Chemical Analysis Report

TLH-ROC-2017-11-15-01

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

Event Description: **SMP Freshwater Kit A**
Request ID: **RQ-2017-10-30-54**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 04-DEC-2017 12:57

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 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: Owens Spring @ Suwannee River **Collection Date/Time: 11/14/2017 11:45**

Field ID: G1TLHR0036-2017-05 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1946182	EPA 180.1 Rev. 2.0	Turbidity	0.20		NTU	P335358	
	EPA 300.0 Rev. 2.1	Chloride	9.3		mg Cl/L	P335408	
	SM 2120 B	Color (true)	4.5	I	PCU	P335391	
	SM 2320 B-97	Total Alkalinity	183		mg CaCO3/L	P335626	
	SM 2540 C-97	TDS	235		mg/L	P335711	
	SM 2540 D-97	TSS	2	U	mg/L	P335729	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P335630	
1946184	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P336095	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.15	I	mg N/L	P335880	
	EPA 353.2 Rev. 2.0	NO2NO3-N	6.5		mg N/L	P335702	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P335542	
	SM 5310 B-00	Organic Carbon	1.2		mg C/L	P335613	
1946186	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P335389	

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: Alapha River Rise @ Suwannee River **Collection Date/Time: 11/14/2017 14:15**

Field ID: G1TLHR0046-2017-05 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1946183	EPA 180.1 Rev. 2.0	Turbidity	0.70	A	NTU	P335358	
	EPA 300.0 Rev. 2.1	Chloride	8.0		mg Cl/L	P335408	
	SM 2120 B	Color (true)	79	A	PCU	P335391	
	SM 2320 B-97	Total Alkalinity	117		mg CaCO3/L	P335626	
	SM 2540 C-97	TDS	178		mg/L	P335711	
	SM 2540 D-97	TSS	2	U	mg/L	P335729	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P335630	
1946185	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P336095	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P335880	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.93		mg N/L	P335702	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P335542	
	SM 5310 B-00	Organic Carbon	7.8		mg C/L	P335613	
1946187	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.092		mg P/L	P335389	

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: P335358

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P335408

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336095

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335880

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335702

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335542

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335389

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

Reference Method: SM 2120 B
Batch ID: P335391

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P335626

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

Reference Method: SM 2540 C-97
Batch ID: P335711

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P335729

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P335630

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P335613

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: P335408

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336095

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335880

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.5		P	90 - 110

Reference Method: SM 2320 B-97
Batch ID: P335626

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

Reference Method: SM 4500 F-C-97
Batch ID: P335630

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P335613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P335408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1946261	Chloride	99.4		P	90 - 110
1946273	Chloride	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336095

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945988	Ammonia-N	97.4	94.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945980	Kjeldahl Nitrogen	106	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1946224	NO2NO3-N	100	99.7	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945989	Total-P	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1946186	O-Phosphate-P	94.0	94.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P335630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1946193	Fluoride	102	103	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P335613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1945949	Organic Carbon	97.3	96.2	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P335358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946183	Turbidity	10.3	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P335408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946261	Chloride	0.750	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336095

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945988	Ammonia-N	2.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P335880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945980	Kjeldahl Nitrogen	5.12	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P335702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946224	NO2NO3-N	0.425	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P335542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945989	Total-P	1.56	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P335389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946186	O-Phosphate-P	0.145	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P335391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946183	Color (true)	0.482	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P335626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946193	Total Alkalinity	0.0904	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P335711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945985	TDS	1.51	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P335630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1946193	Fluoride	0.463	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P335613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1945949	Organic Carbon	0.545	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 300.0 Rev. 2.1
Run ID: A80230
Included Lab Sample IDs: 1946182, 1946183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.5	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A80289
Included Lab Sample IDs: 1946182, 1946183

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A80298
Included Lab Sample IDs: 1946186, 1946187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	95.9	99.5	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A80299
Included Lab Sample IDs: 1946182, 1946183

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.6	102	P/P	85 - 115

Reference Method: SM 5310 B-00
Run ID: A80379
Included Lab Sample IDs: 1946184, 1946185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.5	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A80383
Included Lab Sample IDs: 1946182, 1946183

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

Reference Method: SM 4500 F-C-97
Run ID: A80383
Included Lab Sample IDs: 1946182, 1946183

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A80384
Included Lab Sample IDs: 1946185

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A80413
Included Lab Sample IDs: 1946184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A80428
Included Lab Sample IDs: 1946184, 1946185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A80585
Included Lab Sample IDs: 1946184, 1946185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A80596
Included Lab Sample IDs: 1946184, 1946185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	102	102	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					10.3	
EPA 300.0 Rev. 2.1	Chloride	98.7	99.4	101		0.750	
EPA 350.1 Rev. 2.0	Ammonia-N	100	97.4	94.5			2.94
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	106	100			5.12
EPA 353.2 Rev. 2.0	NO2NO3-N	106	100	99.7			0.425
EPA 365.1 Rev. 2.0	Total-P	99.0	102	100			1.56
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.5	94.0	94.2			0.145
SM 2120 B	Color (true)					0.482	
SM 2320 B-97	Total Alkalinity	103				0.0904	
SM 2540 C-97	TDS					1.51	

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
SM 4500 F-C-97	Fluoride	102	102	103			0.463
SM 5310 B-00	Organic Carbon	98.2	97.3	96.2			0.545

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1946182, 1946183
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1946182, 1946183
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1946184, 1946185
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1946184, 1946185
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1946184, 1946185
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1946184, 1946185
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1946186, 1946187
SM 2120 B / E31780	True Color measured at 450 nm	1946182, 1946183
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1946182, 1946183
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1946182, 1946183
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1946182, 1946183
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1946182, 1946183
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1946184, 1946185

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	11/15/2017			11/15/2017 16:32	DeAsia Armster	1946182, 1946183
EPA 300.0 Rev. 2.1	11/15/2017			11/15/2017	Julia Storbeck	1946182, 1946183
EPA 350.1 Rev. 2.0	11/15/2017			11/29/2017	Sofia Elnemr	1946184, 1946185
EPA 351.2 Rev. 2.0	11/15/2017	11/27/2017	Adrian Shelby	11/28/2017	Joseph Suarez	1946184, 1946185
EPA 353.2 Rev. 2.0	11/15/2017			11/21/2017	Lauren Bottorf	1946184, 1946185
EPA 365.1 Rev. 2.0	11/15/2017	11/17/2017	Sima Feizi	11/20/2017	Lipi Saha	1946184, 1946185
EPA 365.1 Rev. 2.0 dissolved	11/15/2017			11/15/2017 14:27	Megan Treadwell	1946186
	11/15/2017			11/15/2017 14:30	Megan Treadwell	1946187
SM 2120 B	11/15/2017			11/15/2017 15:36	Tanya Welborn	1946182
	11/15/2017			11/15/2017 15:38	Tanya Welborn	1946183
SM 2320 B-97	11/15/2017			11/18/2017	Dale L. Simmons	1946182, 1946183
SM 2540 C-97	11/15/2017			11/17/2017	Yijie Li	1946182, 1946183
SM 2540 D-97	11/15/2017			11/17/2017	Yijie Li	1946182, 1946183
SM 4500 F-C-97	11/15/2017			11/18/2017	Dale L. Simmons	1946182, 1946183
SM 5310 B-00	11/15/2017			11/17/2017	Ping Hua	1946184, 1946185