

Chemical Analysis Report

SO-DIST-2016-05-18-04

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

Event Description: **SMP: Florida Keys**
Request ID: **RQ-2016-05-09-12**
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
Attn: Ben Paswater

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Certified by: Colin Wright, Environmental Administrator

Date Certified: 14-JUN-2016 11:14

A handwritten signature in black ink, appearing to read "Colin Wright", is written on a light-colored 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: 8080-ENRG6 OUT BY REEF

Collection Date/Time: 05/17/2016 09:40

Field ID: G5SD0069

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1799842	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P304581	
	SM 2320 B-97	Total Alkalinity	118		mg CaCO3/L	P304842	
	SM 2540 D-97	TSS	4	I	mg/L	P305157	
	SM 4500 F-C-97	Fluoride	1.3		mg F/L	P305057	
1799843	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P305196	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P305075	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P304908	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P305231	
	SM 5310 B-00	Organic Carbon	1.4	I	mg C/L	P305728	
1799844	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P304541	
1799847	EPA 200.7 Rev. 4.4	Iron	120	U	ug/L	P304986	
	EPA 200.8 Rev. 5.4	Arsenic	1.83		ug/L	P304986	
		Cadmium	0.060	U	ug/L	P304986	
		Chromium	0.15	U	ug/L	P304986	
		Copper	0.30	U	ug/L	P304986	
		Lead	0.25	U	ug/L	P304986	
		Nickel	0.15	U	ug/L	P304986	
		Silver	0.015	U	ug/L	P304986	
		Zinc	3.0	U	ug/L	P304986	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P304581

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P304986

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P304986

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: P304986

Component	Result	Code	Units
Zinc	1.0	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305196

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305075

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304908

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305231

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304541

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

Reference Method: SM 2320 B-97
Batch ID: P304842

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

Reference Method: SM 2540 D-97
Batch ID: P305157

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P305057

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: P305728

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: P304986

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304986

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	96.5		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	100		P	85 - 115
Copper	94.3		P	85 - 115
Lead	100		P	85 - 115
Nickel	96.5		P	85 - 115
Silver	94.1		P	85 - 115
Zinc	97.2		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305196

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305075

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304908

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305231

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304541

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

Reference Method: SM 2320 B-97
Batch ID: P304842

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

Reference Method: SM 4500 F-C-97
Batch ID: P305057

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P305728

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P304986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801523	Iron	102	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801523	Arsenic	100	98.4	P/P	80 - 120
1801523	Cadmium	100	96.3	P/P	80 - 120
1801523	Chromium	90.5	88.3	P/P	80 - 120
1801523	Copper	89.9	88.8	P/P	80 - 120
1801523	Lead	105	104	P/P	80 - 120
1801523	Nickel	94.9	93.7	P/P	80 - 120
1801523	Silver	89.3	88.4	P/P	80 - 120
1801523	Zinc	90.6	89.5	P/P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1799571	Kjeldahl Nitrogen	98.2	99.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1799863	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1799575	Total-P	104	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304541

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1799908	O-Phosphate-P	98.6	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P305057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1798231	Fluoride	98.7	99.4	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P305728

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1799272	Organic Carbon	94.2	94.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799777	Turbidity	0.851	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P304986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801523	Iron	0.746	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801523	Arsenic	1.79	Spike	P	0 - 20
1801523	Cadmium	3.83	Spike	P	0 - 20
1801523	Chromium	2.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P304986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801523	Copper	1.22	Spike	P	0 - 20
1801523	Lead	1.53	Spike	P	0 - 20
1801523	Nickel	1.21	Spike	P	0 - 20
1801523	Silver	1.09	Spike	P	0 - 20
1801523	Zinc	1.17	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799571	Ammonia-N	0.411	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799571	Kjeldahl Nitrogen	1.08	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799863	NO2NO3-N	0.980	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799575	Total-P	5.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799908	O-Phosphate-P	1.49	Spike	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P304842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798231	Total Alkalinity	0.358	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P305057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1798231	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P305728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1799272	Organic Carbon	0.0451	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: A69552
Included Lab Sample IDs: 1799844

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A69569
Included Lab Sample IDs: 1799842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: SM 2320 B-97
Run ID: A69640
Included Lab Sample IDs: 1799842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.2	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A69665
Included Lab Sample IDs: 1799843

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

Reference Method: SM 4500 F-C-97
Run ID: A69701
Included Lab Sample IDs: 1799842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A69726

Included Lab Sample IDs: 1799847

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	98.7	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69737

Included Lab Sample IDs: 1799843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69750

Included Lab Sample IDs: 1799843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	97.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A69752

Included Lab Sample IDs: 1799847

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	97.9	99.1	P/P	90 - 110
Cadmium	99.3	98.1	P/P	90 - 110
Chromium	99.4	97.4	P/P	90 - 110
Copper	96.2	98.0	P/P	90 - 110
Lead	97.6	96.4	P/P	90 - 110
Nickel	97.0	99.0	P/P	90 - 110
Silver	95.8	96.0	P/P	90 - 110
Zinc	97.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69815

Included Lab Sample IDs: 1799843

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

Reference Method: SM 5310 B-00

Run ID: A69893

Included Lab Sample IDs: 1799843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	94.4	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					0.851	
EPA 200.7 Rev. 4.4	Iron	104	102	101			0.746
EPA 200.8 Rev. 5.4	Arsenic	96.5	100	98.4			1.79
	Cadmium	101	100	96.3			3.83
	Chromium	100	90.5	88.3			2.45
	Copper	94.3	89.9	88.8			1.22
	Lead	100	105	104			1.53
	Nickel	96.5	94.9	93.7			1.21
	Silver	94.1	89.3	88.4			1.09
	Zinc	97.2	90.6	89.5			1.17
EPA 350.1 Rev. 2.0	Ammonia-N	99.8					0.411
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.5	98.2	99.4			1.08
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	102			0.980
EPA 365.1 Rev. 2.0	Total-P	104	104	98.0			5.61
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101	98.6	100			1.49
SM 2320 B-97	Total Alkalinity	100				0.358	
SM 4500 F-C-97	Fluoride	97.5	98.7	99.4			0.473
SM 5310 B-00	Organic Carbon	99.3	94.2	94.2			0.0451

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1799842
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1799847
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1799847
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1799843
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1799843
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1799843
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1799843
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1799844
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1799842
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1799842
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1799842
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1799843

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	05/18/2016			05/18/2016 15:38	Sima Feizi	1799842
EPA 200.7 Rev. 4.4	05/18/2016	05/25/2016	Elliott D. Healy	05/26/2016	Joshua Ayres	1799847
EPA 200.8 Rev. 5.4	05/18/2016	05/25/2016	Elliott D. Healy	05/28/2016	Charles J. Peterson	1799847
EPA 350.1 Rev. 2.0	05/18/2016			05/26/2016	Diana M. Turner	1799843
EPA 351.2 Rev. 2.0	05/18/2016	05/26/2016	Sofia Elnemr	05/27/2016	Christopher Armour	1799843
EPA 353.2 Rev. 2.0	05/18/2016			05/24/2016	Peter D. Kaus	1799843
EPA 365.1 Rev. 2.0	05/18/2016	05/31/2016	Vijayalakshmi Reddy	06/02/2016	Rochelle Y Jackson	1799843
EPA 365.1 Rev. 2.0 dissolved	05/18/2016			05/18/2016 15:52	Julia Storbeck	1799844
SM 2320 B-97	05/18/2016			05/21/2016	Dale L. Simmons	1799842
SM 2540 D-97	05/18/2016			05/19/2016	Yijie Li	1799842
SM 4500 F-C-97	05/18/2016			05/26/2016	Dale L. Simmons	1799842
SM 5310 B-00	05/18/2016			06/07/2016	Diana M. Turner	1799843