

Chemical Analysis Report

SO-DIST-2018-01-31-01

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

Event Description: **SFM**
Request ID: **RQ-2018-01-29-51**
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: Maryann Dugan

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Certified by: Colin Wright, Program Administrator

Date Certified: 21-FEB-2018 09:54

A handwritten signature in black ink, appearing to read "Colin Wright", is placed 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: Nutrients and Pesticides.

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: Imperial River Near US41

Collection Date/Time: 01/30/2018 11:20

Field ID: G1SD0057

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963087	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P339090	
	SM 2320 B-97	Total Alkalinity	227		mg CaCO3/L	P339728	
	SM 2540 D-97	TSS	9	I	mg/L	P339624	
	SM 4500 F-C-97	Fluoride	0.32		mg F/L	P339653	
1963089	EPA 350.1 Rev. 2.0	Ammonia-N	0.048		mg N/L	P339681	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P339106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.072		mg N/L	P339527	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P339151	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P339266	
1963091	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P339122	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Oak Creek @ Oak Crk Preserve

Collection Date/Time: 01/30/2018 12:10

Field ID: G1SD0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963081	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P339090	
	EPA 300.0 Rev. 2.1	Chloride	42		mg Cl/L	P339226	
		Sulfate	19		mg SO4/L	P339229	
	SM 2120 B	Color (true)	22		PCU	P339094	
	SM 2320 B-97	Total Alkalinity	308		mg CaCO3/L	P339474	
	SM 2540 C-97	TDS	408		mg/L	P339570	
	SM 2540 D-97	TSS	2	I	mg/L	P339622	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P339731	
1963083	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P339290	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P339103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P339146	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P339152	
	SM 5310 B-00	Organic Carbon	7.5		mg C/L	P339266	
1963085	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.013		mg P/L	P339115	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Hendry Crk @ Old Gladiolus

Collection Date/Time: 01/30/2018 10:15

Field ID: G1SD0062

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963088	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P339090	
	SM 2320 B-97	Total Alkalinity	271		mg CaCO3/L	P339728	
	SM 2540 D-97	TSS	9	I	mg/L	P339624	
	SM 4500 F-C-97	Fluoride	0.41		mg F/L	P339653	
1963090	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P339681	

Field ID: G1SD0062

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963090	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P339106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P339527	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P339151	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P339266	
1963092	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P339122	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 4500 F-C-97: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Winkler Canal @ Princeton

Collection Date/Time: 01/30/2018 09:30

Field ID: G3SD0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963082	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P339090	
	EPA 300.0 Rev. 2.1	Chloride	47		mg Cl/L	P339226	
		Sulfate	23		mg SO4/L	P339229	
	SM 2120 B	Color (true)	26		PCU	P339094	
	SM 2320 B-97	Total Alkalinity	113		mg CaCO3/L	P339474	
	SM 2540 C-97	TDS	266		mg/L	P339570	
	SM 2540 D-97	TSS	3	I	mg/L	P339622	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P339731	
1963084	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P339290	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P339103	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.39		mg N/L	P339147	
	EPA 365.1 Rev. 2.0	Total-P	0.040		mg P/L	P339153	
	SM 5310 B-00	Organic Carbon	6.5		mg C/L	P339266	
1963086	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P339115	

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: Winkler Canal @ Princeton

Collection Date/Time: 01/30/2018 09:30

Field ID: G3SD0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963126	EPA 8321B	2,4-D	0.090		ug/L	P339013	
		Sucralose**	0.21		ug/L	P339293	
		Bentazon	0.0070		ug/L	P339013	MS
		MCP	0.0020	U	ug/L	P339013	MS
		Triclopyr**	0.0040	U	ug/L	P339013	
		Imidacloprid	0.085		ug/L	P339013	
		Diuron	0.017		ug/L	P339013	
		Primidone**	0.0040	U	ug/L	P339013	
		Linuron	0.0040	U	ug/L	P339013	
		Acetaminophen**	0.037		ug/L	P339013	
		Fenuron	0.0080	U	ug/L	P339013	
		Carbamazepine**	7.6E-04	I	ug/L	P339013	

Field ID: G3SD0055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963126	EPA 8321B	Fluridone**	0.0058		ug/L	P339013	

Sample Location: Manuel Branch @ Broadway

Collection Date/Time: 01/30/2018 09:00

Field ID: G3SD0078

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963127	EPA 8321B	2,4-D	0.033		ug/L	P339013	
		Sucralose**	0.43		ug/L	P339293	
		Bentazon	0.011		ug/L	P339013	MS
		MCPD	0.0038	I	ug/L	P339013	MS
		Triclopyr**	0.0040	U	ug/L	P339013	
		Imidacloprid	0.0092		ug/L	P339013	
		Diuron	0.0020	U	ug/L	P339013	
		Primidone**	0.0040	U	ug/L	P339013	
		Linuron	0.0040	U	ug/L	P339013	
		Acetaminophen**	0.029	I	ug/L	P339013	
		Fenuron	0.0080	U	ug/L	P339013	
		Carbamazepine**	0.0025		ug/L	P339013	
		Fluridone**	4.0E-04	U	ug/L	P339013	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P339090

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P339226

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P339229

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P339290

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P339681

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339681

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339103

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339106

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339146

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339147

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339527

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339151

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339152

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339153

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339115

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339122

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

Reference Method: EPA 8321B
Batch ID: P339013

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P339293

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P339094

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P339474

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

Reference Method: SM 2320 B-97
Batch ID: P339728

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P339570

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P339622

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P339624

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P339653

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P339731

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P339266

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: P339226

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339229

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339681

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: P339103

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339146

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339147

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339527

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: P339151

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339152

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339153

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339122

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

Reference Method: EPA 8321B
Batch ID: P339013

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.4		P	40 - 150
Acetaminophen	80.0		P	30 - 150
Bentazon	105		P	30 - 150
Carbamazepine	80.7		P	40 - 150
Diuron	63.0		P	40 - 150
Fenuron	86.5		P	40 - 150
Fluridone	73.0		P	40 - 150
Imidacloprid	85.9		P	40 - 160
Linuron	74.0		P	40 - 150
MCP	75.2		P	40 - 150
Primidone	94.0		P	40 - 150
Triclopyr	72.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P339293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	93.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P339474

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P339728

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	95 - 108

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P339653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.3		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P339731

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P339266

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963035	Chloride	94.4		P	90 - 110
1963060	Chloride	94.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339229

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963035	Sulfate	95.1		P	90 - 110
1963060	Sulfate	93.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339290

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963030	Ammonia-N	95.6	95.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963617	Ammonia-N	107	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963083	Kjeldahl Nitrogen	91.3	91.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963219	Kjeldahl Nitrogen	90.2	91.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339146

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962948	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339147

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963084	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339527

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963056	NO2NO3-N	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339151

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963056	Total-P	98.1	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339153

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963084	Total-P	100	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963085	O-Phosphate-P	95.8	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339122

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963058	O-Phosphate-P	94.6	97.7	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P339013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962854	2,4-D	51.1	54.2	P/P	40 - 150
1962854	Acetaminophen	117	91.0	P/P	30 - 150
1962854	Bentazon	20.5	20.9	F/F	30 - 150
1962854	Carbamazepine	69.9	67.9	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P339013

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962854	Diuron	53.7	54.6	P/P	40 - 150
1962854	Fenuron	67.6	67.6	P/P	40 - 150
1962854	Fluridone	59.6	55.3	P/P	40 - 150
1962854	Imidacloprid	146	146	P/P	40 - 160
1962854	Linuron	70.6	67.2	P/P	40 - 150
1962854	MCPP	37.2	39.5	F/F	40 - 150
1962854	Primidone	89.8	92.4	P/P	40 - 150
1962854	Triclopyr	47.6	51.0	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P339293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962805	Sucralose	105	106	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P339731

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963441	Fluoride	93.7	94.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P339266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963118	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P339090

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963047	Turbidity	0.479	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963035	Chloride	0.307	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339229

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963035	Sulfate	0.0401	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963030	Ammonia-N	0.298	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963617	Ammonia-N	0.799	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963083	Kjeldahl Nitrogen	0.152	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963219	Kjeldahl Nitrogen	0.563	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962948	NO2NO3-N	1.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963084	NO2NO3-N	0.506	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963056	NO2NO3-N	0.396	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963056	Total-P	0.553	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963048	Total-P	2.60	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339153

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963084	Total-P	1.78	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963085	O-Phosphate-P	1.27	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339122

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963058	O-Phosphate-P	1.94	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P339013

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962854	2,4-D	3.35	Spike	P	0 - 30
1962854	Acetaminophen	25.1	Spike	P	0 - 30
1962854	Bentazon	0.708	Spike	P	0 - 30
1962854	Carbamazepine	2.79	Spike	P	0 - 30
1962854	Diuron	1.57	Spike	P	0 - 30
1962854	Fenuron	0.0296	Spike	P	0 - 30
1962854	Fluridone	7.28	Spike	P	0 - 30
1962854	Imidacloprid	0.126	Spike	P	0 - 30
1962854	Linuron	4.83	Spike	P	0 - 30
1962854	MCP	6.05	Spike	P	0 - 30
1962854	Primidone	2.64	Spike	P	0 - 30
1962854	Triclopyr	6.83	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P339293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962805	Sucralose	1.57	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P339094

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963035	Color (true)	0.929	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P339474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962768	Total Alkalinity	3.85	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P339728

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963860	Total Alkalinity	0.519	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P339570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963029	TDS	3.20	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P339653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963619	Fluoride	0.986	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P339731

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963441	Fluoride	0.477	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P339266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963118	Organic Carbon	0.235	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 Surrogates

Quality Assurance Report Surrogates

Lab Sample ID: 1963126
Field Sample ID: G3SD0055

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	33.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.7	P	30 - 160
EPA 8321B	Diuron-d6	49.9	P	30 - 160
EPA 8321B	Primidone-d5	95.2	P	30 - 160
EPA 8321B	Sucralose-d6	99.5	P	40 - 160

Lab Sample ID: 1963127
Field Sample ID: G3SD0078

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	61.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.4	P	30 - 160
EPA 8321B	Diuron-d6	74.8	P	30 - 160
EPA 8321B	Primidone-d5	97.3	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: 81775
Included Lab Sample IDs: 1963081, 1963082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	101	P/P	90 - 110
Sulfate	102	99.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A81765
Included Lab Sample IDs: 1963081, 1963082, 1963087, 1963088

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

Reference Method: SM 2120 B
Run ID: A81766
Included Lab Sample IDs: 1963081, 1963082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	104	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A81776
Included Lab Sample IDs: 1963085, 1963086, 1963091, 1963092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	100	P/P	90 - 110
O-Phosphate-P	99.4	99.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81787

Included Lab Sample IDs: 1963083, 1963084

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81808

Included Lab Sample IDs: 1963090

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81813

Included Lab Sample IDs: 1963083, 1963084, 1963089

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

Reference Method: SM 5310 B-00

Run ID: A81830

Included Lab Sample IDs: 1963083, 1963084, 1963089, 1963090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81832

Included Lab Sample IDs: 1963083, 1963084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81838

Included Lab Sample IDs: 1963083, 1963084

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81840

Included Lab Sample IDs: 1963089, 1963090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.1	96.2	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A81901

Included Lab Sample IDs: 1963081, 1963082

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

Reference Method: SM 2320 B-97

Run ID: A81901

Included Lab Sample IDs: 1963081, 1963082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.6	97.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81917

Included Lab Sample IDs: 1963089, 1963090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A81928

Included Lab Sample IDs: 1963126, 1963127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	104	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A81930

Included Lab Sample IDs: 1963126, 1963127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.0	85.5	P/P	50 - 150
Acetaminophen	115	122	P/P	60 - 150
Bentazon	120	132	P/P	50 - 150
Carbamazepine	107	109	P/P	60 - 150
Diuron	106	111	P/P	60 - 150
Fenuron	108	109	P/P	60 - 150
Fluridone	107	110	P/P	60 - 160
Imidacloprid	99.2	108	P/P	60 - 150
Linuron	112	119	P/P	60 - 150
MCPP	95.5	100	P/P	50 - 150
Primidone	93.0	104	P/P	60 - 150
Triclopyr	99.5	105	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A81946

Included Lab Sample IDs: 1963087, 1963088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81964

Included Lab Sample IDs: 1963089, 1963090

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A81981

Included Lab Sample IDs: 1963087, 1963088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.1	95.5	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A81981

Included Lab Sample IDs: 1963081, 1963082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	99.5	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				0.479	
EPA 300.0 Rev. 2.1	Chloride	98.5	94.4 94.3		0.307	
	Sulfate	97.2	95.1 93.8		0.0401	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8	95.6 95.3			0.298
	Ammonia-N	97.3	107 108			0.799
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	91.3 91.5			0.152
	Kjeldahl Nitrogen	98.0	90.2 91.0			0.563
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104 103			1.45
	NO2NO3-N	105	101			0.506
	NO2NO3-N	103	105 105			0.396
EPA 365.1 Rev. 2.0	Total-P	103	98.1 97.5			0.553
	Total-P	99.9				2.60
	Total-P	100	100 98.0			1.78
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.8	95.8 97.2			1.27
	O-Phosphate-P	100	94.6 97.7			1.94
EPA 8321B	2,4-D	74.4	54.2 51.1			3.35
	Acetaminophen	80.0	117 91.0			25.1
	Bentazon	105	20.9 20.5			0.708
	Carbamazepine	80.7	69.9 67.9			2.79
	Diuron	63.0	53.7 54.6			1.57
	Fenuron	86.5	67.6 67.6			0.0296
	Fluridone	73.0	59.6 55.3			7.28
	Imidacloprid	85.9	146 146			0.126
	Linuron	74.0	70.6 67.2			4.83
	MCP	75.2	39.5 37.2			6.05
	Primidone	94.0	89.8 92.4			2.64
	Sucralose	93.2	105 106			1.57
	Triclopyr	72.0	51.0 47.6			6.83
SM 2120 B	Color (true)				0.929	
SM 2320 B-97	Total Alkalinity	97.0			3.85	
	Total Alkalinity	97.0			0.519	
SM 2540 C-97	TDS				3.20	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 4500 F-C-97	Fluoride	96.3				0.986
	Fluoride	97.3	93.7	94.3		0.477
SM 5310 B-00	Organic Carbon	96.6	102	102		0.235

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1963081, 1963082, 1963087, 1963088
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1963081, 1963082
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1963081, 1963082
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1963083, 1963084, 1963089, 1963090
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1963083, 1963084, 1963089, 1963090
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1963083, 1963084, 1963089, 1963090
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1963083, 1963084, 1963089, 1963090
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1963085, 1963086, 1963091, 1963092
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1963126, 1963127
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1963126, 1963127
SM 2120 B / E31780	True Color measured at 450 nm	1963081, 1963082
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1963081, 1963082, 1963087, 1963088
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1963081, 1963082
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1963081, 1963082, 1963087, 1963088
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1963081, 1963082, 1963087, 1963088
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1963083, 1963084, 1963089, 1963090

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	01/31/2018			01/31/2018 15:52	DeAsia Armster	1963081, 1963082, 1963087, 1963088
EPA 300.0 Rev. 2.1	01/31/2018			02/01/2018	Julia Storbeck	1963081, 1963082
EPA 350.1 Rev. 2.0	01/31/2018			02/02/2018	Ping Hua	1963083, 1963084
	01/31/2018			02/09/2018	Julia Storbeck	1963089, 1963090
EPA 351.2 Rev. 2.0	01/31/2018	02/01/2018	Adrian Shelby	02/02/2018	Joseph Suarez	1963083, 1963084
	01/31/2018	02/01/2018	Adrian Shelby	02/05/2018	Joseph Suarez	1963089, 1963090
EPA 353.2 Rev. 2.0	01/31/2018			02/01/2018	Beverly Y. Sanders	1963083, 1963084
	01/31/2018			02/08/2018	Beverly Y. Sanders	1963089, 1963090
EPA 365.1 Rev. 2.0	01/31/2018	02/01/2018	Sima Feizi	02/02/2018	Beverly Y. Sanders	1963083, 1963084, 1963089, 1963090
EPA 365.1 Rev. 2.0 dissolved	01/31/2018			01/31/2018 16:35	Megan Treadwell	1963085
	01/31/2018			01/31/2018 17:02	Megan Treadwell	1963086
	01/31/2018			01/31/2018 17:03	Megan Treadwell	1963091, 1963092
EPA 8321B	01/31/2018	02/01/2018	Hoor Shaik	02/03/2018	Julie Michelle Frank	1963126, 1963127
	01/31/2018	02/06/2018	Juyoung Kim	02/07/2018	Juyoung Kim	1963126, 1963127
SM 2120 B	01/31/2018			01/31/2018 15:59	Julia Storbeck	1963081
	01/31/2018			01/31/2018 16:00	Julia Storbeck	1963082
SM 2320 B-97	01/31/2018			02/07/2018	Lauren Bottorf	1963081, 1963082
	01/31/2018			02/09/2018	Lauren Bottorf	1963087, 1963088
SM 2540 C-97	01/31/2018			02/03/2018	Yijie Li	1963081, 1963082
SM 2540 D-97	01/31/2018			02/03/2018	Yijie Li	1963081, 1963082, 1963087, 1963088
SM 4500 F-C-97	01/31/2018			02/09/2018	Lauren Bottorf	1963087, 1963088
	01/31/2018			02/10/2018	Lauren Bottorf	1963081, 1963082
SM 5310 B-00	01/31/2018			02/02/2018	Megan Treadwell	1963083, 1963084, 1963089
	01/31/2018			02/03/2018	Megan Treadwell	1963090