

Chemical Analysis Report

SO-DIST-2016-11-15-01

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-2016-11-07-03**
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

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Certified by: Colin Wright, Environmental Administrator

Date Certified: 07-DEC-2016 12:42

A handwritten signature in black ink, appearing to read "Colin Wright", is placed over a light gray rectangular 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 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: 11/14/2016 11:57

Field ID: G2SD-NOVEMBER

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1849718	EPA 180.1 Rev. 2.0	Turbidity	3.5	A	NTU	P315247	
	SM 2320 B-97	Total Alkalinity	124		mg CaCO3/L	P315211	
	SM 2540 D-97	TSS	14		mg/L	P315635	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P315214	
1849719	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P315549	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P315797	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P315370	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P315650	
	SM 5310 B-00	Organic Carbon	4.2		mg C/L	P315312	
1849720	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P315190	
1849722	EPA 200.7 Rev. 4.4	Iron	90	U	ug/L	P315165	
	EPA 200.8 Rev. 5.4	Arsenic	2.07		ug/L	P315165	
		Cadmium	0.060	U	ug/L	P315165	
		Chromium	0.26	I	ug/L	P315165	
		Copper	0.51	I	ug/L	P315165	
		Lead	0.15	U	ug/L	P315165	
		Nickel	0.24	I	ug/L	P315165	
		Silver	0.015	U	ug/L	P315165	
		Zinc	3.0	U	ug/L	P315165	

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: P315247

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P315165

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P315165

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: P315549

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P315797

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P315370

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P315650

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P315190

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

Reference Method: SM 2320 B-97
Batch ID: P315211

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

Reference Method: SM 2540 D-97
Batch ID: P315635

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P315214

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P315312

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: P315165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P315165

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	99.0		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	98.0		P	85 - 115
Copper	96.8		P	85 - 115
Lead	95.8		P	85 - 115
Nickel	97.5		P	85 - 115
Silver	96.9		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P315549

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.3		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P315797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P315370

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P315650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P315190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.6		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P315211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	95 - 108

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P315214

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

Reference Method: SM 5310 B-00
Batch ID: P315312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P315165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1848965	Iron	100	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P315165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1848965	Arsenic	100	102	P/P	70 - 130
1848965	Cadmium	87.6	90.3	P/P	70 - 130
1848965	Chromium	76.1	75.6	P/P	70 - 130
1848965	Copper	93.3	95.4	P/P	70 - 130
1848965	Lead	107	108	P/P	70 - 130
1848965	Nickel	98.8	101	P/P	70 - 130
1848965	Silver	87.1	88.2	P/P	70 - 130
1848965	Zinc	87.5	89.5	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P315549

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1849719	Ammonia-N	90.3	90.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P315797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1849596	Kjeldahl Nitrogen	100	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P315370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1848293	NO2NO3-N	105	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P315650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1849628	Total-P	93.3	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P315190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1849720	O-Phosphate-P	97.2	98.6	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P315214

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1848673	Fluoride	97.8	100	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P315312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1849525	Organic Carbon	98.9	98.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P315247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1849718	Turbidity	5.44	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P315165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1848965	Iron	0.618	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P315165

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1848965	Arsenic	1.98	Spike	P	0 - 20
1848965	Cadmium	3.04	Spike	P	0 - 20
1848965	Chromium	0.733	Spike	P	0 - 20
1848965	Copper	2.15	Spike	P	0 - 20
1848965	Lead	0.552	Spike	P	0 - 20
1848965	Nickel	2.53	Spike	P	0 - 20
1848965	Silver	1.25	Spike	P	0 - 20
1848965	Zinc	2.28	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P315549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1849719	Ammonia-N	0.0699	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P315797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1849596	Kjeldahl Nitrogen	1.83	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P315370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1848293	NO2NO3-N	0.477	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P315650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1849628	Total-P	3.23	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P315190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1849720	O-Phosphate-P	1.26	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P315211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1848673	Total Alkalinity	0.499	Sample	P	0 - 4.8

Reference Method: SM 4500 F-C-97
Batch ID: P315214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1848673	Fluoride	1.52	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P315312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1849525	Organic Carbon	0.441	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: A72815

Included Lab Sample IDs: 1849720

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

Reference Method: SM 2320 B-97

Run ID: A72821

Included Lab Sample IDs: 1849718

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

Reference Method: SM 4500 F-C-97

Run ID: A72821

Included Lab Sample IDs: 1849718

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A72831

Included Lab Sample IDs: 1849718

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

Reference Method: SM 5310 B-00

Run ID: A72849

Included Lab Sample IDs: 1849719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A72859

Included Lab Sample IDs: 1849719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A72877

Included Lab Sample IDs: 1849722

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A72889

Included Lab Sample IDs: 1849722

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	103	P/P	90 - 110
Cadmium	101	99.5	P/P	90 - 110
Copper	99.0	99.4	P/P	90 - 110
Lead	95.6	90.3	P/P	90 - 110
Nickel	100	100	P/P	90 - 110
Silver	97.1	96.4	P/P	90 - 110
Zinc	108	107	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A72937

Included Lab Sample IDs: 1849719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	94.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A72965

Included Lab Sample IDs: 1849722

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	97.6	94.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A72991

Included Lab Sample IDs: 1849719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	105	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A73125

Included Lab Sample IDs: 1849719

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	95.9	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				5.44	
EPA 200.7 Rev. 4.4	Iron	103	100	101		0.618
EPA 200.8 Rev. 5.4	Arsenic	99.0	100	102		1.98
	Cadmium	101	87.6	90.3		3.04
	Chromium	98.0	76.1	75.6		0.733

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 200.8 Rev. 5.4	Copper	96.8	93.3	95.4		2.15
	Lead	95.8	107	108		0.552
	Nickel	97.5	98.8	101		2.53
	Silver	96.9	87.1	88.2		1.25
	Zinc	100	87.5	89.5		2.28
EPA 350.1 Rev. 2.0	Ammonia-N	97.3	90.3	90.3		0.0699
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	100	102		1.83
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	103	105	104		0.477
EPA 365.1 Rev. 2.0	Total-P	99.9	93.3	96.5		3.23
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.6	97.2	98.6		1.26
SM 2320 B-97	Total Alkalinity	100			0.499	
SM 4500 F-C-97	Fluoride	98.2	97.8	100		1.52
SM 5310 B-00	Organic Carbon	97.8	98.9	98.4		0.441

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1849718
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1849722
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1849722
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1849719
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1849719
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1849719
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1849719
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1849720
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1849718
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1849718
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1849718
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1849719

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	11/15/2016			11/15/2016 16:29	Sima Feizi	1849718
EPA 200.7 Rev. 4.4	11/15/2016	11/15/2016	Elliott D. Healy	11/17/2016	Joshua Ayres	1849722
EPA 200.8 Rev. 5.4	11/15/2016	11/15/2016	Elliott D. Healy	11/17/2016	Charles J. Peterson	1849722
	11/15/2016	11/15/2016	Elliott D. Healy	11/22/2016	Charles J. Peterson	1849722
EPA 350.1 Rev. 2.0	11/15/2016			11/18/2016	Sofia Elnemr	1849719
EPA 351.2 Rev. 2.0	11/15/2016	11/29/2016	Adrian Shelby	12/01/2016	Peter D. Kaus	1849719
EPA 353.2 Rev. 2.0	11/15/2016			11/17/2016	Beverly Y. Sanders	1849719
EPA 365.1 Rev. 2.0	11/15/2016	11/23/2016	Lipi Saha	11/23/2016	Lipi Saha	1849719
EPA 365.1 Rev. 2.0 dissolved	11/15/2016			11/15/2016 16:24	Julia Storbeck	1849720
SM 2320 B-97	11/15/2016			11/15/2016	Dale L. Simmons	1849718
SM 2540 D-97	11/15/2016			11/18/2016	Yijie Li	1849718
SM 4500 F-C-97	11/15/2016			11/15/2016	Dale L. Simmons	1849718
SM 5310 B-00	11/15/2016			11/17/2016	Julie Michelle Frank	1849719