Chemical Analysis Report

SO-DIST-2016-03-15-04

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

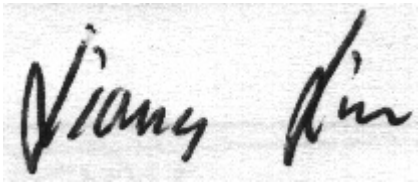
Event Description: **EBAP D-Kit**
Request ID: **RQ-2016-03-07-19**
Customer: **SO-DIST**
Project ID: **SMP**

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

For additional information please contact
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 08-APR-2016 14:21



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: Metals and 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 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: MATANZAS PASS/SAN CARLOS IS/DEP DOCK Collection Date/Time: 03/14/2016 09:55

Field ID: G2SD-MARCH Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1779697	EPA 180.1 Rev. 2.0	Turbidity	17		NTU	P300401	
	SM 2320 B-97	Total Alkalinity	125		mg CaCO3/L	P300586	
	SM 2540 D-97	TSS	24		mg/L	P300906	
	SM 4500 F-C-97	Fluoride	0.86		mg F/L	P300589	
1779698	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P300858	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P300874	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P300798	
	EPA 365.1 Rev. 2.0	Total-P	0.077		mg P/L	P300771	
	SM 5310 B-00	Organic Carbon	4.3		mg C/L	P300652	
1779699	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P300390	
1779705	EPA 200.7 Rev. 4.4	Iron	200	I	ug/L	P300795	
	EPA 200.8 Rev. 5.4	Arsenic	2.42		ug/L	P300795	
		Cadmium	0.060	U	ug/L	P300795	
		Chromium	1.09		ug/L	P300795	
		Copper	1.7		ug/L	P300795	
		Lead	0.35	I	ug/L	P300795	
		Nickel	0.47	I	ug/L	P300795	
		Silver	0.015	U	ug/L	P300795	
		Zinc	14		ug/L	P300795	

Ref. Method and Comment:
SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300401

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300795

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300795

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.050	U	ug/L
Copper	0.10	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.050	U	ug/L
Silver	0.0050	U	ug/L
Zinc	1.0	U	ug/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300858

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300874

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300798

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300771

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300390

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

Reference Method: SM 2320 B-97
Batch ID: P300586

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

Reference Method: SM 2540 D-97
Batch ID: P300906

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P300652

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300795

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300795

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.7		P	85 - 115
Cadmium	95.2		P	85 - 115
Chromium	95.3		P	85 - 115
Copper	92.5		P	85 - 115
Lead	92.8		P	85 - 115
Nickel	95.3		P	85 - 115
Silver	96.3		P	85 - 115
Zinc	92.3		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300858

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300874

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300798

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	98.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300771

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300390

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

Reference Method: SM 2320 B-97
Batch ID: P300586

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 105

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	94 - 108

Reference Method: SM 5310 B-00
Batch ID: P300652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779801	Iron	106	106	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300795

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779801	Arsenic	101	99.8	P/P	70 - 130
1779801	Cadmium	99.3	97.6	P/P	70 - 130
1779801	Chromium	92.9	92.9	P/P	70 - 130
1779801	Copper	92.8	91.6	P/P	70 - 130
1779801	Lead	95.8	95.1	P/P	70 - 130
1779801	Nickel	93.7	93.8	P/P	70 - 130
1779801	Silver	96.3	94.8	P/P	70 - 130
1779801	Zinc	95.2	94.3	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779698	Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779887	Kjeldahl Nitrogen	89.7	93.9	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779174	NO2NO3-N	97.0		P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779772	Total-P	90.0	90.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300390

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779690	O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779588	Fluoride	100	98.5	P/P	94 - 107

Reference Method: SM 5310 B-00
Batch ID: P300652

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779648	Organic Carbon	102		P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779685	Turbidity	1.75	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P300795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779801	Iron	0.537	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P300795

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779801	Arsenic	0.889	Spike	P	0 - 20
1779801	Cadmium	1.65	Spike	P	0 - 20
1779801	Chromium	0.00281	Spike	P	0 - 20
1779801	Copper	1.21	Spike	P	0 - 20
1779801	Lead	0.677	Spike	P	0 - 20
1779801	Nickel	0.101	Spike	P	0 - 20
1779801	Silver	1.57	Spike	P	0 - 20
1779801	Zinc	0.962	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P300858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779698	Ammonia-N	0.598	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P300874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779887	Kjeldahl Nitrogen	3.89	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P300798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779174	NO2NO3-N	0.413	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P300771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779772	Total-P	0.0821	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779690	O-Phosphate-P	0.256	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P300586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779588	Total Alkalinity	0.451	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P300589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779588	Fluoride	1.41	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P300652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779648	Organic Carbon	0.677	Spike	P	0 - 20

Quality Assurance Report
Precision

* 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: A68233
Included Lab Sample IDs: 1779699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.0	98.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68237
Included Lab Sample IDs: 1779697

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

Reference Method: SM 2320 B-97
Run ID: A68295
Included Lab Sample IDs: 1779697

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

Reference Method: SM 4500 F-C-97
Run ID: A68295
Included Lab Sample IDs: 1779697

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

Reference Method: SM 5310 B-00
Run ID: A68315
Included Lab Sample IDs: 1779698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	94.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A68372
Included Lab Sample IDs: 1779698

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A68389
Included Lab Sample IDs: 1779698

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A68436
Included Lab Sample IDs: 1779705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	100	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A68437
Included Lab Sample IDs: 1779698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A68486
Included Lab Sample IDs: 1779698

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A68512
Included Lab Sample IDs: 1779705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.6	98.8	P/P	90 - 110
Cadmium	98.0	98.2	P/P	90 - 110
Chromium	97.1	93.2	P/P	90 - 110
Copper	96.2	96.0	P/P	90 - 110
Nickel	96.1	96.6	P/P	90 - 110
Silver	95.9	96.3	P/P	90 - 110
Zinc	93.8	95.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A68721
Included Lab Sample IDs: 1779705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	98.8	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					1.75	
EPA 200.7 Rev. 4.4	Iron	106	106	106			0.537
EPA 200.8 Rev. 5.4	Arsenic	97.7	101	99.8			0.889
	Cadmium	95.2	99.3	97.6			1.65
	Chromium	95.3	92.9	92.9			0.0028

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 200.8 Rev. 5.4	Copper	92.5	92.8	91.6			1.21
	Lead	92.8	95.8	95.1			0.677
	Nickel	95.3	93.7	93.8			0.101
	Silver	96.3	96.3	94.8			1.57
	Zinc	92.3	95.2	94.3			0.962
EPA 350.1 Rev. 2.0	Ammonia-N	101	104	105			0.598
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.1	89.7	93.9			3.89
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	97.0				0.413
EPA 365.1 Rev. 2.0	Total-P	98.1	90.0	90.1			0.0821
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103	99.9	100			0.256
SM 2320 B-97	Total Alkalinity	103				0.451	
SM 4500 F-C-97	Fluoride	99.9	100	98.5			1.41
SM 5310 B-00	Organic Carbon	101	102				0.677

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1779697
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1779705
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1779705
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1779698
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1779698
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1779698
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1779698
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1779699
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1779697
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1779697
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1779697
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1779698

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	03/15/2016			03/15/2016 17:40	Ping Hua	1779697
EPA 200.7 Rev. 4.4	03/15/2016	03/22/2016	Elliott D. Healy	03/24/2016	Joshua Ayres	1779705
EPA 200.8 Rev. 5.4	03/15/2016	03/22/2016	Elliott D. Healy	03/29/2016	Charles J. Peterson	1779705
	03/15/2016	03/22/2016	Elliott D. Healy	04/06/2016	Charles J. Peterson	1779705
EPA 350.1 Rev. 2.0	03/15/2016			03/22/2016	Diana M. Turner	1779698
EPA 351.2 Rev. 2.0	03/15/2016	03/23/2016	Sofia Elnemr	03/25/2016	Rochelle Y Jackson	1779698
EPA 353.2 Rev. 2.0	03/15/2016			03/22/2016	Virginia P. Brown	1779698
EPA 365.1 Rev. 2.0	03/15/2016	03/22/2016	Christopher Armour	03/24/2016	Lipi Saha	1779698
EPA 365.1 Rev. 2.0 dissolved	03/15/2016			03/15/2016 15:34	Julia Storbeck	1779699
SM 2320 B-97	03/15/2016			03/16/2016	Dale L. Simmons	1779697
SM 2540 D-97	03/15/2016			03/18/2016	Yijie Li	1779697
SM 4500 F-C-97	03/15/2016			03/16/2016	Dale L. Simmons	1779697
SM 5310 B-00	03/15/2016			03/18/2016	Sofia Elnemr	1779698