Chemical Analysis Report

CEN-DIST-2016-10-25-01

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

Event Description: **Banana River**
Request ID: **RQ-2016-10-17-64**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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3319 Maguire Blvd., Suite 232
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 18-NOV-2016 17:27

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: BANANA RIVER EQUADISTANT FROM SR 528 & 520 **Collection Date/Time: 10/24/2016 13:10**

Field ID: G5CE0057 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1843749	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P313876	
	SM 2320 B-97	Total Alkalinity	114		mg CaCO3/L	P314175	
	SM 2540 D-97	TSS	9	I	mg/L	P314505	
	SM 4500 F-C-97	Fluoride	0.87		mg F/L	P314180	
1843750	EPA 350.1 Rev. 2.0	Ammonia-N	0.48		mg N/L	P314735	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P314917	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.029		mg N/L	P314363	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P314531	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P313855	
1843751	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P313833	
1843753	EPA 200.7 Rev. 4.4	Iron	110	I	ug/L	P313921	
	EPA 200.8 Rev. 5.4	Arsenic	3.46		ug/L	P313921	
		Cadmium	0.060	U	ug/L	P313921	
		Chromium	0.41	I	ug/L	P313921	
		Copper	0.93	I	ug/L	P313921	
		Lead	0.31	I	ug/L	P313921	
		Nickel	0.69		ug/L	P313921	
		Silver	0.015	U	ug/L	P313921	
		Zinc	3.0	U	ug/L	P313921	

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: P313876

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Component	Result	Code	Units
Zinc	1.0	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314735

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314917

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P314363

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314531

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313833

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

Reference Method: SM 2320 B-97
Batch ID: P314175

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

Reference Method: SM 2540 D-97
Batch ID: P314505

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P314180

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P313855

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: P313921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	97.1		P	85 - 115
Cadmium	99.5		P	85 - 115
Chromium	113		P	85 - 115
Copper	94.6		P	85 - 115
Lead	96.4		P	85 - 115
Nickel	96.3		P	85 - 115
Silver	97.0		P	85 - 115
Zinc	97.5		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314735

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314917

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: P314363

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314531

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313833

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

Reference Method: SM 2320 B-97
Batch ID: P314175

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P314180

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P313855

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

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1844050	Iron	102	103	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1844050	Arsenic	103	106	P/P	70 - 130
1844050	Cadmium	92.6	95.1	P/P	70 - 130
1844050	Chromium	76.6	79.2	P/P	70 - 130
1844050	Copper	90.9	95.1	P/P	70 - 130
1844050	Lead	105	108	P/P	70 - 130
1844050	Nickel	99.3	101	P/P	70 - 130
1844050	Silver	88.4	89.3	P/P	70 - 130
1844050	Zinc	93.7	95.6	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843232	Ammonia-N	102	105	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314917

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843956	Kjeldahl Nitrogen	101	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P314363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843737	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843737	Total-P	96.4	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843970	O-Phosphate-P	102	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P314180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843962	Fluoride	94.4	95.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P313855

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1843232	Organic Carbon	99.4	97.9	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P313876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843568	Turbidity	4.12	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P313921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1844050	Iron	1.13	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P313921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1844050	Arsenic	2.94	Spike	P	0 - 20
1844050	Cadmium	2.64	Spike	P	0 - 20
1844050	Chromium	3.27	Spike	P	0 - 20
1844050	Copper	4.30	Spike	P	0 - 20
1844050	Lead	2.92	Spike	P	0 - 20
1844050	Nickel	2.10	Spike	P	0 - 20
1844050	Silver	0.920	Spike	P	0 - 20
1844050	Zinc	2.10	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P314735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843232	Ammonia-N	2.35	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P314917

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843956	Kjeldahl Nitrogen	1.32	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P314363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843737	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P314531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843737	Total-P	0.0731	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P313833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843970	O-Phosphate-P	0.294	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P314175

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843962	Total Alkalinity	0.393	Sample	P	0 - 4.8

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P314180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843962	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P313855

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1843232	Organic Carbon	1.23	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: A72418
Included Lab Sample IDs: 1843751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.9	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A72424
Included Lab Sample IDs: 1843750

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A72431
Included Lab Sample IDs: 1843749

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A72482
Included Lab Sample IDs: 1843753

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A72507
Included Lab Sample IDs: 1843753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.2	99.5	P/P	90 - 110
Cadmium	98.5	96.5	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A72507
Included Lab Sample IDs: 1843753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	95.6	101	P/P	90 - 110
Silver	96.8	96.3	P/P	90 - 110
Zinc	96.5	99.7	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A72515
Included Lab Sample IDs: 1843749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	96.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A72515
Included Lab Sample IDs: 1843749

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A72549
Included Lab Sample IDs: 1843753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.8	94.7	P/P	90 - 110
Copper	99.3	96.4	P/P	90 - 110
Lead	95.2	93.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A72565
Included Lab Sample IDs: 1843750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A72656
Included Lab Sample IDs: 1843750

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A72666
Included Lab Sample IDs: 1843750

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A72786
Included Lab Sample IDs: 1843750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	106	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					4.12	
EPA 200.7 Rev. 4.4	Iron	105	102	103			1.13
EPA 200.8 Rev. 5.4	Arsenic	97.1	103	106			2.94
	Cadmium	99.5	92.6	95.1			2.64
	Chromium	113	76.6	79.2			3.27
	Copper	94.6	90.9	95.1			4.30
	Lead	96.4	105	108			2.92
	Nickel	96.3	99.3	101			2.10
	Silver	97.0	88.4	89.3			0.920
	Zinc	97.5	93.7	95.6			2.10
EPA 350.1 Rev. 2.0	Ammonia-N	104	102	105			2.35
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	101	103			1.32
EPA 353.2 Rev. 2.0	NO2NO3-N	105	103	103			0.0
EPA 365.1 Rev. 2.0	Total-P	101	96.4	96.4			0.0731
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	102	102			0.294
SM 2320 B-97	Total Alkalinity	103				0.393	
SM 4500 F-C-97	Fluoride	99.5	94.4	95.2			0.473
SM 5310 B-00	Organic Carbon	102	99.4	97.9			1.23

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1843749
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1843753
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1843753
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1843750
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1843750
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1843750
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1843750
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1843751
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1843749
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1843749

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1843749
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1843750

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	10/25/2016			10/25/2016 16:42	Sima Feizi	1843749
EPA 200.7 Rev. 4.4	10/25/2016	10/26/2016	Elliott D. Healy	10/27/2016	Betina Topolski	1843753
EPA 200.8 Rev. 5.4	10/25/2016	10/26/2016	Elliott D. Healy	10/28/2016	Charles J. Peterson	1843753
	10/25/2016	10/26/2016	Elliott D. Healy	10/31/2016	Charles J. Peterson	1843753
EPA 350.1 Rev. 2.0	10/25/2016			11/07/2016	Sofia Elnemr	1843750
EPA 351.2 Rev. 2.0	10/25/2016	11/10/2016	Martin Acosta	11/14/2016	Joseph Suarez	1843750
EPA 353.2 Rev. 2.0	10/25/2016			11/02/2016	Beverly Y. Sanders	1843750
EPA 365.1 Rev. 2.0	10/25/2016	11/03/2016	Vijayalakshmi Reddy	11/07/2016	Lipi Saha	1843750
EPA 365.1 Rev. 2.0 dissolved	10/25/2016			10/25/2016 17:15	Julia Storbeck	1843751
SM 2320 B-97	10/25/2016			10/29/2016	Dale L. Simmons	1843749
SM 2540 D-97	10/25/2016			10/28/2016	Yijie Li	1843749
SM 4500 F-C-97	10/25/2016			10/29/2016	Dale L. Simmons	1843749
SM 5310 B-00	10/25/2016			10/26/2016	Julie Michelle Frank	1843750