

Chemical Analysis Report

SO-DIST-2019-10-23-01

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

Event Description: **2019 SMP : Josephine**
Request ID: **RQ-2019-10-21-31**
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
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 07-NOV-2019 15:59

A handwritten signature in black ink, appearing to read "Liang Lin", 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 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: Josephine Creek EofCR17

Collection Date/Time: 10/22/2019 11:00

Field ID: G4SD0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130709	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P373060	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P373694	
		Sulfate	15		mg SO4/L	P373697	
		Color (true)	230		PCU	P373100	
	SM 2320 B-97	Total Alkalinity	7.1		mg CaCO3/L	P373214	
	SM 2540 C-97	TDS	96		mg/L	P373595	
	SM 2540 D-97	TSS	4	I	mg/L	P373650	
	SM 4500 F-C-97	Fluoride	0.045	I	mg F/L	P373219	
2130711	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P373453	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P373239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.22		mg N/L	P373196	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P373251	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P373176	
2130713	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P373032	

Sample Location: Josephine Creek EofCR17

Collection Date/Time: 10/22/2019 11:05

Field ID: G4SD0104_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2130710	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P373060	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P373694	
		Sulfate	15		mg SO4/L	P373697	
	SM 2120 B	Color (true)	230		PCU	P373100	
	SM 2320 B-97	Total Alkalinity	7.4		mg CaCO3/L	P373214	
	SM 2540 C-97	TDS	104		mg/L	P373595	
	SM 2540 D-97	TSS	4	I	mg/L	P373650	
	SM 4500 F-C-97	Fluoride	0.046	I	mg F/L	P373219	
2130712	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P373453	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P373239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P373196	
	EPA 365.1 Rev. 2.0	Total-P	0.067		mg P/L	P373251	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P373176	
2130714	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P373032	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373060

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373694

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

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

Reference Method: SM 2120 B
Batch ID: P373100

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P373214

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

Reference Method: SM 2540 C-97
Batch ID: P373595

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P373650

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P373176

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: P373694

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

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: P373239

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

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

Reference Method: SM 2120 B
Batch ID: P373100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P373214

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.3		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P373176

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130642	Chloride	102		P	90 - 110
2130755	Chloride	98.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130642	Sulfate	101		P	90 - 110
2130755	Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130756	Ammonia-N	99.3	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130688	Kjeldahl Nitrogen	99.0	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130697	NO2NO3-N	95.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130756	Total-P	96.6	95.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130758	O-Phosphate-P	97.2	98.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P373219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130536	Fluoride	95.2	94.7	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P373176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2130647	Organic Carbon	96.7	93.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130643	Turbidity	5.68	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130642	Chloride	0.169	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P373697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130642	Sulfate	0.0791	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P373453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130756	Ammonia-N	0.211	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P373239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130688	Kjeldahl Nitrogen	0.359	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P373196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130697	NO2NO3-N	0.922	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P373251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130756	Total-P	1.54	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P373032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130758	O-Phosphate-P	1.33	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P373100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130641	Color (true)	9.31	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P373214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130536	Total Alkalinity	0.201	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P373595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130644	TDS	1.17	Sample	P	0 - 10

Reference Method: SM 2540 D-97
 Batch ID: P373650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130644	TSS	6.45	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P373219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130536	Fluoride	0.477	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P373176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2130647	Organic Carbon	2.57	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: A95195

Included Lab Sample IDs: 2130713, 2130714

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95209

Included Lab Sample IDs: 2130709, 2130710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A95227

Included Lab Sample IDs: 2130709, 2130710

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

Reference Method: SM 5310 B-00

Run ID: A95259

Included Lab Sample IDs: 2130711, 2130712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95272

Included Lab Sample IDs: 2130711, 2130712

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

Reference Method: SM 2320 B-97

Run ID: A95274

Included Lab Sample IDs: 2130709, 2130710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	105	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95274

Included Lab Sample IDs: 2130709, 2130710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.1	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95299

Included Lab Sample IDs: 2130711, 2130712

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95324

Included Lab Sample IDs: 2130711, 2130712

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.7	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95359

Included Lab Sample IDs: 2130711, 2130712

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95482

Included Lab Sample IDs: 2130709, 2130710

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	105	106	P/P	90 - 110
Sulfate	104	105	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					5.68	
EPA 300.0 Rev. 2.1	Chloride	103	102	98.3		0.169	
	Sulfate	102	101	98.8		0.0791	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	99.3	99.5			0.211
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	99.0	99.6			0.359
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.5	95.0	96.0			0.922
EPA 365.1 Rev. 2.0	Total-P	96.1	96.6	95.1			1.54
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	97.2	98.5			1.33
SM 2120 B	Color (true)	100				9.31	
SM 2320 B-97	Total Alkalinity	104				0.201	
SM 2540 C-97	TDS					1.17	
SM 2540 D-97	TSS					6.45	
SM 4500 F-C-97	Fluoride	95.3	95.2	94.7			0.477
SM 5310 B-00	Organic Carbon	94.0	96.7	93.8			2.57

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2130709, 2130710
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2130709, 2130710
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2130709, 2130710
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2130711, 2130712
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2130711, 2130712
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2130711, 2130712
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2130711, 2130712
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2130713, 2130714
SM 2120 B / E31780	True Color measured at 450 nm	2130709, 2130710
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2130709, 2130710
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2130709, 2130710
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2130709, 2130710
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2130709, 2130710
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2130711, 2130712

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	10/23/2019			10/23/2019 15:29	Blanca Fach	2130709, 2130710
EPA 300.0 Rev. 2.1	10/23/2019			11/01/2019 15:53	Jhamieka S. Greenwood	2130709
	10/23/2019			11/01/2019 16:05	Jhamieka S. Greenwood	2130710
EPA 350.1 Rev. 2.0	10/23/2019			10/29/2019 13:40	Ping Hua	2130711
	10/23/2019			10/29/2019 13:41	Ping Hua	2130712
EPA 351.2 Rev. 2.0	10/23/2019	10/28/2019 13:27	Sima Feizi	10/29/2019 18:48	Jhamieka S. Greenwood	2130711
	10/23/2019	10/28/2019 13:27	Sima Feizi	10/29/2019 18:49	Jhamieka S. Greenwood	2130712
EPA 353.2 Rev. 2.0	10/23/2019			10/28/2019 09:10	Beverly Y. Sanders	2130711
	10/23/2019			10/28/2019 09:12	Beverly Y. Sanders	2130712
EPA 365.1 Rev. 2.0	10/23/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 10:56	Lipi Saha	2130711
	10/23/2019	10/28/2019 12:34	Vijayalakshmi Reddy	10/29/2019 10:57	Lipi Saha	2130712
EPA 365.1 Rev. 2.0 dissolved	10/23/2019			10/23/2019 15:31	Virginia P. Brown	2130713
	10/23/2019			10/23/2019 15:32	Virginia P. Brown	2130714
SM 2120 B	10/23/2019			10/23/2019 17:38	Madeline Funaro	2130709
	10/23/2019			10/23/2019 17:42	Madeline Funaro	2130710
SM 2320 B-97	10/23/2019			10/26/2019 10:21	Dale L. Simmons	2130709
	10/23/2019			10/26/2019 10:33	Dale L. Simmons	2130710
SM 2540 C-97	10/23/2019			10/25/2019 14:21	Yijie Li	2130709, 2130710
SM 2540 D-97	10/23/2019			10/25/2019 14:21	Yijie Li	2130709, 2130710
SM 4500 F-C-97	10/23/2019			10/26/2019 10:21	Dale L. Simmons	2130709
	10/23/2019			10/26/2019 10:33	Dale L. Simmons	2130710
SM 5310 B-00	10/23/2019			10/26/2019 06:32	Madeline Funaro	2130711
	10/23/2019			10/26/2019 06:46	Madeline Funaro	2130712