

Chemical Analysis Report

SO-DIST-2019-08-06-01

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

Event Description: **Caloosa Creeks**
Request ID: **RQ-2019-08-05-12**
Customer: **SO-DIST**
Project ID: **BMAP**

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

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 20-AUG-2019 14:29



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: Telegraph Creek

Collection Date/Time: 08/05/2019 13:50

Field ID: G3SD0129

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2108653	SM 2120 B	Color (true)	330		PCU	P368523	
	SM 2320 B-97	Total Alkalinity	53		mg CaCO3/L	P368818	
	SM 2540 D-97	TSS	6	I	mg/L	P368927	
	SM 4500 F-C-97	Fluoride	0.069	I	mg F/L	P368828	
2108656	SM 5310 B-00 dissolved	Organic Carbon	32		mg C/L	P368643	
2108659	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P369007	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P368608	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P368777	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P368575	
	SM 5310 B-00	Organic Carbon	31		mg C/L	P368643	
2108662	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.095		mg P/L	P368518	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Orange River

Collection Date/Time: 08/05/2019 14:25

Field ID: G3SD0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2108654	SM 2120 B	Color (true)	94	A	PCU	P368523	
	SM 2320 B-97	Total Alkalinity	198		mg CaCO3/L	P368818	
	SM 2540 D-97	TSS	6	I	mg/L	P368927	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P368828	
2108657	SM 5310 B-00 dissolved	Organic Carbon	14		mg C/L	P368643	
2108660	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P369007	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P368608	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P368777	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P368575	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P368643	
2108663	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.029		mg P/L	P368518	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Hancock Creek

Collection Date/Time: 08/05/2019 15:05

Field ID: G3SD0130

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2108655	SM 2120 B	Color (true)	97		PCU	P368523	
	SM 2320 B-97	Total Alkalinity	176		mg CaCO3/L	P368818	
	SM 2540 D-97	TSS	4	IA	mg/L	P368927	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P368828	
2108658	SM 5310 B-00 dissolved	Organic Carbon	14		mg C/L	P368643	
2108661	EPA 350.1 Rev. 2.0	Ammonia-N	0.036		mg N/L	P369007	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P368608	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P368733	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P368575	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P368643	
2108664	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.16		mg P/L	P368518	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369007

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368608

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368733

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368777

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368575

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368518

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

Reference Method: SM 2120 B
Batch ID: P368523

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P368818

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

Reference Method: SM 2540 D-97
Batch ID: P368927

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P368828

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P368643

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

Reference Method: SM 5310 B-00 dissolved
Batch ID: P368643

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: P369007

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368608

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368733

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368777

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: P368575

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368518

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

Reference Method: SM 2120 B
Batch ID: P368523

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

Reference Method: SM 2320 B-97
Batch ID: P368818

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P368828

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.0		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P368643

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P368643

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108636	Ammonia-N	95.0	96.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108661	NO2NO3-N	94.2	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108633	NO2NO3-N	97.4	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108631	Total-P	98.1	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108776	O-Phosphate-P	96.3	96.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P368828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108513	Fluoride	99.2	98.6	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P368643

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108618	Organic Carbon	98.9	99.5	P/P	85 - 115

Reference Method: SM 5310 B-00 dissolved
Batch ID: P368643

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108618	Organic Carbon	98.9	99.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P369007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108636	Ammonia-N	0.889	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108755	Kjeldahl Nitrogen	1.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108661	NO2NO3-N	2.92	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108633	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108631	Total-P	1.87	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108776	O-Phosphate-P	0.267	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P368523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108654	Color (true)	0.356	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P368818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108513	Total Alkalinity	1.27	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P368828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108513	Fluoride	0.477	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P368643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108618	Organic Carbon	0.378	Spike	P	0 - 20

Reference Method: SM 5310 B-00 dissolved
Batch ID: P368643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108618	Organic Carbon	0.378	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A93298

Included Lab Sample IDs: 2108662, 2108663, 2108664

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.3	P/P	90 - 110
O-Phosphate-P	99.3	100	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A93299

Included Lab Sample IDs: 2108653, 2108654, 2108655

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	103	P/P	90 - 115
Color (true)	103	104	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A93326

Included Lab Sample IDs: 2108659, 2108660, 2108661

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

Reference Method: SM 5310 B-00

Run ID: A93344

Included Lab Sample IDs: 2108659, 2108660, 2108661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	104	P/P	90 - 110

Reference Method: SM 5310 B-00 dissolved

Run ID: A93344

Included Lab Sample IDs: 2108656, 2108657, 2108658

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A93378

Included Lab Sample IDs: 2108659, 2108660, 2108661

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A93393

Included Lab Sample IDs: 2108659, 2108660, 2108661

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A93413

Included Lab Sample IDs: 2108653, 2108654, 2108655

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

Reference Method: SM 4500 F-C-97

Run ID: A93413

Included Lab Sample IDs: 2108653, 2108654, 2108655

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A93497

Included Lab Sample IDs: 2108659, 2108660, 2108661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	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 350.1 Rev. 2.0	Ammonia-N	99.1	95.0	96.1			0.889
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104					1.44
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	94.2	97.8			2.92
	NO ₂ NO ₃ -N	99.5	97.4	97.4			0.0
EPA 365.1 Rev. 2.0	Total-P	97.2	98.1	100			1.87
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.9	96.3	96.6			0.267
SM 2120 B	Color (true)	101				0.356	
SM 2320 B-97	Total Alkalinity	104				1.27	
SM 4500 F-C-97	Fluoride	97.0	99.2	98.6			0.477
SM 5310 B-00	Organic Carbon	99.8	98.9	99.5			0.378
SM 5310 B-00 dissolved	Organic Carbon	99.8	98.9	99.5			0.378

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2108659, 2108660, 2108661
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2108659, 2108660, 2108661
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2108659, 2108660, 2108661
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2108659, 2108660, 2108661
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2108662, 2108663, 2108664
SM 2120 B / E31780	True Color measured at 450 nm	2108653, 2108654, 2108655
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2108653, 2108654, 2108655
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2108653, 2108654, 2108655
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2108653, 2108654, 2108655
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2108659, 2108660, 2108661
SM 5310 B-00 dissolved / E31780	Dissolved Nonpurgeable Organic Carbon in filtered, aqueous matrices	2108656, 2108657, 2108658

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	08/06/2019			08/13/2019 13:33	Ping Hua	2108659
	08/06/2019			08/13/2019 13:34	Ping Hua	2108660
	08/06/2019			08/13/2019 13:36	Ping Hua	2108661
EPA 351.2 Rev. 2.0	08/06/2019	08/07/2019 12:30	Adrian Shelby	08/08/2019 19:27	Julia Storbeck	2108659
	08/06/2019	08/07/2019 12:30	Adrian Shelby	08/08/2019 19:28	Julia Storbeck	2108660
	08/06/2019	08/07/2019 12:30	Adrian Shelby	08/08/2019 19:30	Julia Storbeck	2108661
EPA 353.2 Rev. 2.0	08/06/2019			08/07/2019 10:39	Beverly Y. Sanders	2108660
	08/06/2019			08/07/2019 10:46	Beverly Y. Sanders	2108661
	08/06/2019			08/07/2019 11:59	Beverly Y. Sanders	2108659
EPA 365.1 Rev. 2.0	08/06/2019	08/07/2019 14:15	Vijayalakshmi Reddy	08/09/2019 09:17	Lipi Saha	2108659
	08/06/2019	08/07/2019 14:15	Vijayalakshmi Reddy	08/09/2019 09:18	Lipi Saha	2108660
	08/06/2019	08/07/2019 14:15	Vijayalakshmi Reddy	08/09/2019 09:19	Lipi Saha	2108661
EPA 365.1 Rev. 2.0 dissolved	08/06/2019			08/06/2019 15:10	Jhamieka S. Greenwood	2108664
	08/06/2019			08/06/2019 15:19	Jhamieka S. Greenwood	2108662
	08/06/2019			08/06/2019 15:20	Jhamieka S. Greenwood	2108663
SM 2120 B	08/06/2019			08/06/2019 15:18	Madeline Funaro	2108654, 2108655
	08/06/2019			08/06/2019 15:40	Madeline Funaro	2108653
SM 2320 B-97	08/06/2019			08/10/2019 01:38	Dale L. Simmons	2108653
	08/06/2019			08/10/2019 01:52	Dale L. Simmons	2108654
	08/06/2019			08/10/2019 02:05	Dale L. Simmons	2108655
SM 2540 D-97	08/06/2019			08/07/2019 15:21	Yijie Li	2108653, 2108654, 2108655
SM 4500 F-C-97	08/06/2019			08/10/2019 01:38	Dale L. Simmons	2108653
	08/06/2019			08/10/2019 01:52	Dale L. Simmons	2108654
	08/06/2019			08/10/2019 02:05	Dale L. Simmons	2108655
SM 5310 B-00	08/06/2019			08/07/2019 18:22	Madeline Funaro	2108659
	08/06/2019			08/07/2019 18:34	Madeline Funaro	2108660
	08/06/2019			08/07/2019 18:46	Madeline Funaro	2108661
SM 5310 B-00 dissolved	08/06/2019			08/07/2019 17:21	Madeline Funaro	2108656
	08/06/2019			08/07/2019 17:33	Madeline Funaro	2108657
	08/06/2019			08/07/2019 17:45	Madeline Funaro	2108658