Chemical Analysis Report

SO-DIST-2019-11-22-02

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

Event Description: **2019 SMP : Josephine Creek**
Request ID: **RQ-2019-11-18-54**
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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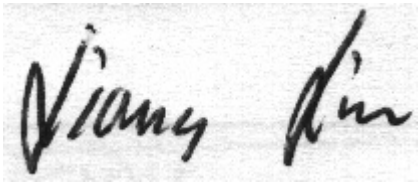
Date Certified: 10-DEC-2019 17:11



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: 11/21/2019 12:55**

Field ID: G4SD0104 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2138893	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P374747	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P375348	
		Sulfate	21		mg SO4/L	P375352	
	SM 2120 B	Color (true)	130		PCU	P374695	
	SM 2320 B-97	Total Alkalinity	12		mg CaCO3/L	P374990	
	SM 2540 C-97	TDS	89		mg/L	P375146	
	SM 2540 D-97	TSS	2	I	mg/L	P375130	
	SM 4500 F-C-97	Fluoride	0.052	I	mg F/L	P374995	
2138895	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P375095	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P375000	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.81		mg N/L	P374760	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P375202	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P374919	
2138897	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P374717	

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

Sample Location: Josephine Creek EofCR17 **Collection Date/Time: 11/21/2019 13:00**

Field ID: G4SD0104_DUP Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2138894	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P374747	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P375348	
		Sulfate	21		mg SO4/L	P375352	
	SM 2120 B	Color (true)	130		PCU	P374695	
	SM 2320 B-97	Total Alkalinity	12		mg CaCO3/L	P374990	
	SM 2540 C-97	TDS	91		mg/L	P375146	
	SM 2540 D-97	TSS	3	I	mg/L	P375130	
	SM 4500 F-C-97	Fluoride	0.052	I	mg F/L	P374995	
2138896	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P375095	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P375000	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.77		mg N/L	P374760	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P375202	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P374919	
2138898	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.035		mg P/L	P374717	

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374747

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375348

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375352

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375095

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375000

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374760

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375202

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374717

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

Reference Method: SM 2120 B
Batch ID: P374695

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P374990

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

Reference Method: SM 2540 C-97
Batch ID: P375146

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P375130

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374995

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374919

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: P375348

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375352

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375095

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375000

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374760

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: P375202

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374717

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

Reference Method: SM 2120 B
Batch ID: P374695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.4		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P374990

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: P374995

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374919

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138562	Chloride	102		P	90 - 110
2138799	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138562	Sulfate	102		P	90 - 110
2138799	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138802	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375000

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139047	Kjeldahl Nitrogen	99.2	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374760

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138802	NO2NO3-N	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375202

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138895	Total-P	105	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138806	O-Phosphate-P	99.0	99.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P374995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2139054	Fluoride	97.0	97.5	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P374919

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2138789	Organic Carbon	98.5	96.1	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P374747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139007	Turbidity	1.53	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138799	Chloride	0.843	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P375352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138799	Sulfate	0.678	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P375095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138802	Ammonia-N	0.666	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P375000

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139047	Kjeldahl Nitrogen	3.77	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374760

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138802	NO2NO3-N	0.238	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P375202

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138895	Total-P	2.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138806	O-Phosphate-P	0.367	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 2120 B
Batch ID: P374695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138999	Color (true)	0.118	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P374990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139054	Total Alkalinity	1.15	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P375146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138787	TDS	5.61	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P374995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2139054	Fluoride	0.484	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374919

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2138789	Organic Carbon	1.49	Spike	P	0 - 20

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 2120 B
Run ID: A95913
Included Lab Sample IDs: 2138893, 2138894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A95916
Included Lab Sample IDs: 2138897, 2138898

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	94.9	93.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A95930
Included Lab Sample IDs: 2138893, 2138894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A95937
Included Lab Sample IDs: 2138895, 2138896

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

Reference Method: SM 5310 B-00
Run ID: A95980
Included Lab Sample IDs: 2138895, 2138896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	96.2	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A96025
Included Lab Sample IDs: 2138893, 2138894

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

Reference Method: SM 4500 F-C-97
Run ID: A96025
Included Lab Sample IDs: 2138893, 2138894

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A96065
Included Lab Sample IDs: 2138895, 2138896

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A96087
Included Lab Sample IDs: 2138893, 2138894

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A96112
Included Lab Sample IDs: 2138895, 2138896

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110
Kjeldahl Nitrogen	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A96134
Included Lab Sample IDs: 2138895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.4	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A96166
Included Lab Sample IDs: 2138896

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

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					1.53	
EPA 300.0 Rev. 2.1	Chloride	102	101	102		0.843	
	Sulfate	101	99.1	102		0.678	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8	101	102			0.666
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.5	99.2	104			3.77
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.2				0.238
EPA 365.1 Rev. 2.0	Total-P	106	105	102			2.14
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	106	99.0	99.5			0.367
SM 2120 B	Color (true)	98.4				0.118	
SM 2320 B-97	Total Alkalinity	104				1.15	
SM 2540 C-97	TDS					5.61	
SM 4500 F-C-97	Fluoride	98.2	97.0	97.5			0.484
SM 5310 B-00	Organic Carbon	96.6	98.5	96.1			1.49

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2138893, 2138894
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2138893, 2138894
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2138893, 2138894
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2138895, 2138896
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2138895, 2138896
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2138895, 2138896
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2138895, 2138896
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2138897, 2138898
SM 2120 B / E31780	True Color measured at 450 nm	2138893, 2138894
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2138893, 2138894
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2138893, 2138894
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2138893, 2138894
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2138893, 2138894
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2138895, 2138896

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	11/22/2019			11/22/2019 16:25	Yen Ta	2138893, 2138894
EPA 300.0 Rev. 2.1	11/22/2019			12/05/2019 06:29	Lipi Saha	2138893
	11/22/2019			12/05/2019 06:41	Lipi Saha	2138894
EPA 350.1 Rev. 2.0	11/22/2019			12/02/2019 12:28	Ping Hua	2138895
	11/22/2019			12/02/2019 12:30	Ping Hua	2138896
EPA 351.2 Rev. 2.0	11/22/2019	12/02/2019 12:34	Sima Feizi	12/04/2019 17:22	Jhamieka S. Greenwood	2138896
	11/22/2019	12/02/2019 12:34	Sima Feizi	12/04/2019 17:35	Jhamieka S. Greenwood	2138895
EPA 353.2 Rev. 2.0	11/22/2019			11/25/2019 12:38	Beverly Y. Sanders	2138895
	11/22/2019			11/25/2019 12:39	Beverly Y. Sanders	2138896
EPA 365.1 Rev. 2.0	11/22/2019	12/04/2019 12:29	Yen Ta	12/05/2019 16:15	Benjamin T. Nordmann	2138895
	11/22/2019	12/04/2019 12:29	Yen Ta	12/05/2019 18:08	Benjamin T. Nordmann	2138896
EPA 365.1 Rev. 2.0 dissolved	11/22/2019			11/22/2019 17:11	Samantha Davila	2138897
	11/22/2019			11/22/2019 17:12	Samantha Davila	2138898
SM 2120 B	11/22/2019			11/22/2019 16:15	Julia Storbeck	2138893
	11/22/2019			11/22/2019 16:16	Julia Storbeck	2138894
SM 2320 B-97	11/22/2019			11/27/2019 18:16	Dale L. Simmons	2138893
	11/22/2019			11/27/2019 18:27	Dale L. Simmons	2138894
SM 2540 C-97	11/22/2019			11/25/2019 15:56	Yijie Li	2138893, 2138894
SM 2540 D-97	11/22/2019			11/25/2019 15:56	Yijie Li	2138893, 2138894
SM 4500 F-C-97	11/22/2019			11/27/2019 18:16	Dale L. Simmons	2138893
	11/22/2019			11/27/2019 18:27	Dale L. Simmons	2138894
SM 5310 B-00	11/22/2019			11/26/2019 05:40	Lauren Lees	2138895
	11/22/2019			11/26/2019 05:58	Lauren Lees	2138896