

Chemical Analysis Report

SW-DIST-2021-04-21-01

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

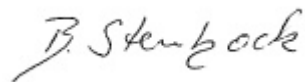
Event Description: **SMP Run 17**
Request ID: **RQ-2021-04-19-20**
Customer: **SW-DIST**
Project ID: **SMP**

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Date Certified: 14-MAY-2021 11:50



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: Nutrients and Pesticides.

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: PP Ditch#1

Collection Date/Time: 04/20/2021 10:40

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241205	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P396929	
	SM 2320 B-2011	Total Alkalinity	164		mg CaCO3/L	P397029	
	SM 2540 D-2011	TSS	2	U	mg/L	P397165	
	SM 4500 F-C-2011	Fluoride	0.30		mg F/L	P397030	
2241206	EPA 350.1 Rev. 2.0	Ammonia-N	0.25		mg N/L	P397634	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P397063	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P397045	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P397013	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P397239	
2241207	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.092		mg P/L	P396926	
2241222	EPA 8276	Chlordane	5.5	U	ng/L	P397022	
		Toxaphene	33	U	ng/L	P397022	

Sample Location: St Joe Tidal by Westchester Blvd

Collection Date/Time: 04/20/2021 11:40

Field ID: G5SW0169

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2241208	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P396929	
	SM 2320 B-2011	Total Alkalinity	182		mg CaCO3/L	P397029	
	SM 2540 D-2011	TSS	4	I	mg/L	P397165	
	SM 4500 F-C-2011	Fluoride	0.51		mg F/L	P397030	
2241209	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P397510	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P397109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.3		mg N/L	P397176	
	EPA 365.1 Rev. 2.0	Total-P	0.63		mg P/L	P397014	
	SM 5310 B-2011	Organic Carbon	8.3		mg C/L	P397240	
2241210	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.50		mg P/L	P396925	

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P396929

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397045

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397013

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397014

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396926

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

Reference Method: EPA 8276
Batch ID: P397022

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: SM 2320 B-2011
Batch ID: P397029

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

Reference Method: SM 2540 D-2011
Batch ID: P397165

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P397239

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

Reference Method: SM 5310 B-2011
Batch ID: P397240

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397063

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397045

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

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: P397013

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397014

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.1		P	90 - 110

Reference Method: EPA 8276
Batch ID: P397022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	100	92.4	P/P	56 - 117
Toxaphene	81.0	80.6	P/P	45 - 116

Reference Method: SM 2320 B-2011
Batch ID: P397029

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

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P397239

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.9		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P397240

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241209	Ammonia-N	96.8	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2243029	Ammonia-N	98.4	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2239605	Kjeldahl Nitrogen	101	95.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241157	Kjeldahl Nitrogen	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2239605	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241212	NO2NO3-N	99.8	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241041	Total-P	109	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241186	Total-P	107	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241300	O-Phosphate-P	97.0	96.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P396926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241239	O-Phosphate-P	94.8	95.3	P/P	90 - 110

Reference Method: EPA 8276
Batch ID: P397022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241684	Chlordane	109	115	P/P	47 - 128
2241684	Toxaphene	75.7	79.0	P/P	11 - 163

Reference Method: SM 4500 F-C-2011
Batch ID: P397030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241298	Fluoride	98.2	98.9	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P397239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2240950	Organic Carbon	96.9	99.7	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P397240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2241209	Organic Carbon	98.5	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P396929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241184	Turbidity	4.52	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241209	Ammonia-N	0.985	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P397634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2243029	Ammonia-N	2.84	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2239605	Kjeldahl Nitrogen	5.49	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P397109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241157	Kjeldahl Nitrogen	0.223	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2239605	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P397176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241212	NO2NO3-N	1.94	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P397013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241041	Total-P	1.49	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P397014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241186	Total-P	1.59	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P396925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241300	O-Phosphate-P	0.477	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P396926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241239	O-Phosphate-P	0.461	Spike	P	0 - 20

Reference Method: EPA 8276

Batch ID: P397022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241684	Chlordane	5.91	Spike	P	0 - 30
2241684	Toxaphene	4.30	Spike	P	0 - 30
LFB	Chlordane	8.04	LCS	P	0 - 30
LFB	Toxaphene	0.462	LCS	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P397029

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241298	Total Alkalinity	0.205	Sample	P	0 - 8.1

Reference Method: SM 2540 D-2011

Batch ID: P397165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241567	TSS	8.96	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P397030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241298	Fluoride	0.486	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P397239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2240950	Organic Carbon	2.22	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P397240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2241209	Organic Carbon	0.107	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2241222
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	66.2	P	29 - 92.0
EPA 8276	PCNB	73.8	P	43 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104886

Included Lab Sample IDs: 2241207, 2241210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	101	P/P	90 - 110
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104887

Included Lab Sample IDs: 2241205, 2241208

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

Reference Method: SM 2320 B-2011

Run ID: A104923

Included Lab Sample IDs: 2241205, 2241208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.3	102	P/P	90 - 110
Total Alkalinity	99.5	99.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104923

Included Lab Sample IDs: 2241205, 2241208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	103	P/P	90 - 110
Fluoride	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104928

Included Lab Sample IDs: 2241206

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104942

Included Lab Sample IDs: 2241209

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104947

Included Lab Sample IDs: 2241206

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104990

Included Lab Sample IDs: 2241206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	98.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104995

Included Lab Sample IDs: 2241209

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

Reference Method: SM 5310 B-2011

Run ID: A105018

Included Lab Sample IDs: 2241206, 2241209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.3	96.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A105021

Included Lab Sample IDs: 2241209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	103	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A105045

Included Lab Sample IDs: 2241222

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	95.7		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A105117

Included Lab Sample IDs: 2241206, 2241209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	98.2	P/P	90 - 110
Ammonia-N	98.6	98.7	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		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						4.52	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8		96.8	98.4			0.985
	Ammonia-N	98.0		98.4	95.2			2.84
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		101	95.5			5.49
	Kjeldahl Nitrogen	100		100	101			0.223
EPA 353.2 Rev. 2.0	NO2NO3-N	101		100	100			0.0
	NO2NO3-N	100		99.8	97.8			1.94
EPA 365.1 Rev. 2.0	Total-P	106		109	108			1.49
	Total-P	107		107	109			1.59
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9		97.0	96.4			0.477
	O-Phosphate-P	97.1		94.8	95.3			0.461
EPA 8276	Chlordane	100	92.4	109	115	8.04		5.91
	Toxaphene	81.0	80.6	75.7	79.0	0.462		4.30
SM 2320 B-2011	Total Alkalinity	102					0.205	
SM 2540 D-2011	TSS						8.96	
SM 4500 F-C-2011	Fluoride	100		98.2	98.9			0.486
SM 5310 B-2011	Organic Carbon	96.9		96.9	99.7			2.22
	Organic Carbon	97.3		98.5	98.6			0.107

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2241205, 2241208
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2241206, 2241209
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2241206, 2241209
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2241206, 2241209
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2241206, 2241209
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2241207, 2241210
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2241222
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2241205, 2241208
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2241205, 2241208
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2241205, 2241208
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2241206, 2241209

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	04/21/2021			04/21/2021 15:18	Yen Ta	2241205, 2241208
EPA 350.1 Rev. 2.0	04/21/2021			05/01/2021 10:55	Ping Hua	2241209
	04/21/2021			05/04/2021 18:13	Ping Hua	2241206
EPA 351.2 Rev. 2.0	04/21/2021	04/23/2021 13:54	Benjamin T. Nordmann	04/26/2021 14:17	Virginia P. Brown	2241206
	04/21/2021	04/25/2021 14:48	Benjamin T. Nordmann	04/27/2021 13:30	Virginia P. Brown	2241209
EPA 353.2 Rev. 2.0	04/21/2021			04/23/2021 09:05	Beverly Y. Sanders	2241206
	04/21/2021			04/26/2021 16:55	Touraj Touran	2241209
EPA 365.1 Rev. 2.0	04/21/2021	04/22/2021 16:03	Yen Ta	04/23/2021 14:04	Shengyu Ding	2241209
	04/21/2021	04/22/2021 16:03	Yen Ta	04/23/2021 15:45	Shengyu Ding	2241206
EPA 365.1 Rev. 2.0 dissolved	04/21/2021			04/21/2021 14:54	Blanca Fach	2241210
	04/21/2021			04/21/2021 15:04	Blanca Fach	2241207
EPA 8276	04/21/2021	04/23/2021 08:00	Fe-Val Siddell	04/27/2021 04:24	Michael Poppell	2241222
SM 2320 B-2011	04/21/2021			04/22/2021 23:50	Dale L. Simmons	2241208
	04/21/2021			04/23/2021 00:51	Dale L. Simmons	2241205
SM 2540 D-2011	04/21/2021			04/23/2021 15:31	Yijie Li	2241205, 2241208
SM 4500 F-C-2011	04/21/2021			04/22/2021 23:50	Dale L. Simmons	2241208
	04/21/2021			04/23/2021 00:51	Dale L. Simmons	2241205
SM 5310 B-2011	04/21/2021			04/24/2021 01:55	Lauren Lees	2241206
	04/21/2021			04/24/2021 02:44	Lauren Lees	2241209