

Chemical Analysis Report

CEN-DIST-2018-02-06-02

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

Event Description: **Mirror / Felter / Tilden X4**
Request ID: **RQ-2018-02-05-68**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Mike Linger

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

Certified by: Liang Lin, Environmental Administrator

Date Certified: 06-MAR-2018 11:06

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored 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: MIRROR LAKE @ CENTER OF NORTH LOBE **Collection Date/Time: 02/05/2018 11:05**

Field ID: G1CE0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964822	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P339410	
	EPA 300.0 Rev. 2.1	Chloride	16	A	mg Cl/L	P339701	
		Sulfate	25	A	mg SO4/L	P339706	
	SM 2120 B	Color (true)	12		PCU	P339422	
	SM 2320 B-97	Total Alkalinity	13	A	mg CaCO3/L	P340123	
	SM 2540 C-97	TDS	112		mg/L	P339838	
	SM 2540 D-97	TSS	3	I	mg/L	P339802	
	SM 4500 F-C-97	Fluoride	0.092	I	mg F/L	P340137	
1964824	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P339959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P339562	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P339852	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P339607	
	SM 5310 B-00	Organic Carbon	6.2		mg C/L	P339914	
1964826	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P339449	

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: LAKE FELTER @ CENTER

Collection Date/Time: 02/05/2018 11:55

Field ID: G1CE0042

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964823	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P339410	
	EPA 300.0 Rev. 2.1	Chloride	20	A	mg Cl/L	P339950	
		Sulfate	3.3	A	mg SO4/L	P339954	
	SM 2120 B	Color (true)	110		PCU	P339422	
	SM 2320 B-97	Total Alkalinity	20		mg CaCO3/L	P340123	
	SM 2540 C-97	TDS	129		mg/L	P339838	
	SM 2540 D-97	TSS	2	I	mg/L	P339802	
	SM 4500 F-C-97	Fluoride	0.097	I	mg F/L	P340137	
1964825	EPA 350.1 Rev. 2.0	Ammonia-N	0.31		mg N/L	P339959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.2		mg N/L	P339562	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P339852	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P339607	
	SM 5310 B-00	Organic Carbon	29		mg C/L	P339914	
1964827	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P339449	

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: LAKE TILDEN @ 140M NW OF CENTER

Collection Date/Time: 02/05/2018 13:08

Field ID: G1CE0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964810	EPA 180.1 Rev. 2.0	Turbidity	5.7	A	NTU	P339410	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P339701	
		Sulfate	11		mg SO4/L	P339706	

Field ID: G1CE0087

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964810	SM 2120 B	Color (true)	320		PCU	P339422	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P340123	
	SM 2540 C-97	TDS	168		mg/L	P339838	
	SM 2540 D-97	TSS	3	I	mg/L	P339802	
	SM 4500 F-C-97	Fluoride	0.093	I	mg F/L	P340137	
1964814	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P339959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P339562	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P339852	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P339607	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P339914	
1964818	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P339449	
1964849	EPA 200.7 Rev. 4.4	Calcium	12.4		mg/L	P339505	
		Iron	230		ug/L	P339505	
		Magnesium	5.01		mg/L	P339505	
		Potassium	7.7		mg/L	P339505	
		Sodium	19.7		mg/L	P339505	
		Zinc	5.0	U	ug/L	P339505	
		Arsenic	1.16		ug/L	P339505	
	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P339505	
		Chromium	0.62	I	ug/L	P340191	
		Copper	1.41		ug/L	P339505	
		Lead	0.40		ug/L	P339505	
		Nickel	0.44	I	ug/L	P340191	
		Silver	0.010	U	ug/L	P339505	

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: LAKE TILDEN @ 165M NE OF CENTER

Collection Date/Time: 02/05/2018 13:15

Field ID: G1CE0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964811	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P339410	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P339701	
		Sulfate	11		mg SO4/L	P339706	
		Color (true)	320		PCU	P339422	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P340123	
1964815	SM 2540 C-97	TDS	160		mg/L	P339838	
	SM 2540 D-97	TSS	2	I	mg/L	P339802	
	SM 4500 F-C-97	Fluoride	0.092	I	mg F/L	P340137	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P339959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P339562	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P339852	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P339607	
1964819	SM 5310 B-00	Organic Carbon	22		mg C/L	P339914	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P339448	

Field ID: G1CE0088

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964850	EPA 200.7 Rev. 4.4	Calcium	12.9		mg/L	P339505	
		Iron	220		ug/L	P339505	
		Magnesium	5.28		mg/L	P339505	
		Potassium	8.0		mg/L	P339505	
		Sodium	20.5		mg/L	P339505	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P339505	
		Arsenic	1.14		ug/L	P339505	
		Cadmium	0.020	U	ug/L	P339505	
		Chromium	0.46	I	ug/L	P340191	
		Copper	1.33		ug/L	P339505	
		Lead	0.36		ug/L	P339505	
		Nickel	0.35	I	ug/L	P340191	
		Silver	0.010	U	ug/L	P339505	

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: LAKE TILDEN @ 150M SE OF CENTER

Collection Date/Time: 02/05/2018 13:30

Field ID: G1CE0089

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964812	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P339410	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P339701	
		Sulfate	11		mg SO4/L	P339706	
		Color (true)	320		PCU	P339422	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P340123	
	SM 2540 C-97	TDS	172		mg/L	P339838	
	SM 2540 D-97	TSS	4	I	mg/L	P339802	
	SM 4500 F-C-97	Fluoride	0.090	I	mg F/L	P340137	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P339959	
		Kjeldahl Nitrogen	1.0		mg N/L	P339562	
1964816	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P339852	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P339607	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P339914	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.082		mg P/L	P339449	
	EPA 200.7 Rev. 4.4	Calcium	12.8		mg/L	P339505	
		Iron	210		ug/L	P339505	
		Magnesium	5.16		mg/L	P339505	
		Potassium	7.9		mg/L	P339505	
		Sodium	20.3		mg/L	P339505	
		Zinc	5.0	U	ug/L	P339505	
	EPA 200.8 Rev. 5.4	Arsenic	1.12		ug/L	P339505	
		Cadmium	0.020	U	ug/L	P339505	
		Chromium	0.63	I	ug/L	P340191	
		Copper	1.37		ug/L	P339505	
		Lead	0.36		ug/L	P339505	

Field ID: G1CE0089

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964851	EPA 200.8 Rev. 5.4	Nickel	0.46	I	ug/L	P340191	
		Silver	0.010	U	ug/L	P339505	

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: LAKE TILDEN @ 225M S OF CENTER

Collection Date/Time: 02/05/2018 13:35

Field ID: G1CE0090

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964813	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P339410	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P339701	
		Sulfate	11		mg SO4/L	P339706	
	SM 2120 B	Color (true)	320		PCU	P339422	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P340123	
	SM 2540 C-97	TDS	173	A	mg/L	P339838	
	SM 2540 D-97	TSS	4	IA	mg/L	P339802	
	SM 4500 F-C-97	Fluoride	0.091	I	mg F/L	P340137	
1964817	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P339959	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P339562	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P339852	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P339607	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P339914	
1964821	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.084		mg P/L	P339449	
1964852	EPA 200.7 Rev. 4.4	Calcium	12.7		mg/L	P339505	
		Iron	220		ug/L	P339505	
		Magnesium	5.19		mg/L	P339505	
		Potassium	7.9		mg/L	P339505	
		Sodium	20.2		mg/L	P339505	
		Zinc	5.0	U	ug/L	P339505	
	EPA 200.8 Rev. 5.4	Arsenic	1.12		ug/L	P339505	
		Cadmium	0.020	U	ug/L	P339505	
		Chromium	0.65	I	ug/L	P340191	
		Copper	1.36		ug/L	P339505	
		Lead	0.38		ug/L	P339505	
		Nickel	0.44	I	ug/L	P340191	
		Silver	0.010	U	ug/L	P339505	

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: P339410

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P339505

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339505

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340191

Component	Result	Code	Units
Chromium	0.40	U	ug/L
Nickel	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339701

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339706

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339950

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339954

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339959

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339959

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339562

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339852

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339607

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339448

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339449

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

Reference Method: SM 2120 B
Batch ID: P339422

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P340123

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

Reference Method: SM 2540 C-97
Batch ID: P339838

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P339802

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P340137

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P339914

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: P339505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	105		P	85 - 115
Magnesium	111		P	85 - 115
Potassium	104		P	85 - 115
Sodium	105		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	106		P	85 - 115
Cadmium	104		P	85 - 115
Copper	102		P	85 - 115
Lead	107		P	85 - 115
Silver	91.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340191

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chromium	98.3		P	85 - 115
Nickel	99.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339706

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	93.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339954

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339852

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: P339607

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339448

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339449

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.4		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P340123

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.5		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P340137

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P339914

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P339505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964772	Calcium	100		P	80 - 120
1964772	Iron	107		P	80 - 120
1964772	Magnesium	109		P	80 - 120
1964772	Potassium	102		P	80 - 120
1964772	Sodium	103		P	80 - 120
1964772	Zinc	105		P	80 - 120
1964978	Calcium	103		P	80 - 120
1964978	Iron	107	106	P/P	80 - 120
1964978	Magnesium	111	109	P/P	80 - 120
1964978	Potassium	103	103	P/P	80 - 120
1964978	Sodium	105		P	80 - 120
1964978	Zinc	106	108	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964772	Arsenic	108		P	80 - 120
1964772	Cadmium	104		P	80 - 120
1964772	Copper	105		P	80 - 120
1964772	Lead	108		P	80 - 120
1964772	Silver	90.2		P	80 - 120
1964978	Arsenic	108	108	P/P	80 - 120
1964978	Cadmium	103	108	P/P	80 - 120
1964978	Copper	99.1	99.8	P/P	80 - 120
1964978	Lead	109	110	P/P	80 - 120
1964978	Silver	91.0	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340191

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964772	Chromium	98.8		P	80 - 120
1964772	Nickel	97.8		P	80 - 120
1964979	Chromium	99.2	97.9	P/P	80 - 120
1964979	Nickel	99.1	98.0	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964687	Chloride	97.1		P	90 - 110
1964822	Chloride	95.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964687	Sulfate	95.8		P	90 - 110
1964822	Sulfate	93.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964823	Chloride	103		P	90 - 110
1965134	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964823	Sulfate	106		P	90 - 110
1965134	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964807	Ammonia-N	95.8	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964824	Kjeldahl Nitrogen	98.6	96.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964814	NO2NO3-N	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339607

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964824	Total-P	96.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964604	O-Phosphate-P	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339449

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964818	O-Phosphate-P	98.8	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Batch ID: P340137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964822	Fluoride	95.5	96.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P339914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964688	Organic Carbon	96.3	95.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P339410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964810	Turbidity	0.175	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P339505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964978	Calcium	0.104	Spike	P	0 - 20
1964978	Iron	1.22	Spike	P	0 - 20
1964978	Magnesium	1.12	Spike	P	0 - 20
1964978	Potassium	0.178	Spike	P	0 - 20
1964978	Sodium	0.365	Spike	P	0 - 20
1964978	Zinc	2.35	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964978	Arsenic	0.595	Spike	P	0 - 20
1964978	Cadmium	4.50	Spike	P	0 - 20
1964978	Copper	0.665	Spike	P	0 - 20
1964978	Lead	0.718	Spike	P	0 - 20
1964978	Silver	10.5	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P340191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964979	Chromium	1.26	Spike	P	0 - 20
1964979	Nickel	1.17	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964822	Chloride	0.0559	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964822	Sulfate	0.0422	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964823	Chloride	0.604	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964823	Sulfate	0.194	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339959

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964807	Ammonia-N	2.88	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964824	Kjeldahl Nitrogen	1.49	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964814	NO2NO3-N	0.269	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964824	Total-P	3.92	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964604	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339449

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964818	O-Phosphate-P	0.978	Spike	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P339422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964905	Color (true)	0.0250	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P340123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964822	Total Alkalinity	2.79	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P339838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964813	TDS	0.0	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P340137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964822	Fluoride	0.482	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P339914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964688	Organic Carbon	0.381	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 180.1 Rev. 2.0
Run ID: A81879
Included Lab Sample IDs: 1964810, 1964811, 1964812, 1964813, 1964822, 1964823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A81881
Included Lab Sample IDs: 1964810, 1964811, 1964812, 1964813, 1964822, 1964823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	98.7	P/P	85 - 115
Color (true)	98.4	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A81897
Included Lab Sample IDs: 1964818, 1964819, 1964820, 1964821, 1964826, 1964827

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.5	P/P	90 - 110
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.5	99.8	P/P	90 - 110
O-Phosphate-P	99.8	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A81938
Included Lab Sample IDs: 1964849, 1964850, 1964851, 1964852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	105	104	P/P	90 - 110
Arsenic	105	106	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Copper	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81938

Included Lab Sample IDs: 1964849, 1964850, 1964851, 1964852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	103	102	P/P	90 - 110
Lead	104	106	P/P	90 - 110
Lead	107	107	P/P	90 - 110
Silver	100	102	P/P	90 - 110
Silver	100	100	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A81944

Included Lab Sample IDs: 1964849, 1964850, 1964851, 1964852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.2	99.5	P/P	90 - 110
Iron	98.7	99.2	P/P	90 - 110
Magnesium	99.8	101	P/P	90 - 110
Potassium	99.6	100	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81947

Included Lab Sample IDs: 1964814, 1964815, 1964816, 1964817, 1964824, 1964825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	99.7	P/P	90 - 110
Kjeldahl Nitrogen	98.4	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A81969

Included Lab Sample IDs: 1964810, 1964811, 1964812, 1964813, 1964822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.6	P/P	90 - 110
Chloride	101	100	P/P	90 - 110
Chloride	103	101	P/P	90 - 110
Sulfate	101	99.6	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110
Sulfate	99.6	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81982

Included Lab Sample IDs: 1964814, 1964815, 1964816, 1964817

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.0	P/P	90 - 110
Total-P	99.0	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81985

Included Lab Sample IDs: 1964824, 1964825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81985

Included Lab Sample IDs: 1964824, 1964825

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A82003

Included Lab Sample IDs: 1964823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	107	103	P/P	90 - 110
Sulfate	107	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A82028

Included Lab Sample IDs: 1964814, 1964815, 1964816, 1964817, 1964824, 1964825

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

Reference Method: SM 5310 B-00

Run ID: A82049

Included Lab Sample IDs: 1964814, 1964815, 1964816, 1964817, 1964824, 1964825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.3	96.8	P/P	90 - 110
Organic Carbon	95.5	95.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A82064

Included Lab Sample IDs: 1964814, 1964815, 1964816, 1964817, 1964824, 1964825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	102	P/P	90 - 110
Ammonia-N	101	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A82122

Included Lab Sample IDs: 1964810, 1964811, 1964812, 1964813, 1964822, 1964823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.0	98.0	P/P	90 - 110
Total Alkalinity	96.1	99.2	P/P	90 - 110
Total Alkalinity	98.0	96.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A82122

Included Lab Sample IDs: 1964810, 1964811, 1964812, 1964813, 1964822, 1964823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.6	97.1	P/P	90 - 110
Fluoride	97.1	98.1	P/P	90 - 110
Fluoride	97.6	96.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A82182

Included Lab Sample IDs: 1964849, 1964850, 1964851, 1964852

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	99.2	100	P/P	90 - 110
Nickel	99.4	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	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.175	
EPA 200.7 Rev. 4.4	Calcium	104	100	103		0.104
	Iron	105	107	107		1.22
	Magnesium	111	109	111		1.12
	Potassium	104	102	103		0.178
	Sodium	105	103	105		0.365
	Zinc	102	105	106		2.35
EPA 200.8 Rev. 5.4	Arsenic	106	108	108		0.595
	Cadmium	104	104	103		4.50
	Chromium	98.3	99.2	97.9		1.26
	Copper	102	105	99.1		0.665
	Lead	107	108	109		0.718
	Nickel	99.6	99.1	98.0		1.17
	Silver	91.4	90.2	91.0		10.5
EPA 300.0 Rev. 2.1	Chloride	97.5	95.0	97.1	0.0559	
	Chloride	93.7	103	104	0.604	
	Sulfate	95.9	93.9	95.8	0.0422	
	Sulfate	106	106	106	0.194	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	95.8	99.4		2.88
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.9	98.6	96.5		1.49
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	102	102		0.269
EPA 365.1 Rev. 2.0	Total-P	98.4	96.8	101		3.92
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	97.0	97.0		0.0
	O-Phosphate-P	99.4	98.8	101		0.978
SM 2120 B	Color (true)				0.0250	
SM 2320 B-97	Total Alkalinity	97.5			2.79	
SM 2540 C-97	TDS				0.0	
SM 4500 F-C-97	Fluoride	94.5	95.5	96.1		0.482
SM 5310 B-00	Organic Carbon	96.8	95.9	96.3		0.381

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1964849, 1964850, 1964851, 1964852

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1964849, 1964850, 1964851, 1964852
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1964818, 1964819, 1964820, 1964821, 1964826, 1964827
SM 2120 B / E31780	True Color measured at 450 nm	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1964814, 1964815, 1964816, 1964817, 1964824, 1964825

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	02/06/2018			02/06/2018 17:02	DeAsia Armster	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
EPA 200.7 Rev. 4.4	02/06/2018	02/07/2018	Elliott D. Healy	02/08/2018	Martin Acosta	1964849, 1964850, 1964851, 1964852
EPA 200.8 Rev. 5.4	02/06/2018	02/07/2018	Elliott D. Healy	02/09/2018	Nadine Brooks	1964849, 1964850, 1964851, 1964852
	02/06/2018	02/19/2018	Elliott D. Healy	02/20/2018	Nadine Brooks	1964849, 1964850, 1964851, 1964852
EPA 300.0 Rev. 2.1	02/06/2018			02/10/2018	Julia Storbeck	1964810, 1964811, 1964812, 1964813, 1964822
	02/06/2018			02/14/2018	Julia Storbeck	1964823
EPA 350.1 Rev. 2.0	02/06/2018			02/14/2018	Ping Hua	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 351.2 Rev. 2.0	02/06/2018	02/08/2018	Adrian Shelby	02/09/2018	Joseph Suarez	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 353.2 Rev. 2.0	02/06/2018			02/13/2018	Lauren Bottorf	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 365.1 Rev. 2.0	02/06/2018	02/09/2018	Sima Feizi	02/12/2018	Beverly Y. Sanders	1964814, 1964815, 1964816, 1964817, 1964824, 1964825
EPA 365.1 Rev. 2.0 dissolved	02/06/2018			02/06/2018 16:51	Megan Treadwell	1964818
	02/06/2018			02/06/2018 17:35	Megan Treadwell	1964821
	02/06/2018			02/06/2018 17:40	Megan Treadwell	1964826
	02/06/2018			02/06/2018 17:41	Megan Treadwell	1964827
	02/06/2018			02/06/2018 17:44	Megan Treadwell	1964820
	02/06/2018			02/06/2018 18:02	Megan Treadwell	1964819
SM 2120 B	02/06/2018			02/06/2018 18:53	Tanya Welborn	1964822
	02/06/2018			02/06/2018 18:54	Tanya Welborn	1964823
	02/06/2018			02/06/2018 19:25	Tanya Welborn	1964810, 1964811
	02/06/2018			02/06/2018 19:26	Tanya Welborn	1964812, 1964813
SM 2320 B-97	02/06/2018			02/16/2018	Dale L. Simmons	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 2540 C-97	02/06/2018			02/09/2018	Yijie Li	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 2540 D-97	02/06/2018			02/09/2018	Yijie Li	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 4500 F-C-97	02/06/2018			02/16/2018	Dale L. Simmons	1964810, 1964811, 1964812, 1964813, 1964822, 1964823
SM 5310 B-00	02/06/2018			02/14/2018	Megan Treadwell	1964814, 1964815, 1964816, 1964817, 1964824, 1964825