Chemical Analysis Report

SO-DIST-2022-08-23-01

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

Event Description: **2022SMP: Caloosa**
Request ID: **RQ-2022-08-22-37**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
2295 Victoria Ave. Suite 314
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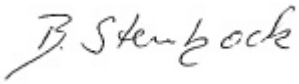
Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator Date Certified: 13-SEP-2022 13:30



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 group are included in this report: 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: ChaparralSloughAtSR29 **Collection Date/Time: 08/22/2022 09:30**

Field ID: G3SD0224 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2351423	DEP SOP: NU-094-1	Color (true)	840		PCU	P418563	
	EPA 180.1 Rev. 2.0	Turbidity	16		NTU	P418573	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P418970	
		Sulfate	0.24	I	mg SO4/L	P418973	
	SM 2320 B-2011	Total Alkalinity	22		mg CaCO3/L	P418856	
	SM 2540 C-2011	TDS	217		mg/L	P418979	
	SM 2540 D-2011	TSS	18		mg/L	P419042	
	SM 4500-F- C-2011	Fluoride	0.058	I	mg F/L	P418789	
2351426	EPA 350.1 Rev. 2.0	Ammonia-N	0.64		mg N/L	P418747	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	5.0		mg N/L	P418776	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418754	
	EPA 365.1 Rev. 2.0	Total-P	0.75		mg P/L	P418674	
	SM 5310 B-2011	Organic Carbon	70		mg C/L	P418825	

Ref. Method and Comment:
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: PadgettRanchCanalAtSR78 **Collection Date/Time: 08/22/2022 10:05**

Field ID: G3SD0222 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2351424	DEP SOP: NU-094-1	Color (true)	110		PCU	P418560	
	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P418573	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P418970	
		Sulfate	11		mg SO4/L	P418973	
	SM 2320 B-2011	Total Alkalinity	117	A	mg CaCO3/L	P418786	
	SM 2540 C-2011	TDS	245		mg/L	P418979	
	SM 2540 D-2011	TSS	3	I	mg/L	P419042	
	SM 4500-F- C-2011	Fluoride	0.27		mg F/L	P418789	
2351427	EPA 350.1 Rev. 2.0	Ammonia-N	0.088		mg N/L	P418747	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P418776	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P418754	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P418674	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P418825	

Ref. Method and Comment:
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: CaloosaRivDwnstrmOrtona **Collection Date/Time: 08/22/2022 10:55**

Field ID: G3SD0225 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2351425	DEP SOP: NU-094-1	Color (true)	95		PCU	P418560	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P418573	
	EPA 300.0 Rev. 2.1	Chloride	48		mg Cl/L	P418970	
		Sulfate	22		mg SO4/L	P418973	
	SM 2320 B-2011	Total Alkalinity	169		mg CaCO3/L	P418856	
	SM 2540 C-2011	TDS	316		mg/L	P418979	
	SM 2540 D-2011	TSS	4	I	mg/L	P419042	
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P418789	
2351428	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P418747	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P418649	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032		mg N/L	P418754	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P418674	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P418976	

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P418560

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P418563

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418573

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418970

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418973

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418747

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418649

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418776

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418754

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418674

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

Reference Method: SM 2320 B-2011
Batch ID: P418786

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

Reference Method: SM 2320 B-2011
Batch ID: P418856

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

Reference Method: SM 2540 C-2011
Batch ID: P418979

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419042

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P418789

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P418825

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P418976

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: P418560

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P418563

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: P418573

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418970

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418973

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418747

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418649

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418776

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418754

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	93.0		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418674

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

Reference Method: SM 2320 B-2011
Batch ID: P418786

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P418856

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P418789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P418825

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P418976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351371	Chloride	96.3		P	90 - 110
2351423	Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418973

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351371	Sulfate	96.0		P	90 - 110
2351423	Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351397	Ammonia-N	99.8	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418649

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351525	Kjeldahl Nitrogen	91.2	95.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418754

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351427	NO2NO3-N	92.0	92.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351397	Total-P	104	107	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P418789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351424	Fluoride	99.5	99.5	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P418825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351255	Organic Carbon	98.1	98.2	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P418976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2351463	Organic Carbon	97.4	97.2	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P418560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351458	Color (true)	0.745	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P418563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351251	Color (true)	0.481	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418573

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351371	Turbidity	9.71	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351371	Chloride	0.0828	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P418973

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351371	Sulfate	0.349	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351397	Ammonia-N	4.71	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351525	Kjeldahl Nitrogen	3.39	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351461	Kjeldahl Nitrogen	4.58	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P418754

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351427	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351397	Total-P	2.37	Spike	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P418786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351424	Total Alkalinity	1.58	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P418856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351371	Total Alkalinity	0.618	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P418979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351325	TDS	3.06	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P419042

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351325	TSS	7.06	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P418789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351424	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P418825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351255	Organic Carbon	0.0271	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P418976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2351463	Organic Carbon	0.131	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: A114285
Included Lab Sample IDs: 2351423, 2351424, 2351425

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 110
Color (true)	102	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A114288
Included Lab Sample IDs: 2351423, 2351424, 2351425

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A114378
Included Lab Sample IDs: 2351426, 2351427, 2351428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	93.0	92.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114379
Included Lab Sample IDs: 2351426, 2351427, 2351428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114393
Included Lab Sample IDs: 2351428

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

Reference Method: SM 2320 B-2011
Run ID: A114396
Included Lab Sample IDs: 2351424

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

Reference Method: SM 4500-F- C-2011
Run ID: A114396
Included Lab Sample IDs: 2351423, 2351424, 2351425

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114401
Included Lab Sample IDs: 2351426, 2351427, 2351428

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114401
Included Lab Sample IDs: 2351426, 2351427, 2351428

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

Reference Method: SM 5310 B-2011
Run ID: A114412
Included Lab Sample IDs: 2351426, 2351427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	96.1	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A114426
Included Lab Sample IDs: 2351423, 2351425

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.8	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114444
Included Lab Sample IDs: 2351426, 2351427

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	93.4	P/P	90 - 110
Kjeldahl Nitrogen	96.3	92.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A114446
Included Lab Sample IDs: 2351423, 2351424, 2351425

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Chloride	99.6	100	P/P	90 - 110
Sulfate	99.1	99.6	P/P	90 - 110
Sulfate	99.6	99.7	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A114476
Included Lab Sample IDs: 2351428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	96.3	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)	101				0.745	
	Color (true)	102				0.481	
EPA 180.1 Rev. 2.0	Turbidity	96.5				9.71	
EPA 300.0 Rev. 2.1	Chloride	98.3	96.3	97.7		0.0828	
	Sulfate	97.9	96.0	98.5		0.349	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	99.8	106			4.71
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	91.2	95.6			3.39
	Kjeldahl Nitrogen	101					4.58
EPA 353.2 Rev. 2.0	NO2NO3-N	93.0	92.0	92.0			0.0
EPA 365.1 Rev. 2.0	Total-P	103	104	107			2.37
SM 2320 B-2011	Total Alkalinity	101				1.58	
	Total Alkalinity	101				0.618	
SM 2540 C-2011	TDS					3.06	
SM 2540 D-2011	TSS					7.06	
SM 4500-F- C-2011	Fluoride	101	99.5	99.5			0.0
SM 5310 B-2011	Organic Carbon	97.2	98.1	98.2			0.0271
	Organic Carbon	95.6	97.4	97.2			0.131

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2351423, 2351424, 2351425
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2351423, 2351424, 2351425
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2351423, 2351424, 2351425
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2351423, 2351424, 2351425
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2351426, 2351427, 2351428
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2351426, 2351427, 2351428
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2351426, 2351427, 2351428
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2351426, 2351427, 2351428
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2351423, 2351424, 2351425
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2351423, 2351424, 2351425
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2351423, 2351424, 2351425
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2351423, 2351424, 2351425
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2351426, 2351427, 2351428

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	08/23/2022			08/23/2022 15:48	Blanca Fach	2351424
	08/23/2022			08/23/2022 15:49	Blanca Fach	2351425
	08/23/2022			08/23/2022 16:14	Blanca Fach	2351423
EPA 180.1 Rev. 2.0	08/23/2022			08/23/2022 14:28	Chandler E Cox	2351423
	08/23/2022			08/23/2022 14:31	Chandler E Cox	2351424
	08/23/2022			08/23/2022 14:32	Chandler E Cox	2351425
EPA 300.0 Rev. 2.1	08/23/2022			08/31/2022 21:30	Anna M. Plaviak	2351423
	08/23/2022			09/01/2022 01:44	Anna M. Plaviak	2351424
	08/23/2022			09/01/2022 01:58	Anna M. Plaviak	2351425
EPA 350.1 Rev. 2.0	08/23/2022			08/26/2022 11:07	Ping Hua	2351426
	08/23/2022			08/26/2022 11:08	Ping Hua	2351427
	08/23/2022			08/26/2022 11:09	Ping Hua	2351428
EPA 351.2 Rev. 2.0	08/23/2022	08/25/2022 14:20	Alexandra J Mattheus	08/26/2022 14:51	Alexandra J Mattheus	2351428
	08/23/2022	08/30/2022 09:19	Samantha L Bates	08/30/2022 14:04	Alexandra J Mattheus	2351427
	08/23/2022	08/30/2022 09:19	Samantha L Bates	08/30/2022 16:12	Alexandra J Mattheus	2351426
EPA 353.2 Rev. 2.0	08/23/2022			08/26/2022 11:44	Beverly Y. Sanders	2351427
	08/23/2022			08/26/2022 11:50	Beverly Y. Sanders	2351426
	08/23/2022			08/26/2022 11:51	Beverly Y. Sanders	2351428
EPA 365.1 Rev. 2.0	08/23/2022	08/25/2022 15:50	Simonne.V. Calhoun	08/29/2022 10:44	James L Waggerby	2351426
	08/23/2022	08/25/2022 15:50	Simonne.V. Calhoun	08/29/2022 10:45	James L Waggerby	2351427
	08/23/2022	08/25/2022 15:50	Simonne.V. Calhoun	08/29/2022 10:46	James L Waggerby	2351428
SM 2320 B-2011	08/23/2022			08/26/2022 22:19	Adam P Silver	2351424
	08/23/2022			08/30/2022 07:05	Adam P Silver	2351423
	08/23/2022			08/30/2022 07:17	Adam P Silver	2351425
SM 2540 C-2011	08/23/2022			08/25/2022 13:46	Yijie Li	2351423, 2351424, 2351425
SM 2540 D-2011	08/23/2022			08/25/2022 13:46	Yijie Li	2351423, 2351424, 2351425
SM 4500-F- C-2011	08/23/2022			08/26/2022 22:08	Adam P Silver	2351424
	08/23/2022			08/27/2022 01:25	Adam P Silver	2351423
	08/23/2022			08/27/2022 01:40	Adam P Silver	2351425
SM 5310 B-2011	08/23/2022			08/30/2022 04:33	Khloe J Berg	2351426
	08/23/2022			08/30/2022 04:47	Khloe J Berg	2351427
	08/23/2022			08/31/2022 14:07	Khloe J Berg	2351428