

Chemical Analysis Report

TLH-ROC-2021-06-09-02

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

Event Description: **Run 15**
Request ID: **RQ-2021-06-07-28**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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2600 Blair Stone Rd
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Date Certified: 01-JUL-2021 10:16



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: Russ Mill Creek @ Union Rd

Collection Date/Time: 06/09/2021 09:40

Field ID: G2TLHR0037

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2254134	EPA 180.1 Rev. 2.0	Turbidity	3.3	A	NTU	P399529	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P399824	
		Sulfate	2.1		mg SO4/L	P399826	
	SM 2120 B-2011	Color (true)	11		PCU	P399532	
	SM 2320 B-2011	Total Alkalinity	127	J	mg CaCO3/L	P400074	LCS
	SM 2540 C-2011	TDS	159		mg/L	P399794	
	SM 2540 D-2011	TSS	6	I	mg/L	P399682	
	SM 4500 F-C-2011	Fluoride	0.055	I	mg F/L	P399739	
2254137	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P399945	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33		mg N/L	P399712	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P399690	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P400122	
	SM 5310 B-2011	Organic Carbon	1.7		mg C/L	P399772	
2254140	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P399453	

Ref. Method and Comment:

SM 2320 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Little Creek @ Treatment Plant Rd

Collection Date/Time: 06/09/2021 10:20

Field ID: G3TLHR0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2254135	EPA 180.1 Rev. 2.0	Turbidity	9.0		NTU	P399529	
	EPA 300.0 Rev. 2.1	Chloride	5.9		mg Cl/L	P399824	
		Sulfate	2.6		mg SO4/L	P399826	
	SM 2120 B-2011	Color (true)	20		PCU	P399532	
	SM 2320 B-2011	Total Alkalinity	117	J	mg CaCO3/L	P400074	LCS
	SM 2540 C-2011	TDS	147		mg/L	P399794	
	SM 2540 D-2011	TSS	4	I	mg/L	P399682	
	SM 4500 F-C-2011	Fluoride	0.038	I	mg F/L	P399739	
2254138	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P400174	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P399712	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P399690	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P400122	
	SM 5310 B-2011	Organic Carbon	4.1		mg C/L	P399772	
2254141	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P399453	

Ref. Method and Comment:

SM 2320 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Camp Branch @ US90

Collection Date/Time: 06/09/2021 11:10

Field ID: G3TLHR0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2254136	EPA 180.1 Rev. 2.0	Turbidity	9.1		NTU	P399529	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P399824	
		Sulfate	1.4		mg SO4/L	P399826	
	SM 2120 B-2011	Color (true)	61		PCU	P399532	
	SM 2320 B-2011	Total Alkalinity	81	J	mg CaCO3/L	P400074	LCS
	SM 2540 C-2011	TDS	125	A	mg/L	P399794	
	SM 2540 D-2011	TSS	10	A	mg/L	P399682	
	SM 4500 F-C-2011	Fluoride	0.054	I	mg F/L	P399739	
2254139	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P400174	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P399712	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P399690	
	EPA 365.1 Rev. 2.0	Total-P	0.27		mg P/L	P400122	
	SM 5310 B-2011	Organic Carbon	6.1		mg C/L	P399772	
2254142	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.18		mg P/L	P399453	

Ref. Method and Comment:

SM 2320 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P399529

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399824

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399826

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399945

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400174

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399712

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399690

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400122

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399453

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P399532

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P400074

Component	Result	Code	Units
Total Alkalinity	0.73	I	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P399794

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P399682

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P399739

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P399772

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P399824

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P399826

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P399945

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P400174

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P399712

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P399690

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: P400122

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P399453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.8		P	90 - 110

Reference Method: SM 2120 B-2011
 Batch ID: P399532

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P400074

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

Reference Method: SM 4500 F-C-2011
Batch ID: P399739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P399772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399824

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253848	Chloride	93.9		P	90 - 110
2254122	Chloride	95.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253848	Sulfate	95.5		P	90 - 110
2254122	Sulfate	94.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399945

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253920	Ammonia-N	97.2	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253917	Ammonia-N	97.6	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253917	Kjeldahl Nitrogen	91.9	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253617	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400122

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253892	Total-P	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253856	O-Phosphate-P	99.6	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Batch ID: P399739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2254134	Fluoride	102	102	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P399772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2253746	Organic Carbon	100		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P399529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2254134	Turbidity	0.301	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253848	Chloride	1.86	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253848	Sulfate	2.11	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253920	Ammonia-N	0.190	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253917	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253917	Kjeldahl Nitrogen	5.32	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P399690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253617	NO2NO3-N	0.496	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400122

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253892	Total-P	0.596	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P399453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253856	O-Phosphate-P	0.330	Spike	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P399532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2254154	Color (true)	0.574	Sample	P	0 - 20

Reference Method: SM 2540 C-2011
Batch ID: P399794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2254136	TDS	4.80	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P399682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2254136	TSS	3.92	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P399739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2254134	Fluoride	0.479	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P399772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2253746	Organic Carbon	0.589	Spike	P	0 - 20

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A105970

Included Lab Sample IDs: 2254140, 2254141, 2254142

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	99.3	P/P	90 - 110
O-Phosphate-P	99.3	99.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A105999

Included Lab Sample IDs: 2254134, 2254135, 2254136

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A106000

Included Lab Sample IDs: 2254134, 2254135, 2254136

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	101	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106065

Included Lab Sample IDs: 2254137, 2254138, 2254139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	102	100	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A106087

Included Lab Sample IDs: 2254134, 2254135, 2254136

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

Reference Method: SM 5310 B-2011

Run ID: A106104

Included Lab Sample IDs: 2254137, 2254138, 2254139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	95.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A106105

Included Lab Sample IDs: 2254134, 2254135, 2254136

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.8	100	P/P	90 - 110
Sulfate	99.3	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A106117

Included Lab Sample IDs: 2254137, 2254138, 2254139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.5	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A106175

Included Lab Sample IDs: 2254137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.5	97.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A106227

Included Lab Sample IDs: 2254134, 2254135, 2254136

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106255

Included Lab Sample IDs: 2254139

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106257

Included Lab Sample IDs: 2254137, 2254138

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A106261

Included Lab Sample IDs: 2254138, 2254139

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	98.5	P/P	90 - 110
Ammonia-N	99.5	98.5	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 180.1 Rev. 2.0	Turbidity				0.301	
EPA 300.0 Rev. 2.1	Chloride	98.6	93.9	95.7	1.86	
	Sulfate	97.7	95.5	94.3	2.11	
EPA 350.1 Rev. 2.0	Ammonia-N	97.6	97.2	97.0		0.190
	Ammonia-N	96.0	97.6	97.6		0.0
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.3	91.9	98.2		5.32
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	101	100		0.496
EPA 365.1 Rev. 2.0	Total-P	99.6	101	100		0.596
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	99.6	99.2		0.330
SM 2120 B-2011	Color (true)	99.8			0.574	
SM 2320 B-2011	Total Alkalinity	106				
SM 2540 C-2011	TDS				4.80	
SM 2540 D-2011	TSS				3.92	
SM 4500 F-C-2011	Fluoride	102	102	102		0.479
SM 5310 B-2011	Organic Carbon	93.7	100			0.589

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2254134, 2254135, 2254136
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2254134, 2254135, 2254136
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2254134, 2254135, 2254136
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2254137, 2254138, 2254139
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2254137, 2254138, 2254139
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2254137, 2254138, 2254139
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2254137, 2254138, 2254139
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2254140, 2254141, 2254142
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2254134, 2254135, 2254136
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2254134, 2254135, 2254136
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2254134, 2254135, 2254136
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2254134, 2254135, 2254136
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2254134, 2254135, 2254136
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2254137, 2254138, 2254139

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	06/09/2021			06/10/2021 14:54	Sarah A Nixon	2254134, 2254135, 2254136
EPA 300.0 Rev. 2.1	06/09/2021			06/16/2021 19:44	Lipi Saha	2254134
	06/09/2021			06/16/2021 19:56	Lipi Saha	2254135
	06/09/2021			06/16/2021 20:08	Lipi Saha	2254136
EPA 350.1 Rev. 2.0	06/09/2021			06/18/2021 14:30	Roberta Tatti	2254137
	06/09/2021			06/24/2021 12:23	Roberta Tatti	2254139
	06/09/2021			06/24/2021 13:26	Roberta Tatti	2254138
EPA 351.2 Rev. 2.0	06/09/2021	06/15/2021 14:13	Benjamin T. Nordmann	06/16/2021 13:31	Virginia P. Brown	2254137
	06/09/2021	06/15/2021 14:13	Benjamin T. Nordmann	06/16/2021 13:33	Virginia P. Brown	2254138
	06/09/2021	06/15/2021 14:13	Benjamin T. Nordmann	06/16/2021 13:34	Virginia P. Brown	2254139
EPA 353.2 Rev. 2.0	06/09/2021			06/15/2021 09:29	Beverly Y. Sanders	2254139
	06/09/2021			06/15/2021 11:05	Beverly Y. Sanders	2254137
	06/09/2021			06/15/2021 11:06	Beverly Y. Sanders	2254138
EPA 365.1 Rev. 2.0	06/09/2021	06/23/2021 13:50	Shengyu Ding	06/24/2021 12:05	Shengyu Ding	2254139
	06/09/2021	06/23/2021 13:50	Shengyu Ding	06/24/2021 13:22	Shengyu Ding	2254137
	06/09/2021	06/23/2021 13:50	Shengyu Ding	06/24/2021 13:23	Shengyu Ding	2254138
EPA 365.1 Rev. 2.0 dissolved	06/09/2021			06/09/2021 15:49	Blanca Fach	2254140
	06/09/2021			06/09/2021 15:50	Blanca Fach	2254141
	06/09/2021			06/09/2021 15:55	Blanca Fach	2254142
SM 2120 B-2011	06/09/2021			06/10/2021 16:16	Madeline Gruver	2254134, 2254135
	06/09/2021			06/10/2021 16:17	Madeline Gruver	2254136
SM 2320 B-2011	06/09/2021			06/22/2021 18:21	Patrick M. Roche	2254134
	06/09/2021			06/22/2021 18:31	Patrick M. Roche	2254135
	06/09/2021			06/22/2021 18:41	Patrick M. Roche	2254136
SM 2540 C-2011	06/09/2021			06/11/2021 15:27	Yijie Li	2254134, 2254135, 2254136
SM 2540 D-2011	06/09/2021			06/11/2021 15:27	Yijie Li	2254134, 2254135, 2254136
SM 4500 F-C-2011	06/09/2021			06/15/2021 18:02	Dale L. Simmons	2254134
	06/09/2021			06/15/2021 18:17	Dale L. Simmons	2254135
	06/09/2021			06/15/2021 18:22	Dale L. Simmons	2254136
SM 5310 B-2011	06/09/2021			06/16/2021 05:47	Touraj Touran	2254137
	06/09/2021			06/16/2021 05:59	Touraj Touran	2254138
	06/09/2021			06/16/2021 06:08	Touraj Touran	2254139