 120
2451582	Magnesium	107		P	80 - 120
2451582	Potassium	99.4		P	80 - 120
2451582	Sodium	99.1		P	80 - 120
2451582	Strontium	97.4		P	80 - 120
2451582	Tin	99.4		P	80 - 120
2451582	Titanium	102		P	80 - 120
2451582	Vanadium	103		P	80 - 120
2451582	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P437910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451123	Aluminum	102	102	P/P	80 - 120
2451123	Antimony	103	103	P/P	80 - 120
2451123	Arsenic	103	103	P/P	80 - 120
2451123	Barium	104	103	P/P	80 - 120
2451123	Beryllium	97.8	98.5	P/P	80 - 120
2451123	Boron	104	106	P/P	80 - 120
2451123	Cadmium	103	101	P/P	80 - 120
2451123	Chromium	100	101	P/P	80 - 120
2451123	Cobalt	98.6	99.1	P/P	80 - 120
2451123	Copper	100	99.8	P/P	80 - 120
2451123	Lead	98.5	98.8	P/P	80 - 120
2451123	Manganese	99.8	100	P/P	80 - 120
2451123	Molybdenum	102	102	P/P	80 - 120
2451123	Nickel	99.4	99.6	P/P	80 - 120
2451123	Selenium	101	102	P/P	80 - 120
2451123	Silver	106	105	P/P	80 - 120
2451123	Thallium	102	103	P/P	80 - 120
2451582	Aluminum	101		P	80 - 120
2451582	Antimony	102		P	80 - 120
2451582	Arsenic	102		P	80 - 120
2451582	Barium	103		P	80 - 120
2451582	Beryllium	97.3		P	80 - 120
2451582	Boron	102		P	80 - 120
2451582	Cadmium	101		P	80 - 120
2451582	Chromium	97.1		P	80 - 120
2451582	Cobalt	96.9		P	80 - 120
2451582	Copper	96.6		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451582	Lead	97.5		P	80 - 120
2451582	Manganese	96.8		P	80 - 120
2451582	Molybdenum	102		P	80 - 120
2451582	Nickel	98.9		P	80 - 120
2451582	Selenium	102		P	80 - 120
2451582	Silver	106		P	80 - 120
2451582	Thallium	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451475	Chloride	98.6		P	90 - 110
2451570	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451475	Sulfate	97.7		P	90 - 110
2451570	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451539	Ammonia-N	100	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451572	Ammonia-N	95.6	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451566	Kjeldahl Nitrogen	97.0	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451617	Kjeldahl Nitrogen	104	97.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2450900	NO2NO3-N	97.5	98.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451567	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451573	Total-P	106	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451485	O-Phosphate-P	97.5	96.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451614	Fluoride	102	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P437963

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451413	Organic Carbon	97.5	99.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P437807

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451570	Color (true)	0.775	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P437852

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451498	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P437910

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451123	Calcium	0.705	Spike	P	0 - 20
2451123	Iron	0.482	Spike	P	0 - 20
2451123	Magnesium	0.467	Spike	P	0 - 20
2451123	Potassium	0.533	Spike	P	0 - 20
2451123	Sodium	0.245	Spike	P	0 - 20
2451123	Strontium	0.0943	Spike	P	0 - 20
2451123	Tin	0.953	Spike	P	0 - 20
2451123	Titanium	0.175	Spike	P	0 - 20
2451123	Vanadium	0.0278	Spike	P	0 - 20
2451123	Zinc	0.616	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P437910

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451123	Aluminum	0.0441	Spike	P	0 - 20
2451123	Antimony	0.247	Spike	P	0 - 20
2451123	Arsenic	0.138	Spike	P	0 - 20
2451123	Barium	0.436	Spike	P	0 - 20
2451123	Beryllium	0.668	Spike	P	0 - 20
2451123	Boron	1.53	Spike	P	0 - 20
2451123	Cadmium	1.64	Spike	P	0 - 20
2451123	Chromium	0.813	Spike	P	0 - 20
2451123	Cobalt	0.489	Spike	P	0 - 20
2451123	Copper	0.448	Spike	P	0 - 20
2451123	Lead	0.305	Spike	P	0 - 20
2451123	Manganese	0.233	Spike	P	0 - 20
2451123	Molybdenum	0.427	Spike	P	0 - 20
2451123	Nickel	0.171	Spike	P	0 - 20
2451123	Selenium	0.950	Spike	P	0 - 20
2451123	Silver	0.942	Spike	P	0 - 20
2451123	Thallium	0.793	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451475	Chloride	0.716	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451475	Sulfate	1.00	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451539	Ammonia-N	0.743	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451572	Ammonia-N	2.78	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451566	Kjeldahl Nitrogen	2.05	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451617	Kjeldahl Nitrogen	5.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2450900	NO2NO3-N	0.512	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438096

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451567	NO2NO3-N	1.00	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451573	Total-P	2.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P437832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451485	O-Phosphate-P	1.39	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P438014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451614	Total Alkalinity	1.72	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P438344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451565	TDS	2.12	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P438018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451614	Fluoride	0.484	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P437963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451413	Organic Carbon	1.68	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: A122732

Included Lab Sample IDs: 2451564, 2451565, 2451570, 2451571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A122740

Included Lab Sample IDs: 2451568, 2451569

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.2	96.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122747

Included Lab Sample IDs: 2451564, 2451565, 2451570, 2451571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A122791

Included Lab Sample IDs: 2451566, 2451567, 2451572, 2451573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	95.4	P/P	90 - 110
Organic Carbon	95.4	96.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A122815

Included Lab Sample IDs: 2451564, 2451565, 2451570, 2451571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.7	97.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A122815

Included Lab Sample IDs: 2451564, 2451565, 2451570, 2451571

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122816

Included Lab Sample IDs: 2451581, 2451582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	102	P/P	90 - 110
Aluminum	102	103	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Antimony	101	100	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Arsenic	104	101	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Barium	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122816

Included Lab Sample IDs: 2451581, 2451582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	100	101	P/P	90 - 110
Beryllium	101	100	P/P	90 - 110
Boron	97.5	99.7	P/P	90 - 110
Boron	99.7	101	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	101	103	P/P	90 - 110
Chromium	103	100	P/P	90 - 110
Cobalt	100	98.8	P/P	90 - 110
Cobalt	98.8	97.8	P/P	90 - 110
Copper	101	97.8	P/P	90 - 110
Copper	97.8	97.9	P/P	90 - 110
Lead	97.0	97.1	P/P	90 - 110
Lead	97.1	96.8	P/P	90 - 110
Manganese	100	102	P/P	90 - 110
Manganese	102	99.8	P/P	90 - 110
Molybdenum	101	101	P/P	90 - 110
Molybdenum	102	101	P/P	90 - 110
Nickel	102	99.7	P/P	90 - 110
Nickel	99.7	99.6	P/P	90 - 110
Selenium	100	100	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	100	101	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Thallium	100	99.9	P/P	90 - 110
Thallium	99.3	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A122817

Included Lab Sample IDs: 2451581, 2451582

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Calcium	102	100	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Iron	103	100	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Magnesium	102	100	P/P	90 - 110
Potassium	98.7	97.2	P/P	90 - 110
Potassium	99.1	98.7	P/P	90 - 110
Sodium	98.7	97.1	P/P	90 - 110
Sodium	99.1	98.7	P/P	90 - 110
Strontium	100	98.0	P/P	90 - 110
Strontium	98.0	96.9	P/P	90 - 110
Tin	101	99.5	P/P	90 - 110
Tin	99.5	96.3	P/P	90 - 110
Titanium	101	97.8	P/P	90 - 110
Titanium	97.8	97.0	P/P	90 - 110
Vanadium	101	98.1	P/P	90 - 110
Vanadium	98.1	97.4	P/P	90 - 110
Zinc	101	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A122817

Included Lab Sample IDs: 2451581, 2451582

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122849

Included Lab Sample IDs: 2451566, 2451567, 2451572, 2451573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122874

Included Lab Sample IDs: 2451564, 2451565, 2451570, 2451571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Chloride	105	105	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110
Sulfate	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122886

Included Lab Sample IDs: 2451572

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.7	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122887

Included Lab Sample IDs: 2451566, 2451567, 2451573

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122892

Included Lab Sample IDs: 2451566, 2451567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	95.9	P/P	90 - 110
Kjeldahl Nitrogen	99.4	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122899

Included Lab Sample IDs: 2451572, 2451573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.2	97.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122914

Included Lab Sample IDs: 2451566, 2451567

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122988

Included Lab Sample IDs: 2451572, 2451573

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	98.6	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)	102				0.775	
EPA 180.1 Rev. 2.0	Turbidity	104				0.0	
EPA 200.7 Rev. 4.4	Calcium	107	105	106	102		0.705
	Iron	107	106	107	105		0.482
	Magnesium	109	106	107	107		0.467
	Potassium	103	102	101	99.4		0.533
	Sodium	102	101	99.1			0.245
	Strontium	101	101	101	97.4		0.0943
	Tin	101	100	101	99.4		0.953
	Titanium	100	102	102	102		0.175
	Vanadium	101	104	104	103		0.0278
	Zinc	100	102	103	102		0.616
EPA 200.8 Rev. 5.4	Aluminum	100	102	102	101		0.0441
	Antimony	103	103	103	102		0.247
	Arsenic	103	103	103	102		0.138
	Barium	103	104	103	103		0.436
	Beryllium	98.0	97.8	98.5	97.3		0.668
	Boron	99.7	104	106	102		1.53
	Cadmium	100	103	101	101		1.64
	Chromium	101	100	101	97.1		0.813
	Cobalt	100	98.6	99.1	96.9		0.489
	Copper	99.6	100	99.8	96.6		0.448
	Lead	97.2	98.5	98.8	97.5		0.305
	Manganese	99.2	99.8	100	96.8		0.233
	Molybdenum	101	102	102	102		0.427
	Nickel	102	99.4	99.6	98.9		0.171
	Selenium	103	101	102	102		0.950
	Silver	107	106	105	106		0.942
	Thallium	101	102	103	101		0.793
EPA 300.0 Rev. 2.1	Chloride	103	98.6	99.9		0.716	
	Sulfate	102	97.7	101		1.00	
EPA 350.1 Rev. 2.0	Ammonia-N	93.6	100	98.8			0.743
	Ammonia-N	95.8	95.6	98.8			2.78
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	97.0	99.6			2.05
	Kjeldahl Nitrogen	104	104	97.2			5.59
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.5	98.0			0.512
	NO2NO3-N	99.0	99.5	100			1.00
EPA 365.1 Rev. 2.0	Total-P	103	106	108			2.18
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.5	96.0			1.39
SM 2320 B-2011	Total Alkalinity	100				1.72	
SM 2540 C-2015	TDS	94.0				2.12	
SM 2540 D-2015	TSS	107					
SM 4500-F- C-2011	Fluoride	102	102	102			0.484
SM 5310 B-2011	Organic Carbon	96.6	97.5	99.9			1.68

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2451564, 2451565, 2451570, 2451571
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2451564, 2451565, 2451570, 2451571
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2451581, 2451582

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	2451581, 2451582
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2451564, 2451565, 2451570, 2451571
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2451564, 2451565, 2451570, 2451571
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2451566, 2451567, 2451572, 2451573
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2451566, 2451567, 2451572, 2451573
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2451566, 2451567, 2451572, 2451573
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2451566, 2451567, 2451572, 2451573
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2451568, 2451569
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2451564, 2451565, 2451570, 2451571
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2451581, 2451582
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2451564, 2451565, 2451570, 2451571
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2451564, 2451565, 2451570, 2451571
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2451564, 2451565, 2451570, 2451571
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2451566, 2451567, 2451572, 2451573

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	11/15/2023			11/15/2023 13:16	Samantha L Bates	2451564, 2451565
	11/15/2023			11/15/2023 13:17	Samantha L Bates	2451570
	11/15/2023			11/15/2023 13:18	Samantha L Bates	2451571
EPA 180.1 Rev. 2.0	11/15/2023			11/15/2023 14:04	Khloe J Berg	2451564, 2451565
	11/15/2023			11/15/2023 14:05	Khloe J Berg	2451570
	11/15/2023			11/15/2023 14:06	Khloe J Berg	2451571
EPA 200.7 Rev. 4.4	11/15/2023	11/16/2023 14:25	George D Taylor	11/17/2023 21:37	Samatha Luckman	2451581
	11/15/2023	11/16/2023 14:25	George D Taylor	11/17/2023 22:12	Samatha Luckman	2451582
EPA 200.8 Rev. 5.4	11/15/2023	11/16/2023 14:25	George D Taylor	11/17/2023 22:07	Emily M Philpot	2451581
	11/15/2023	11/16/2023 14:25	George D Taylor	11/17/2023 23:41	Emily M Philpot	2451582
EPA 300.0 Rev. 2.1	11/15/2023			11/22/2023 08:38	James L Waggeberby	2451570
	11/15/2023			11/22/2023 12:09	James L Waggeberby	2451564
	11/15/2023			11/22/2023 12:24	James L Waggeberby	2451565
EPA 350.1 Rev. 2.0	11/15/2023			11/22/2023 12:40	James L Waggeberby	2451571
	11/15/2023			11/28/2023 14:09	Khloe J Berg	2451566
	11/15/2023			11/28/2023 14:10	Khloe J Berg	2451567
	11/15/2023			12/01/2023 12:59	Khloe J Berg	2451572
EPA 351.2 Rev. 2.0	11/15/2023			12/01/2023 13:03	Khloe J Berg	2451573
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 13:50	Ping Hua	2451566
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 14:11	Ping Hua	2451567
	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 15:46	Ping Hua	2451572
EPA 353.2 Rev. 2.0	11/15/2023	11/20/2023 21:15	Simonne.V. Calhoun	11/27/2023 15:48	Ping Hua	2451573
	11/15/2023			11/20/2023 11:44	Anna M. Plaviak	2451566
	11/15/2023			11/20/2023 11:51	Anna M. Plaviak	2451567
	11/15/2023			11/20/2023 11:57	Anna M. Plaviak	2451572
EPA 365.1 Rev. 2.0	11/15/2023			11/20/2023 11:58	Anna M. Plaviak	2451573
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:10	Chandler E Cox	2451572
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 11:59	Chandler E Cox	2451573
	11/15/2023	11/21/2023 12:58	Adam P Silver	11/27/2023 12:00	Chandler E Cox	2451566
EPA 365.1 Rev. 2.0 dissolved	11/15/2023			11/27/2023 12:01	Chandler E Cox	2451567
	11/15/2023			11/15/2023 13:56	Chandler E Cox	2451568
	11/15/2023			11/15/2023 13:57	Chandler E Cox	2451569
SM 2320 B-2011	11/15/2023			11/18/2023 12:51	Adam P Silver	2451564
	11/15/2023			11/18/2023 13:03	Adam P Silver	2451565
	11/15/2023			11/18/2023 13:15	Adam P Silver	2451570
	11/15/2023			11/18/2023 13:26	Adam P Silver	2451571
SM 2340 B-2011	11/15/2023			11/17/2023 21:37	Samatha Luckman	2451581
	11/15/2023			11/17/2023 22:12	Samatha Luckman	2451582
SM 2540 C-2015	11/15/2023			11/20/2023 15:30	Yijie Li	2451564, 2451565, 2451570, 2451571
SM 2540 D-2015	11/15/2023			11/20/2023 15:30	Yijie Li	2451564, 2451565, 2451570, 2451571

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	11/15/2023			11/18/2023 12:51	Adam P Silver	2451564
	11/15/2023			11/18/2023 13:03	Adam P Silver	2451565
	11/15/2023			11/18/2023 13:15	Adam P Silver	2451570
	11/15/2023			11/18/2023 13:26	Adam P Silver	2451571
SM 5310 B-2011	11/15/2023			11/16/2023 23:42	Khloe J Berg	2451566
	11/15/2023			11/17/2023 00:22	Khloe J Berg	2451567
	11/15/2023			11/17/2023 00:35	Khloe J Berg	2451572
	11/15/2023			11/17/2023 00:49	Khloe J Berg	2451573