

Chemical Analysis Report

SO-DIST-2021-06-23-01

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

Event Description: **2021 SMP : Myakka**
Request ID: **RQ-2021-06-21-19**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: William Mullen

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 19-JUL-2021 10:14

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: 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: Brandy Branch @ SR 70

Collection Date/Time: 06/21/2021 10:15

Field ID: G3SD0083

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2256680	EPA 180.1 Rev. 2.0	Turbidity	1.8	Q	NTU	P400135	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P400552	
		Sulfate	860		mg SO4/L	P400627	
	SM 2120 B-2011	Color (true)	51	Q	PCU	P400132	
	SM 2320 B-2011	Total Alkalinity	56		mg CaCO3/L	P400372	
	SM 2540 C-2011	TDS	1.34E+03		mg/L	P400472	
	SM 2540 D-2011	TSS	3	I	mg/L	P400245	
	SM 4500 F-C-2011	Fluoride	0.83		mg F/L	P400375	
2256681	EPA 350.1 Rev. 2.0	Ammonia-N	0.055		mg N/L	P400460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P400448	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.41		mg N/L	P400150	
	EPA 365.1 Rev. 2.0	Total-P	0.27		mg P/L	P400332	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P400533	
2256682	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.22	Q	mg P/L	P400130	
2256690	EPA 8276	Chlordane	5.7	U	ng/L	P400144	
		Toxaphene	34	U	ng/L	P400144	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: FB

Collection Date/Time: 06/21/2021 10:15

Field ID: FB_06212021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2256683	EPA 180.1 Rev. 2.0	Turbidity	0.10	UQ	NTU	P400135	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P400552	
		Sulfate	0.20	U	mg SO4/L	P400555	
	SM 2120 B-2011	Color (true)	2.5	UQ	PCU	P400133	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P400372	
	SM 2540 C-2011	TDS	15	U	mg/L	P400470	
	SM 2540 D-2011	TSS	2	U	mg/L	P400243	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P400375	
2256684	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P400460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P400448	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P400150	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P400332	
	SM 5310 B-2011	Organic Carbon	0.86	I	mg C/L	P400533	
2256685	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P400130	
2256691	EPA 8276	Chlordane	5.4	U	ng/L	P400144	
		Toxaphene	32	U	ng/L	P400144	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 5310 B-2011: The result was confirmed on 07/09/2021.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: LAKE MYAKKA (LOWER) @ MIDDLE

Collection Date/Time: 06/21/2021 13:00

Field ID: G3SD0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2256677	EPA 180.1 Rev. 2.0	Turbidity	18	Q	NTU	P400135	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P400552	
		Sulfate	320		mg SO4/L	P400627	
	SM 2120 B-2011	Color (true)	61	JQ	PCU	P400132	
	SM 2320 B-2011	Total Alkalinity	12		mg CaCO3/L	P400372	
	SM 2540 C-2011	TDS	606		mg/L	P400472	
	SM 2540 D-2011	TSS	26		mg/L	P400245	
	SM 4500 F-C-2011	Fluoride	0.32		mg F/L	P400375	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P400460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P400448	
2256678	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P400150	
	EPA 365.1 Rev. 2.0	Total-P	0.37		mg P/L	P400332	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P400533	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.19	Q	mg P/L	P400130	
	dissolved						

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt. The result may be biased high because of matrix interference.

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P400135

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400552

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400555

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400627

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400460

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400448

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400150

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400332

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400130

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P400144

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

Reference Method: SM 2120 B-2011
Batch ID: P400132

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P400133

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P400372

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

Reference Method: SM 2540 C-2011
Batch ID: P400470

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P400472

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P400243

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P400245

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P400375

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P400533

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: P400552

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400555

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400627

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400448

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: P400150

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400332

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400130

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

Reference Method: EPA 8276
Batch ID: P400144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	86.7	91.1	P/P	56 - 117
Toxaphene	88.8	93.5	P/P	45 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P400132

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P400133

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P400372

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

Reference Method: SM 4500 F-C-2011
Batch ID: P400375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P400533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400552

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256665	Chloride	99.6		P	90 - 110
2256775	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256665	Sulfate	99.6		P	90 - 110
2256775	Sulfate	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2257434	Sulfate	101		P	90 - 110
2257572	Sulfate	98.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256668	Ammonia-N	93.8	95.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256649	Kjeldahl Nitrogen	108	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256649	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400332

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256681	Total-P	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400130

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256631	O-Phosphate-P	97.2	98.3	P/P	90 - 110

Reference Method: EPA 8276
Batch ID: P400144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256690	Chlordane	103	96.5	P/P	47 - 128

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P400144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256690	Toxaphene	109	94.9	P/P	11 - 163

Reference Method: SM 4500 F-C-2011
Batch ID: P400375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256032	Fluoride	99.6	99.6	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P400533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2256776	Organic Carbon	95.9	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P400135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256666	Turbidity	2.12	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400552

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256665	Chloride	0.827	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256665	Sulfate	1.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P400627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2257572	Sulfate	0.616	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P400460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256668	Ammonia-N	1.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P400448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256649	Kjeldahl Nitrogen	1.07	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P400150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256649	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P400332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256681	Total-P	1.19	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400130

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256631	O-Phosphate-P	0.829	Spike	P	0 - 20

Reference Method: EPA 8276
Batch ID: P400144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256690	Chlordane	6.11	Spike	P	0 - 30
2256690	Toxaphene	14.2	Spike	P	0 - 30
LFB	Chlordane	4.96	LCS	P	0 - 30
LFB	Toxaphene	5.12	LCS	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P400132

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256471	Color (true)	0.826	Sample	P	0 - 20

Reference Method: SM 2120 B-2011
Batch ID: P400133

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256701	Color (true)	0.210	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P400372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256032	Total Alkalinity	0.267	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P400470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256190	TDS	1.57	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P400472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256666	TDS	1.60	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P400375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256032	Fluoride	0.0	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P400533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2256776	Organic Carbon	0.323	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2256690
Field Sample ID: G3SD0083

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	69.7	P	29 - 92.0
EPA 8276	PCNB	96.2	P	43 - 134

Lab Sample ID: 2256691
Field Sample ID: FB_06212021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	67.5	P	29 - 92.0
EPA 8276	PCNB	94.2	P	43 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A106235

Included Lab Sample IDs: 2256679, 2256682, 2256685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	97.9	P/P	90 - 110
O-Phosphate-P	98.0	98.4	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A106236

Included Lab Sample IDs: 2256677, 2256680, 2256683

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	90 - 115
Color (true)	101	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106237

Included Lab Sample IDs: 2256677, 2256680, 2256683

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: A106247

Included Lab Sample IDs: 2256678, 2256681, 2256684

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

Reference Method: SM 2320 B-2011

Run ID: A106363

Included Lab Sample IDs: 2256677, 2256680, 2256683

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.2	104	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A106363

Included Lab Sample IDs: 2256677, 2256680, 2256683

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106368

Included Lab Sample IDs: 2256678, 2256681

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106370

Included Lab Sample IDs: 2256684

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.8	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A106396

Included Lab Sample IDs: 2256678, 2256681, 2256684

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.6	96.4	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A106414

Included Lab Sample IDs: 2256690, 2256691

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Chlordane	96.9		P	80 - 120
Toxaphene	84.9		P	80 - 120
Toxaphene	96.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A106423

Included Lab Sample IDs: 2256677, 2256680, 2256683

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	99.6	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A106432

Included Lab Sample IDs: 2256678, 2256681, 2256684

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A106468

Included Lab Sample IDs: 2256678, 2256681, 2256684

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	93.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A106481

Included Lab Sample IDs: 2256677, 2256680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	99.8	99.5	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		LCS	Precision	
							SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.12	
EPA 300.0 Rev. 2.1	Chloride	102		99.6	100		0.827	
	Sulfate	100		99.6	98.0		1.15	
	Sulfate	101		98.9	101		0.616	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6		93.8	95.6			1.63
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100		108	107			1.07
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5		99.5	99.0			0.504
EPA 365.1 Rev. 2.0	Total-P	104		102	104			1.19
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		97.2	98.3			0.829
EPA 8276	Chlordane	86.7	91.1	103	96.5	4.96		6.11
	Toxaphene	88.8	93.5	109	94.9	5.12		14.2
SM 2120 B-2011	Color (true)	102					0.826	
	Color (true)	101					0.210	
SM 2320 B-2011	Total Alkalinity	102					0.267	
SM 2540 C-2011	TDS						1.57	
	TDS						1.60	
SM 4500 F-C-2011	Fluoride	101		99.6	99.6			0.0
SM 5310 B-2011	Organic Carbon	95.9		95.9	95.5			0.323

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2256677, 2256680, 2256683
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2256677, 2256680, 2256683
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2256677, 2256680, 2256683
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2256678, 2256681, 2256684
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2256678, 2256681, 2256684
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2256678, 2256681, 2256684
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2256678, 2256681, 2256684
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2256679, 2256682, 2256685
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2256690, 2256691
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2256677, 2256680, 2256683
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2256677, 2256680, 2256683
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2256677, 2256680, 2256683
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2256677, 2256680, 2256683
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2256677, 2256680, 2256683
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2256678, 2256681, 2256684

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	06/23/2021			06/23/2021 15:19	Sarah A Nixon	2256677, 2256680, 2256683
EPA 300.0 Rev. 2.1	06/23/2021			07/02/2021 21:24	Lipi Saha	2256677
	06/23/2021			07/02/2021 21:36	Lipi Saha	2256680
	06/23/2021			07/02/2021 21:48	Lipi Saha	2256683
	06/23/2021			07/07/2021 06:47	Lipi Saha	2256677
	06/23/2021			07/07/2021 06:59	Lipi Saha	2256680
EPA 350.1 Rev. 2.0	06/23/2021			07/01/2021 13:52	Roberta Tatti	2256678
	06/23/2021			07/01/2021 13:53	Roberta Tatti	2256681
	06/23/2021			07/01/2021 14:02	Roberta Tatti	2256684
EPA 351.2 Rev. 2.0	06/23/2021	07/01/2021 14:00	Benjamin T. Nordmann	07/06/2021 18:29	Letuzia M De Oliveira	2256678
	06/23/2021	07/01/2021 14:00	Benjamin T. Nordmann	07/06/2021 18:31	Letuzia M De Oliveira	2256681
	06/23/2021	07/01/2021 14:00	Benjamin T. Nordmann	07/06/2021 18:32	Letuzia M De Oliveira	2256684
EPA 353.2 Rev. 2.0	06/23/2021			06/24/2021 10:11	Beverly Y. Sanders	2256678
	06/23/2021			06/24/2021 10:12	Beverly Y. Sanders	2256681
	06/23/2021			06/24/2021 10:14	Beverly Y. Sanders	2256684
EPA 365.1 Rev. 2.0	06/23/2021	06/29/2021 13:16	Madeline Gruver	06/30/2021 10:39	Shengyu Ding	2256678
	06/23/2021	06/29/2021 13:16	Madeline Gruver	06/30/2021 10:42	Shengyu Ding	2256681
	06/23/2021	06/29/2021 13:16	Madeline Gruver	06/30/2021 12:29	Shengyu Ding	2256684
EPA 365.1 Rev. 2.0 dissolved	06/23/2021			06/23/2021 14:58	Ping Hua	2256685
	06/23/2021			06/23/2021 15:22	Ping Hua	2256679
	06/23/2021			06/23/2021 15:23	Ping Hua	2256682
EPA 8276	06/23/2021	06/24/2021 08:30	Rasheda Ghaffari	07/01/2021 02:08	Michael Poppell	2256690
	06/23/2021	06/24/2021 08:30	Rasheda Ghaffari	07/01/2021 11:21	Michael Poppell	2256691
SM 2120 B-2011	06/23/2021			06/23/2021 15:58	Benjamin T. Nordmann	2256677, 2256680
	06/23/2021			06/23/2021 16:02	Benjamin T. Nordmann	2256683
SM 2320 B-2011	06/23/2021			06/30/2021 01:12	Dale L. Simmons	2256677
	06/23/2021			06/30/2021 01:20	Dale L. Simmons	2256683
	06/23/2021			06/30/2021 01:35	Dale L. Simmons	2256680
SM 2540 C-2011	06/23/2021			06/24/2021 14:15	Yijie Li	2256677, 2256680, 2256683
SM 2540 D-2011	06/23/2021			06/24/2021 14:15	Yijie Li	2256677, 2256680, 2256683
SM 4500 F-C-2011	06/23/2021			06/30/2021 01:12	Dale L. Simmons	2256677
	06/23/2021			06/30/2021 01:20	Dale L. Simmons	2256683
	06/23/2021			06/30/2021 01:35	Dale L. Simmons	2256680
SM 5310 B-2011	06/23/2021			07/01/2021 04:10	Madeline Gruver	2256678
	06/23/2021			07/01/2021 04:23	Madeline Gruver	2256681
	06/23/2021			07/01/2021 04:36	Madeline Gruver	2256684