

Chemical Analysis Report

SO-DIST-2021-03-16-02

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

Event Description: **2021 SMP: Continuous Lee**

Request ID: **RQ-2021-03-08-11**

Customer: **SO-DIST**

Project ID: **SMP**

Send Reports to:

FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Date Certified: 05-APR-2021 12:40



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 by the Florida Department of Health Environmental Laboratory Certification Program 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: Spring Creek @ US41

Collection Date/Time: 03/15/2021 11:00

Field ID: G1SD0109

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2231626	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P395035	
	EPA 300.0 Rev. 2.1	Bromide	13		mg Br/L	P395413	
	SM 2320 B-2011	Total Alkalinity	238	A	mg CaCO3/L	P395230	
	SM 2540 D-2011	TSS	6	I	mg/L	P395601	
	SM 4500 F-C-2011	Fluoride	0.33		mg F/L	P395234	
2231627	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P395250	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P395203	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P395206	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P395100	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P395519	
2231628	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P395045	
2231636	EPA 8321B	2,4-D	0.0020	U	ug/L	P395071	
		Acesulfame K	0.30	I	ug/L	P395125	MS
		AMPA	1.0	U	ug/L	P395125	
		2,4,5-T	0.0040	U	ug/L	P395071	
		Sucralose	2.9		ug/L	P395125	
		Acetaminophen	0.0080	U	ug/L	P395071	
		Endothall	0.25	U	ug/L	P395125	
		Acetamiprid	0.0020	U	ug/L	P395071	
		Glufosinate	1.0	U	ug/L	P395125	
		Glyphosate	7.2	J	ug/L	P395125	LCS
		Afidopypropen	0.0020	U	ug/L	P395071	
		Bentazon	0.78		ug/L	P395071	
		Benzovindiflupyr	0.0020	U	ug/L	P395071	
		Carbamazepine	0.0021	I	ug/L	P395071	
		Clothianidin	0.0020	U	ug/L	P395071	
		Dinotefuran	0.0020	U	ug/L	P395071	
		Diuron	0.0020	U	ug/L	P395071	
		Fenuron	0.016	U	ug/L	P395071	
		Fluridone	0.034		ug/L	P395071	
		Imazapyr	0.070		ug/L	P395071	
		Hydrocodone	0.0020	U	ug/L	P395071	
		Ibuprofen	0.020	U	ug/L	P395071	
		Imidacloprid	0.0020	U	ug/L	P395071	
		Linuron	0.0040	U	ug/L	P395071	
		Mandestrobin	0.0020	U	ug/L	P395071	
		MCPP	0.0020	U	ug/L	P395071	
		Naproxen	0.0080	U	ug/L	P395071	
		Primidone	0.014	I	ug/L	P395071	
		Pyraclostrobin	0.0020	U	ug/L	P395071	
		Thiamethoxam	0.0020	U	ug/L	P395071	
		Tolfenpyrad	0.0020	U	ug/L	P395071	
		Triclopyr	0.0040	U	ug/L	P395071	

Field ID: G1SD0109

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MDL for some parameters elevated due to matrix interference. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Imperial River @ Orr Rd

Collection Date/Time: 03/15/2021 10:10

Field ID: G1SD0105

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2231629	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P395035	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P395298	
		Sulfate	13		mg SO4/L	P395302	
		Color (true)	76		PCU	P395050	
	SM 2320 B-2011	Total Alkalinity	274		mg CaCO3/L	P395226	
	SM 2540 C-2011	TDS	351		mg/L	P395590	
	SM 2540 D-2011	TSS	2	I	mg/L	P395598	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P395232	
2231630	EPA 350.1 Rev. 2.0	Ammonia-N	0.46		mg N/L	P395261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P395284	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.043		mg N/L	P395077	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P395104	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P395519	
2231631	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P395043	

Ref. Method and Comment:

SM 2540 D-2011: 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: P395035

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395298

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395413

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395250

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395261

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395203

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395284

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395077

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395206

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395100

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395104

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395043

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395045

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

Reference Method: EPA 8321B
Batch ID: P395071

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P395071

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P395125

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P395050

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P395226

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

Reference Method: SM 2320 B-2011
Batch ID: P395230

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

Reference Method: SM 2540 C-2011
Batch ID: P395590

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P395598

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P395601

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P395232

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P395234

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395519

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: P395298

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395413

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395250

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395261

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: P395203

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395284

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395077

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395206

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395100

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395104

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395043

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395045

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

Reference Method: EPA 8321B

Batch ID: P395071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	30 - 160
2,4,5-T	103		P	30 - 160
Acetaminophen	92.2		P	30 - 160
Acetamiprid	109		P	30 - 160
Afidopyropen	79.1		P	30 - 160
Bentazon	91.2		P	30 - 160
Benzovindiflupyr	92.0		P	30 - 160
Carbamazepine	105		P	30 - 160
Clothianidin	103		P	30 - 160
Dinotefuran	106		P	30 - 160
Diuron	78.3		P	30 - 160
Fenuron	107		P	30 - 160
Fluridone	101		P	30 - 160
Hydrocodone	105		P	30 - 160
Ibuprofen	102		P	30 - 160
Imazapyr	112		P	30 - 160
Imidacloprid	112		P	30 - 160
Linuron	85.5		P	30 - 160
Mandestrobin	96.1		P	30 - 160
MCPP	123		P	30 - 160
Naproxen	56.1		P	30 - 160
Primidone	99.7		P	30 - 160
Pyraclostrobin	89.1		P	30 - 160
Thiamethoxam	110		P	30 - 160
Tolfenpyrad	62.8		P	30 - 160
Triclopyr	107		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P395125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	115		P	40 - 150
AMPA	104		P	40 - 150
Endothall	87.4		P	40 - 150
Glufosinate	125		P	40 - 150
Glyphosate	148		F	40 - 140
Sucralose	93.5		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P395050

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

Reference Method: SM 2320 B-2011
Batch ID: P395226

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 2320 B-2011
Batch ID: P395230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P395232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P395234

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	104		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P395519

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231575	Chloride	101		P	90 - 110
2231693	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231575	Sulfate	97.3		P	90 - 110
2231693	Sulfate	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231575	Bromide	103	102	P/P	90 - 110
2232292	Bromide	98.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230850	Ammonia-N	98.4	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231665	Ammonia-N	96.8	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2230710	Kjeldahl Nitrogen	107	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231537	Kjeldahl Nitrogen	111	107	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231578	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231627	NO2NO3-N	98.8	95.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231347	Total-P	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395104

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231548	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231592	O-Phosphate-P	97.2	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231628	O-Phosphate-P	100	103	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P395071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231596	2,4-D	116	124	P/P	30 - 160
2231596	2,4,5-T	98.9	103	P/P	30 - 160
2231596	Acetaminophen	94.8	103	P/P	30 - 160
2231596	Acetamiprid	107	97.0	P/P	30 - 160
2231596	Afidopyropen	78.5	65.5	P/P	30 - 160
2231596	Bentazon	67.7	70.4	P/P	30 - 160
2231596	Benzovindiflupyr	89.4	92.9	P/P	30 - 160
2231596	Carbamazepine	95.3	91.9	P/P	30 - 160
2231596	Clothianidin	113	101	P/P	30 - 160
2231596	Dinotefuran	109	95.4	P/P	30 - 160
2231596	Diuron	64.9	67.1	P/P	30 - 160
2231596	Fenuron	93.9	97.0	P/P	30 - 160
2231596	Fluridone	87.5	90.0	P/P	30 - 160
2231596	Hydrocodone	108	104	P/P	30 - 160
2231596	Ibuprofen	82.1	83.6	P/P	30 - 160
2231596	Imazapyr	118	113	P/P	30 - 160
2231596	Imidacloprid	137	135	P/P	30 - 160
2231596	Linuron	74.3	73.9	P/P	30 - 160
2231596	Mandestrobin	86.6	88.4	P/P	30 - 160
2231596	MCPP	107	112	P/P	30 - 160
2231596	Naproxen	73.6	80.1	P/P	30 - 160
2231596	Primidone	101	99.6	P/P	30 - 160
2231596	Pyraclostrobin	85.7	84.9	P/P	30 - 160
2231596	Thiamethoxam	135	126	P/P	30 - 160
2231596	Tolfenpyrad	58.0	59.2	P/P	30 - 160
2231596	Triclopyr	102	103	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P395125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231596	Acesulfame K	177	145	F/P	40 - 150
2231596	AMPA	120	127	P/P	40 - 150
2231596	Endothall	82.1	109	P/P	40 - 150
2231596	Glufosinate	134	135	P/P	40 - 150
2231596	Glyphosate	105	92.0	P/P	40 - 140
2231596	Sucralose	105	103	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P395232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231841	Fluoride	99.4	99.4	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P395234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231626	Fluoride	102	103	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P395519

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231591	Organic Carbon	95.5	97.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231590	Turbidity	0.889	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231575	Chloride	0.468	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231575	Sulfate	0.723	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231575	Bromide	1.21	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230850	Ammonia-N	0.847	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231665	Ammonia-N	1.87	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2230710	Kjeldahl Nitrogen	4.91	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231537	Kjeldahl Nitrogen	4.15	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231578	NO2NO3-N	0.394	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231627	NO2NO3-N	3.01	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231347	Total-P	0.769	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395104

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231548	Total-P	1.69	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231592	O-Phosphate-P	2.05	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231628	O-Phosphate-P	1.66	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P395071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231596	2,4-D	7.04	Spike	P	0 - 30
2231596	2,4,5-T	3.76	Spike	P	0 - 30
2231596	Acetaminophen	7.94	Spike	P	0 - 30
2231596	Acetamiprid	9.90	Spike	P	0 - 30
2231596	Afidopyropen	18.0	Spike	P	0 - 30
2231596	Bentazon	3.94	Spike	P	0 - 30
2231596	Benzovindiflupyr	3.90	Spike	P	0 - 30
2231596	Carbamazepine	3.55	Spike	P	0 - 30
2231596	Clothianidin	10.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P395071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231596	Dinotefuran	12.9	Spike	P	0 - 30
2231596	Diuron	3.40	Spike	P	0 - 30
2231596	Fenuron	3.30	Spike	P	0 - 30
2231596	Fluridone	2.78	Spike	P	0 - 30
2231596	Hydrocodone	4.03	Spike	P	0 - 30
2231596	Ibuprofen	1.90	Spike	P	0 - 30
2231596	Imazapyr	4.41	Spike	P	0 - 30
2231596	Imidacloprid	1.59	Spike	P	0 - 30
2231596	Linuron	0.482	Spike	P	0 - 30
2231596	Mandestrobin	2.10	Spike	P	0 - 30
2231596	MCPPP	5.39	Spike	P	0 - 30
2231596	Naproxen	8.42	Spike	P	0 - 30
2231596	Primidone	1.68	Spike	P	0 - 30
2231596	Pyraclostrobin	0.919	Spike	P	0 - 30
2231596	Thiamethoxam	6.85	Spike	P	0 - 30
2231596	Tolfenpyrad	2.03	Spike	P	0 - 30
2231596	Triclopyr	1.54	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231596	Acesulfame K	19.8	Spike	P	0 - 30
2231596	AMPA	6.11	Spike	P	0 - 30
2231596	Endothall	28.3	Spike	P	0 - 30
2231596	Glufosinate	0.981	Spike	P	0 - 30
2231596	Glyphosate	13.5	Spike	P	0 - 30
2231596	Sucralose	1.82	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P395050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231590	Color (true)	2.64	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P395226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231841	Total Alkalinity	0.340	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P395230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231626	Total Alkalinity	0.539	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P395590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231577	TDS	2.68	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P395232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231841	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P395234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231626	Fluoride	0.448	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P395519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231591	Organic Carbon	1.80	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2231636

Field Sample ID: G1SD0109

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	83.0	P	30 - 160
EPA 8321B	Diuron-d6	70.0	P	30 - 160
EPA 8321B	Endothall-d6	99.2	P	40 - 160
EPA 8321B	Endothall-d6	99.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Ibuprofen-d3	78.2	P	30 - 160
EPA 8321B	Primidone-d5	105	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104090

Included Lab Sample IDs: 2231626, 2231629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104091

Included Lab Sample IDs: 2231628, 2231631

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.0	97.7	P/P	90 - 110
O-Phosphate-P	99.2	97.6	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A104092

Included Lab Sample IDs: 2231629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	103	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104102

Included Lab Sample IDs: 2231630

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104153

Included Lab Sample IDs: 2231629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.9	100	P/P	90 - 110
Sulfate	98.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104154

Included Lab Sample IDs: 2231627, 2231630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	100	P/P	90 - 110
Total-P	99.2	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104161

Included Lab Sample IDs: 2231627

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

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A104172

Included Lab Sample IDs: 2231626, 2231629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	96.9	P/P	90 - 110
Total Alkalinity	98.6	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104172

Included Lab Sample IDs: 2231626, 2231629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	104	P/P	90 - 110
Fluoride	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A104179

Included Lab Sample IDs: 2231627

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	97.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A104182

Included Lab Sample IDs: 2231630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104192

Included Lab Sample IDs: 2231636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	158	99.9	P/P	60 - 160
AMPA	122	121	P/P	60 - 160
Endothall	86.5	122	P/P	60 - 160
Glufosinate	117	115	P/P	60 - 160
Glyphosate	108	117	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104244

Included Lab Sample IDs: 2231626

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104250

Included Lab Sample IDs: 2231627, 2231630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	100	P/P	90 - 110
Kjeldahl Nitrogen	97.8	98.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A104272
Included Lab Sample IDs: 2231636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.7	101	P/P	60 - 160

Reference Method: SM 5310 B-2011
Run ID: A104292
Included Lab Sample IDs: 2231627, 2231630

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	95.6	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A104297
Included Lab Sample IDs: 2231636

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	116	107	P/P	50 - 150
2,4,5-T	100	99.6	P/P	50 - 150
Acetaminophen	106	111	P/P	60 - 160
Acetamiprid	107	108	P/P	50 - 150
Afidopyropen	103	85.5	P/P	50 - 150
Bentazon	104	92.1	P/P	50 - 160
Benzovindiflupyr	115	114	P/P	50 - 160
Carbamazepine	104	106	P/P	60 - 150
Clothianidin	113	107	P/P	60 - 150
Dinotefuran	108	113	P/P	50 - 150
Diuron	107	109	P/P	60 - 160
Fenuron	105	104	P/P	60 - 150
Fluridone	101	105	P/P	60 - 160
Hydrocodone	114	111	P/P	60 - 150
Ibuprofen	117	89.1	P/P	50 - 160
Imazapyr	97.3	104	P/P	50 - 160
Imidacloprid	103	101	P/P	60 - 150
Linuron	97.2	102	P/P	60 - 150
Mandestrobin	108	107	P/P	50 - 150
MCPP	107	106	P/P	50 - 150
Naproxen	98.6	99.0	P/P	50 - 160
Primidone	97.1	98.8	P/P	60 - 150
Pyraclostrobin	110	108	P/P	60 - 150
Thiamethoxam	110	115	P/P	50 - 150
Tolfenpyrad	106	108	P/P	60 - 150
Triclopyr	117	94.6	P/P	50 - 150

* 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 SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					0.889	
EPA 300.0 Rev. 2.1	Bromide	101	103	102	98.9		1.21
	Chloride	99.9	101	100		0.468	
	Sulfate	97.6	97.3	97.5		0.723	
EPA 350.1 Rev. 2.0	Ammonia-N	97.2	98.4	99.6			0.847
	Ammonia-N	100	96.8	98.8			1.87
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	107	101			4.91
	Kjeldahl Nitrogen	103	111	107			4.15
EPA 353.2 Rev. 2.0	NO2NO3-N	102	103	103			0.394
	NO2NO3-N	100	98.8	95.2			3.01
EPA 365.1 Rev. 2.0	Total-P	106	104	103			0.769
	Total-P	104	105	107			1.69
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	97.2	99.3			2.05
	O-Phosphate-P	100	100	103			1.66
EPA 8321B	2,4-D	133	116	124			7.04
	2,4,5-T	103	98.9	103			3.76
	Acesulfame K	115	177	145			19.8
	Acetaminophen	92.2	94.8	103			7.94
	Acetamiprid	109	107	97.0			9.90
	Afidopyropen	79.1	78.5	65.5			18.0
	AMPA	104	120	127			6.11
	Bentazon	91.2	67.7	70.4			3.94
	Benzovindiflupyr	92.0	89.4	92.9			3.90
	Carbamazepine	105	95.3	91.9			3.55
	Clothianidin	103	113	101			10.8
	Dinotefuran	106	109	95.4			12.9
	Diuron	78.3	64.9	67.1			3.40
	Endothall	87.4	82.1	109			28.3
	Fenuron	107	93.9	97.0			3.30
	Fluridone	101	87.5	90.0			2.78
	Glufosinate	125	134	135			0.981
	Glyphosate	148	105	92.0			13.5
	Hydrocodone	105	108	104			4.03
	Ibuprofen	102	82.1	83.6			1.90
	Imazapyr	112	118	113			4.41
	Imidacloprid	112	137	135			1.59
	Linuron	85.5	74.3	73.9			0.482
	Mandestrobin	96.1	86.6	88.4			2.10
	MCPP	123	107	112			5.39
	Naproxen	56.1	73.6	80.1			8.42
	Primidone	99.7	101	99.6			1.68
	Pyraclostrobin	89.1	85.7	84.9			0.919
	Sucralose	93.5	105	103			1.82
	Thiamethoxam	110	135	126			6.85
	Tolfenpyrad	62.8	58.0	59.2			2.03
	Triclopyr	107	102	103			1.54
SM 2120 B-2011	Color (true)	102				2.64	
SM 2320 B-2011	Total Alkalinity	101				0.340	
	Total Alkalinity	101				0.539	
SM 2540 C-2011	TDS					2.68	
SM 4500 F-C-2011	Fluoride	102	99.4	99.4			0.0
	Fluoride	104	102	103			0.448
SM 5310 B-2011	Organic Carbon	95.2	95.5	97.5			1.80

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2231626, 2231629
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2231626
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2231629
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2231629
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2231627, 2231630
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2231627, 2231630
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2231627, 2231630
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2231627, 2231630
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2231628, 2231631
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2231636
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2231636
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2231629
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2231626, 2231629
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2231629
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2231626, 2231629
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2231626, 2231629
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2231627, 2231630

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	03/16/2021			03/16/2021 16:11	Yen Ta	2231626, 2231629
EPA 300.0 Rev. 2.1	03/16/2021			03/19/2021 21:34	Lipi Saha	2231629
	03/16/2021			03/23/2021 00:04	Lipi Saha	2231626
EPA 350.1 Rev. 2.0	03/16/2021			03/20/2021 10:55	Ping Hua	2231627
	03/16/2021			03/21/2021 15:27	Ping Hua	2231630
EPA 351.2 Rev. 2.0	03/16/2021	03/19/2021 12:22	Benjamin T. Nordmann	03/23/2021 21:11	Julia Storbeck	2231627
	03/16/2021	03/22/2021 13:25	Benjamin T. Nordmann	03/23/2021 23:06	Julia Storbeck	2231630
EPA 353.2 Rev. 2.0	03/16/2021			03/17/2021 10:26	Beverly Y. Sanders	2231630
	03/16/2021			03/19/2021 09:45	Beverly Y. Sanders	2231627
EPA 365.1 Rev. 2.0	03/16/2021	03/17/2021 13:18	Yen Ta	03/18/2021 15:30	Shengyu Ding	2231627
	03/16/2021	03/17/2021 13:18	Yen Ta	03/18/2021 16:19	Shengyu Ding	2231630
EPA 365.1 Rev. 2.0 dissolved	03/16/2021			03/16/2021 15:20	Patrick M. Roche	2231631
	03/16/2021			03/16/2021 15:49	Patrick M. Roche	2231628
EPA 8321B	03/16/2021	03/18/2021 09:00	Hoor Shaik	03/26/2021 01:54	Juyoung Kim	2231636
	03/16/2021	03/18/2021 09:00	Hoor Shaik	03/26/2021 12:18	Juyoung Kim	2231636
	03/16/2021	03/18/2021 10:30	Rebecca Ware	03/18/2021 12:32	Rebecca Ware	2231636
	03/16/2021	03/18/2021 10:30	Rebecca Ware	03/18/2021 15:44	Rebecca Ware	2231636
	03/16/2021	03/18/2021 10:30	Rebecca Ware	03/24/2021 16:56	Rebecca Ware	2231636
SM 2120 B-2011	03/16/2021			03/16/2021 18:35	Benjamin T. Nordmann	2231629
SM 2320 B-2011	03/16/2021			03/19/2021 02:09	Dale L. Simmons	2231629
	03/16/2021			03/19/2021 12:24	Dale L. Simmons	2231626
SM 2540 C-2011	03/16/2021			03/19/2021 15:21	Yijie Li	2231629
SM 2540 D-2011	03/16/2021			03/19/2021 15:21	Yijie Li	2231626, 2231629
SM 4500 F-C-2011	03/16/2021			03/19/2021 02:09	Dale L. Simmons	2231629
	03/16/2021			03/19/2021 10:38	Dale L. Simmons	2231626
SM 5310 B-2011	03/16/2021			03/26/2021 02:12	Madeline Gruver	2231627
	03/16/2021			03/26/2021 02:29	Madeline Gruver	2231630