

Chemical Analysis Report

SO-DIST-2024-04-30-01

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

Event Description: **2024 SMP: Glades Sloughs**
Request ID: **RQ-2024-04-15-30**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
Attn: Nicole Reistad

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

Certified by: Chris Bowen, Environmental Administrator

Date Certified: 28-MAY-2024 13:48



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: BLUE LAKE AT CENTER

Collection Date/Time: 04/29/2024 10:10

Field ID: G4SD0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2485607	DEP SOP: NU-094-1	Color (true)	14	A	PCU	P444991	
	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P445005	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P445271	
		Sulfate	25	J	mg SO4/L	P445276	LCS
	SM 2320 B-2011	Total Alkalinity	18		mg CaCO3/L	P445110	
	SM 2540 C-2015	TDS	106		mg/L	P445590	
	SM 2540 D-2015	TSS	8	I	mg/L	P445511	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P445111	
2485608	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P445352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P445239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P445533	
	EPA 365.1 Rev. 2.0	Total-P	0.019		mg P/L	P445131	
	SM 5310 B-2014	Organic Carbon	8.6		mg C/L	P445381	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKEPLACIDOUTLETATSR70W

Collection Date/Time: 04/29/2024 10:50

Field ID: G4SD0213

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2485595	DEP SOP: NU-094-1	Color (true)	370	J	PCU	P444990	
	EPA 180.1 Rev. 2.0	Turbidity	21		NTU	P445005	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P445271	
		Sulfate	26	J	mg SO4/L	P445276	LCS
	SM 2320 B-2011	Total Alkalinity	12		mg CaCO3/L	P445110	
	SM 2540 C-2015	TDS	170	A	mg/L	P445590	
	SM 2540 D-2015	TSS	64	A	mg/L	P445511	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P445111	
2485599	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P445344	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	4.5		mg N/L	P445239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.007	I	mg N/L	P445532	
	EPA 365.1 Rev. 2.0	Total-P	1.7		mg P/L	P445059	
	SM 5310 B-2014	Organic Carbon	32		mg C/L	P445381	

Ref. Method and Comment:
DEP SOP: NU-094-1: The result may be biased high because of turbidity.
EPA 300.0 Rev. 2.1: Sulfate: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: CHAPARRALSLOUGHATSR29

Collection Date/Time: 04/29/2024 11:40

Field ID: G3SD0224

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2485603	DEP SOP: NU-094-1	Color (true)	410		PCU	P444990	
	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P445005	
	EPA 300.0 Rev. 2.1	Chloride	29		mg Cl/L	P445271	
		Sulfate	0.39	I J	mg SO4/L	P445276	LCS
	SM 2320 B-2011	Total Alkalinity	8.0		mg CaCO3/L	P445110	
	SM 2540 C-2015	TDS	163		mg/L	P445590	
	SM 2540 D-2015	TSS	10		mg/L	P445511	
2485605	SM 4500-F- C-2011	Fluoride	0.075	I	mg F/L	P445111	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.25		mg N/L	P445352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.7		mg N/L	P445239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P445533	
	EPA 365.1 Rev. 2.0	Total-P	0.37		mg P/L	P445131	
2485622	SM 5310 B-2014	Organic Carbon	41		mg C/L	P445381	
	EPA 200.7 Rev. 4.4	Calcium	9.86		mg/L	P445049	
		Iron	880		ug/L	P445049	
		Magnesium	2.73		mg/L	P445049	
		Potassium	0.61	I	mg/L	P445049	
		Sodium	14.2		mg/L	P445049	
		Strontium	42.5		ug/L	P445049	
		Tin	3.0	U	ug/L	P445049	
		Titanium	0.89	I	ug/L	P445049	
		Vanadium	2.0	U	ug/L	P445049	
		Zinc	25		ug/L	P445049	
	EPA 200.8 Rev. 5.4	Aluminum	167		ug/L	P445049	
		Antimony	0.067	I	ug/L	P445049	
		Arsenic	1.23		ug/L	P445049	
		Barium	7.64		ug/L	P445049	
		Beryllium	0.028	I	ug/L	P445049	
		Boron	23.0		ug/L	P445049	
		Cadmium	0.020	U	ug/L	P445049	
		Chromium	0.74	I	ug/L	P445049	
		Cobalt	0.141		ug/L	P445049	
		Copper	0.85		ug/L	P445049	
		Lead	0.59		ug/L	P445049	
		Manganese	13.0		ug/L	P445049	
		Molybdenum	0.15	I	ug/L	P445049	
		Nickel	0.50	U	ug/L	P445049	
		Selenium	0.20	U	ug/L	P445049	
		Silver	0.010	U	ug/L	P445049	
		Thallium	0.10	U	ug/L	P445049	
	SM 2340 B-2011	Hardness	35.8		mg/L	P445049	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 351.2 Rev. 2.0: 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: BOOTHEELCREEKEASTBRANCH

Collection Date/Time: 04/29/2024 12:45

Field ID: G4SD0105

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2485597	DEP SOP: NU-094-1	Color (true)	55		PCU	P444990	
	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P445005	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P445271	
		Sulfate	0.34	I J	mg SO4/L	P445276	LCS
	SM 2320 B-2011	Total Alkalinity	52		mg CaCO3/L	P445110	
	SM 2540 C-2015	TDS	137		mg/L	P445590	
	SM 2540 D-2015	TSS	5	I	mg/L	P445511	
	SM 4500-F- C-2011	Fluoride	0.31		mg F/L	P445111	
2485601	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P445352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P445239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P445533	
	EPA 365.1 Rev. 2.0	Total-P	0.88		mg P/L	P445059	
	SM 5310 B-2014	Organic Carbon	7.1		mg C/L	P445381	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: JOHNHENRYSLOUGH ATCR731

Collection Date/Time: 04/29/2024 13:15

Field ID: G4SD0215

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2485598	DEP SOP: NU-094-1	Color (true)	88		PCU	P444990	
	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P445005	
	EPA 300.0 Rev. 2.1	Chloride	290		mg Cl/L	P445271	
		Sulfate	95	J	mg SO4/L	P445276	LCS
	SM 2320 B-2011	Total Alkalinity	85		mg CaCO3/L	P445110	
	SM 2540 C-2015	TDS	860		mg/L	P445590	
	SM 2540 D-2015	TSS	29		mg/L	P445511	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P445111	
2485602	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P445352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P445239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.49		mg N/L	P445533	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P445059	
	SM 5310 B-2014	Organic Carbon	21		mg C/L	P445381	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: RAINEY SLOUGH AT FARABEE RD

Collection Date/Time: 04/29/2024 13:35

Field ID: G4SD0111

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2485604	DEP SOP: NU-094-1	Color (true)	300	J	PCU	P444990	
	EPA 180.1 Rev. 2.0	Turbidity	40		NTU	P445005	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P445271	
		Sulfate	0.37	I J	mg SO4/L	P445276	LCS
	SM 2320 B-2011	Total Alkalinity	74		mg CaCO3/L	P445110	
	SM 2540 C-2015	TDS	191		mg/L	P445590	
	SM 2540 D-2015	TSS	77		mg/L	P445511	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P445111	
2485606	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P445352	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.5		mg N/L	P445239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P445533	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P445131	
	SM 5310 B-2014	Organic Carbon	39		mg C/L	P445381	
2485623	EPA 200.7 Rev. 4.4	Calcium	30.5		mg/L	P445049	
		Iron	2.31E+03		ug/L	P445049	
		Magnesium	6.06		mg/L	P445049	
		Potassium	0.67	I	mg/L	P445049	
		Sodium	19.3		mg/L	P445049	
		Strontium	207		ug/L	P445049	
		Tin	3.0	U	ug/L	P445049	
		Titanium	5.3		ug/L	P445049	
	EPA 200.8 Rev. 5.4	Vanadium	2.0	U	ug/L	P445049	
		Zinc	24		ug/L	P445049	
		Aluminum	598		ug/L	P445049	
		Antimony	0.063	I	ug/L	P445049	
		Arsenic	1.36		ug/L	P445049	
		Barium	28.1		ug/L	P445049	
		Beryllium	0.092		ug/L	P445049	
		Boron	23.3		ug/L	P445049	
		Cadmium	0.024	I	ug/L	P445049	
		Chromium	1.4	I	ug/L	P445049	
		Cobalt	0.583		ug/L	P445049	
		Copper	1.35		ug/L	P445049	
		Lead	1.24		ug/L	P445049	
		Manganese	31.7		ug/L	P445049	
		Molybdenum	0.24	I	ug/L	P445049	
		Nickel	0.99	I	ug/L	P445049	
		Selenium	0.20	U	ug/L	P445049	
		Silver	0.010	U	ug/L	P445049	
		Thallium	0.10	U	ug/L	P445049	
	SM 2340 B-2011	Hardness	101		mg/L	P445049	

Ref. Method and Comment:

DEP SOP: NU-094-1: The result may be biased high because of turbidity.

EPA 300.0 Rev. 2.1: Sulfate: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 351.2 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: P444990

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P444991

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P445005

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445049

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: P445049

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	0.010	U	ug/L
Thallium	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445271

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445276

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445344

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445352

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445239

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445532

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445533

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445059

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445131

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P445110

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

Reference Method: SM 2540 C-2015
Batch ID: P445590

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P445511

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P445111

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P445381

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: P444990

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P444991

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P445005

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	103		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	100		P	85 - 115
Sodium	104		P	85 - 115
Strontium	99.9		P	85 - 115
Tin	100		P	85 - 115
Titanium	99.9		P	85 - 115
Vanadium	104		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445049

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.4		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	98.5		P	85 - 115
Barium	100		P	85 - 115
Beryllium	105		P	85 - 115
Boron	107		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.6		P	85 - 115
Cobalt	97.8		P	85 - 115
Copper	96.2		P	85 - 115
Lead	98.3		P	85 - 115
Manganese	100		P	85 - 115
Molybdenum	98.5		P	85 - 115
Nickel	97.0		P	85 - 115
Selenium	99.4		P	85 - 115
Silver	111		P	85 - 115
Thallium	93.6		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445271

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	112		F	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445239

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445532

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445533

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445059

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445131

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P445110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.9		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P445590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	95.2		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P445511

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	99.2		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P445111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P445381

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485415	Calcium	105	107	P/P	80 - 120
2485415	Iron	100	104	P/P	80 - 120
2485415	Magnesium	105	107	P/P	80 - 120
2485415	Potassium	97.7	98.0	P/P	80 - 120
2485415	Sodium	100	102	P/P	80 - 120
2485415	Strontium	98.0	99.1	P/P	80 - 120
2485415	Tin	99.5	100	P/P	80 - 120
2485415	Titanium	98.3	98.8	P/P	80 - 120
2485415	Vanadium	103	105	P/P	80 - 120
2485415	Zinc	103	104	P/P	80 - 120
2485658	Calcium	102		P	80 - 120
2485658	Iron	100		P	80 - 120
2485658	Magnesium	101		P	80 - 120
2485658	Potassium	98.2		P	80 - 120
2485658	Sodium	101		P	80 - 120
2485658	Strontium	96.6		P	80 - 120
2485658	Tin	93.8		P	80 - 120
2485658	Titanium	98.1		P	80 - 120
2485658	Vanadium	102		P	80 - 120
2485658	Zinc	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485415	Aluminum	100	98.5	P/P	80 - 120
2485415	Antimony	100	99.2	P/P	80 - 120
2485415	Arsenic	98.8	100	P/P	80 - 120
2485415	Barium	101	100	P/P	80 - 120
2485415	Beryllium	109	106	P/P	80 - 120
2485415	Boron	109	108	P/P	80 - 120
2485415	Cadmium	100	100	P/P	80 - 120
2485415	Chromium	101	102	P/P	80 - 120
2485415	Cobalt	98.3	100	P/P	80 - 120
2485415	Copper	97.4	100	P/P	80 - 120
2485415	Lead	98.2	98.4	P/P	80 - 120
2485415	Manganese	100	103	P/P	80 - 120
2485415	Molybdenum	99.4	99.7	P/P	80 - 120
2485415	Nickel	98.5	102	P/P	80 - 120
2485415	Selenium	97.6	99.5	P/P	80 - 120
2485415	Silver	109	108	P/P	80 - 120
2485415	Thallium	97.8	98.2	P/P	80 - 120
2485658	Aluminum	101		P	80 - 120
2485658	Antimony	101		P	80 - 120
2485658	Arsenic	103		P	80 - 120
2485658	Barium	101		P	80 - 120
2485658	Beryllium	110		P	80 - 120
2485658	Boron	108		P	80 - 120
2485658	Cadmium	103		P	80 - 120
2485658	Chromium	100		P	80 - 120
2485658	Cobalt	98.3		P	80 - 120
2485658	Copper	98.1		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445049

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485658	Lead	100		P	80 - 120
2485658	Manganese	103		P	80 - 120
2485658	Molybdenum	100		P	80 - 120
2485658	Nickel	96.7		P	80 - 120
2485658	Selenium	98.2		P	80 - 120
2485658	Silver	110		P	80 - 120
2485658	Thallium	98.7		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485276	Chloride	107		P	90 - 110
2485595	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485276	Sulfate	107		P	90 - 110
2485595	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485453	Ammonia-N	95.2	97.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485760	Ammonia-N	95.0	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485453	NO2NO3-N	95.4	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485601	NO2NO3-N	99.1	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445059

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485534	Total-P	103	103	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485608	Total-P	99.7	109	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P445111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2485363	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P445381

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482686	Organic Carbon	97.9	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P444990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485541	Color (true)	1.54	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P444991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485607	Color (true)	1.72	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P445005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485405	Turbidity	1.06	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485415	Calcium	1.04	Spike	P	0 - 20
2485415	Iron	2.93	Spike	P	0 - 20
2485415	Magnesium	2.21	Spike	P	0 - 20
2485415	Potassium	0.220	Spike	P	0 - 20
2485415	Sodium	1.35	Spike	P	0 - 20
2485415	Strontium	1.10	Spike	P	0 - 20
2485415	Tin	0.686	Spike	P	0 - 20
2485415	Titanium	0.415	Spike	P	0 - 20
2485415	Vanadium	1.51	Spike	P	0 - 20
2485415	Zinc	0.835	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485415	Aluminum	1.15	Spike	P	0 - 20
2485415	Antimony	0.750	Spike	P	0 - 20
2485415	Arsenic	1.37	Spike	P	0 - 20
2485415	Barium	0.465	Spike	P	0 - 20
2485415	Beryllium	2.49	Spike	P	0 - 20
2485415	Boron	0.619	Spike	P	0 - 20
2485415	Cadmium	0.203	Spike	P	0 - 20
2485415	Chromium	0.842	Spike	P	0 - 20
2485415	Cobalt	2.08	Spike	P	0 - 20
2485415	Copper	2.73	Spike	P	0 - 20
2485415	Lead	0.113	Spike	P	0 - 20
2485415	Manganese	1.46	Spike	P	0 - 20
2485415	Molybdenum	0.330	Spike	P	0 - 20
2485415	Nickel	3.35	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445049

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485415	Selenium	1.97	Spike	P	0 - 20
2485415	Silver	1.07	Spike	P	0 - 20
2485415	Thallium	0.375	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485276	Chloride	0.198	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485276	Sulfate	1.27	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485453	Ammonia-N	2.16	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P445352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485760	Ammonia-N	2.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485654	Kjeldahl Nitrogen	10.8	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485453	NO2NO3-N	4.61	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P445533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485601	NO2NO3-N	0.475	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485534	Total-P	0.205	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P445131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485608	Total-P	8.73	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P445110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485363	Total Alkalinity	0.846	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P445590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485595	TDS	4.71	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P445511

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485595	TSS	5.03	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P445111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2485363	Fluoride	0.473	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P445381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482686	Organic Carbon	0.617	Spike	P	0 - 15

Quality Assurance Report Precision

* 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: A125591

Included Lab Sample IDs: 2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.6	96.9	P/P	90 - 110
Color (true)	99.5	97.6	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A125598

Included Lab Sample IDs: 2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A125631

Included Lab Sample IDs: 2485599, 2485600, 2485601, 2485602

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

Reference Method: SM 2320 B-2011

Run ID: A125637

Included Lab Sample IDs: 2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	97.2	P/P	90 - 110
Total Alkalinity	96.1	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A125637

Included Lab Sample IDs: 2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	105	P/P	90 - 110
Fluoride	105	106	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A125640

Included Lab Sample IDs: 2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	104	P/P	90 - 110
Chloride	103	102	P/P	90 - 110
Sulfate	104	106	P/P	90 - 110
Sulfate	105	104	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A125659

Included Lab Sample IDs: 2485622, 2485623

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A125659
Included Lab Sample IDs: 2485622, 2485623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	101	P/P	90 - 110
Magnesium	102	105	P/P	90 - 110
Potassium	102	103	P/P	90 - 110
Sodium	101	102	P/P	90 - 110
Strontium	102	98.2	P/P	90 - 110
Tin	100	105	P/P	90 - 110
Titanium	99.4	98.0	P/P	90 - 110
Vanadium	102	106	P/P	90 - 110
Zinc	102	110	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A125661
Included Lab Sample IDs: 2485622, 2485623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.8	100	P/P	90 - 110
Arsenic	101	98.3	P/P	90 - 110
Barium	98.4	99.8	P/P	90 - 110
Beryllium	106	109	P/P	90 - 110
Boron	105	107	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Chromium	97.4	97.3	P/P	90 - 110
Cobalt	96.7	95.5	P/P	90 - 110
Copper	97.1	95.4	P/P	90 - 110
Lead	97.3	100	P/P	90 - 110
Manganese	98.3	98.9	P/P	90 - 110
Molybdenum	98.3	97.1	P/P	90 - 110
Nickel	96.9	94.7	P/P	90 - 110
Selenium	99.8	98.1	P/P	90 - 110
Silver	97.4	97.6	P/P	90 - 110
Thallium	98.7	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A125664
Included Lab Sample IDs: 2485605, 2485606

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A125668
Included Lab Sample IDs: 2485608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A125682
Included Lab Sample IDs: 2485622, 2485623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A125682

Included Lab Sample IDs: 2485622, 2485623

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.6	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A125724

Included Lab Sample IDs: 2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	95.9	99.1	P/P	90 - 110
Ammonia-N	98.9	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A125725

Included Lab Sample IDs: 2485600, 2485601, 2485602, 2485605, 2485606, 2485608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	104	P/P	90 - 110
Kjeldahl Nitrogen	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A125730

Included Lab Sample IDs: 2485599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7		P	90 - 110

Reference Method: SM 5310 B-2014

Run ID: A125736

Included Lab Sample IDs: 2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	109	98.4	P/P	70 - 130

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A125796

Included Lab Sample IDs: 2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	102	94.5	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			
						LCS	SMP	MS	
DEP SOP: NU-094-1	Color (true)	97.8					1.54		
	Color (true)	98.7					1.72		
EPA 180.1 Rev. 2.0	Turbidity	102					1.06		
EPA 200.7 Rev. 4.4	Calcium	106	105	107	102			1.04	
	Iron	103	100	104	100			2.93	
	Magnesium	107	105	107	101			2.21	
	Potassium	100	97.7	98.0	98.2			0.220	
	Sodium	104	100	102	101			1.35	
	Strontium	99.9	98.0	99.1	96.6			1.10	
	Tin	100	99.5	100	93.8			0.686	
	Titanium	99.9	98.3	98.8	98.1			0.415	
	Vanadium	104	103	105	102			1.51	
	Zinc	102	103	104	100			0.835	
	EPA 200.8 Rev. 5.4	Aluminum	98.4	100	98.5	101			1.15
		Antimony	101	100	99.2	101			0.750
		Arsenic	98.5	98.8	100	103			1.37
		Barium	100	101	100	101			0.465
Beryllium		105	109	106	110			2.49	
Boron		107	109	108	108			0.619	
Cadmium		101	100	100	103			0.203	
Chromium		99.6	101	102	100			0.842	
Cobalt		97.8	98.3	100	98.3			2.08	
Copper		96.2	97.4	100	98.1			2.73	
Lead		98.3	98.2	98.4	100			0.113	
Manganese		100	100	103	103			1.46	
Molybdenum		98.5	99.4	99.7	100			0.330	
Nickel		97.0	98.5	102	96.7			3.35	
Selenium		99.4	97.6	99.5	98.2			1.97	
Silver		111	109	108	110			1.07	
Thallium		93.6	97.8	98.2	98.7			0.375	
EPA 300.0 Rev. 2.1		Chloride	110	107	105			0.198	
	Sulfate	112	107	106			1.27		
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	95.2	97.8				2.16	
	Ammonia-N	95.2	95.0	97.0				2.08	
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103						10.8	
EPA 353.2 Rev. 2.0	NO2NO3-N	102	95.4	100				4.61	
	NO2NO3-N	100	99.1	98.6				0.475	
EPA 365.1 Rev. 2.0	Total-P	105	103	103				0.205	
	Total-P	98.7	99.7	109				8.73	
SM 2320 B-2011	Total Alkalinity	99.9					0.846		
SM 2540 C-2015	TDS	95.2					4.71		
SM 2540 D-2015	TSS	99.2					5.03		
SM 4500-F- C-2011	Fluoride	103	103	103				0.473	
SM 5310 B-2014	Organic Carbon	99.6	97.9	98.6				0.617	

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2485622, 2485623
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2485622, 2485623
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2485622, 2485623
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2485599, 2485600, 2485601, 2485602, 2485605, 2485606, 2485608

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	04/30/2024			04/30/2024 14:15	Jessica K Wilks	2485597, 2485598
	04/30/2024			04/30/2024 14:19	Jessica K Wilks	2485607
	04/30/2024			04/30/2024 14:21	Jessica K Wilks	2485595, 2485596
	04/30/2024			04/30/2024 14:22	Jessica K Wilks	2485603, 2485604
EPA 180.1 Rev. 2.0	04/30/2024			04/30/2024 13:50	Khloe J Berg	2485595
	04/30/2024			04/30/2024 13:51	Khloe J Berg	2485596
	04/30/2024			04/30/2024 13:53	Khloe J Berg	2485597
	04/30/2024			04/30/2024 13:54	Khloe J Berg	2485598
	04/30/2024			04/30/2024 13:55	Khloe J Berg	2485603
	04/30/2024			04/30/2024 13:56	Khloe J Berg	2485604
	04/30/2024			04/30/2024 14:00	Khloe J Berg	2485607
EPA 200.7 Rev. 4.4	04/30/2024	05/01/2024 13:10	George D Taylor	05/02/2024 18:56	Chase Roberts	2485622
	04/30/2024	05/01/2024 13:10	George D Taylor	05/02/2024 19:03	Chase Roberts	2485623
EPA 200.8 Rev. 5.4	04/30/2024	05/01/2024 13:10	George D Taylor	05/02/2024 20:53	McKinley C Carter	2485622
	04/30/2024	05/01/2024 13:10	George D Taylor	05/02/2024 21:02	McKinley C Carter	2485623
	04/30/2024	05/01/2024 13:10	George D Taylor	05/03/2024 17:56	McKinley C Carter	2485622
	04/30/2024	05/01/2024 13:10	George D Taylor	05/03/2024 18:05	McKinley C Carter	2485623
EPA 300.0 Rev. 2.1	04/30/2024			05/02/2024 10:59	Samantha L Bates	2485595
	04/30/2024			05/02/2024 14:32	Samantha L Bates	2485596
	04/30/2024			05/02/2024 14:47	Samantha L Bates	2485597
	04/30/2024			05/02/2024 15:02	Samantha L Bates	2485598
	04/30/2024			05/02/2024 15:17	Samantha L Bates	2485603
	04/30/2024			05/02/2024 15:32	Samantha L Bates	2485604
	04/30/2024			05/02/2024 15:47	Samantha L Bates	2485607
EPA 350.1 Rev. 2.0	04/30/2024			05/07/2024 11:15	Khloe J Berg	2485599
	04/30/2024			05/07/2024 14:36	Khloe J Berg	2485600
	04/30/2024			05/07/2024 14:37	Khloe J Berg	2485601
	04/30/2024			05/07/2024 14:39	Khloe J Berg	2485602
	04/30/2024			05/07/2024 14:40	Khloe J Berg	2485605
	04/30/2024			05/07/2024 14:41	Khloe J Berg	2485606
	04/30/2024			05/07/2024 14:43	Khloe J Berg	2485608
EPA 351.2 Rev. 2.0	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 14:58	Ping Hua	2485601
	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 15:00	Ping Hua	2485602
	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 15:02	Ping Hua	2485605
	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 15:03	Ping Hua	2485606
	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 15:05	Ping Hua	2485608
	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 15:13	Ping Hua	2485600
	04/30/2024	05/07/2024 09:24	Simonne.V. Calhoun	05/07/2024 16:13	Ping Hua	2485599
EPA 353.2 Rev. 2.0	04/30/2024			05/09/2024 13:56	Fadila Guebre	2485599
	04/30/2024			05/09/2024 14:04	Fadila Guebre	2485601

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	04/30/2024			05/09/2024 14:10	Fadila Guebre	2485600
	04/30/2024			05/09/2024 14:12	Fadila Guebre	2485602
	04/30/2024			05/09/2024 14:13	Fadila Guebre	2485605
	04/30/2024			05/09/2024 14:14	Fadila Guebre	2485606
	04/30/2024			05/09/2024 14:15	Fadila Guebre	2485608
EPA 365.1 Rev. 2.0	04/30/2024	05/01/2024 15:32	Adam P Silver	05/02/2024 08:26	Simonne.V. Calhoun	2485600
	04/30/2024	05/01/2024 15:32	Adam P Silver	05/02/2024 08:27	Simonne.V. Calhoun	2485601
	04/30/2024	05/01/2024 15:32	Adam P Silver	05/02/2024 08:28	Simonne.V. Calhoun	2485602
	04/30/2024	05/01/2024 15:32	Adam P Silver	05/02/2024 08:44	Simonne.V. Calhoun	2485599
	04/30/2024	05/02/2024 13:57	Josephine W Gitau	05/03/2024 10:45	Simonne.V. Calhoun	2485605
	04/30/2024	05/02/2024 13:57	Josephine W Gitau	05/03/2024 10:46	Simonne.V. Calhoun	2485606
SM 2320 B-2011	04/30/2024	05/02/2024 13:57	Josephine W Gitau	05/03/2024 11:49	Simonne.V. Calhoun	2485608
	04/30/2024			05/01/2024 23:02	Dale L. Simmons	2485595
	04/30/2024			05/01/2024 23:09	Dale L. Simmons	2485596
	04/30/2024			05/01/2024 23:20	Dale L. Simmons	2485597
	04/30/2024			05/01/2024 23:32	Dale L. Simmons	2485603
	04/30/2024			05/01/2024 23:44	Dale L. Simmons	2485604
	04/30/2024			05/01/2024 23:56	Dale L. Simmons	2485607
SM 2340 B-2011	04/30/2024			05/02/2024 00:59	Dale L. Simmons	2485598
	04/30/2024			05/02/2024 18:56	Chase Roberts	2485622
SM 2540 C-2015	04/30/2024			05/02/2024 19:03	Chase Roberts	2485623
	04/30/2024			05/03/2024 15:46	Yijie Li	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
SM 2540 D-2015	04/30/2024			05/03/2024 15:46	Yijie Li	2485595, 2485596, 2485597, 2485598, 2485603, 2485604, 2485607
SM 4500-F- C-2011	04/30/2024			05/01/2024 23:02	Dale L. Simmons	2485595
	04/30/2024			05/01/2024 23:09	Dale L. Simmons	2485596
	04/30/2024			05/01/2024 23:20	Dale L. Simmons	2485597
	04/30/2024			05/01/2024 23:32	Dale L. Simmons	2485603
	04/30/2024			05/01/2024 23:44	Dale L. Simmons	2485604
	04/30/2024			05/01/2024 23:56	Dale L. Simmons	2485607
SM 5310 B-2014	04/30/2024			05/02/2024 00:59	Dale L. Simmons	2485598
	04/30/2024			05/06/2024 19:15	Jessica K Wilks	2485599
	04/30/2024			05/06/2024 19:30	Jessica K Wilks	2485600
	04/30/2024			05/06/2024 19:46	Jessica K Wilks	2485601
	04/30/2024			05/06/2024 20:01	Jessica K Wilks	2485602
	04/30/2024			05/06/2024 20:16	Jessica K Wilks	2485605
	04/30/2024			05/06/2024 20:31	Jessica K Wilks	2485606
	04/30/2024			05/06/2024 20:47	Jessica K Wilks	2485608