

Chemical Analysis Report

SW-DIST-2021-08-24-01

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

Event Description: **SMP Run 17**
Request ID: **RQ-2021-07-12-04**
Customer: **SW-DIST**
Project ID: **SMP**

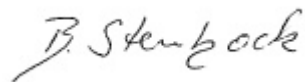
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 17-SEP-2021 15:36



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: St Joe Tidal by Westchester Blvd

Collection Date/Time: 08/23/2021 12:00

Field ID: G5SW0169

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271372	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P402915	
	SM 2320 B-2011	Total Alkalinity	140		mg CaCO3/L	P403059	
	SM 2540 D-2011	TSS	3	IA	mg/L	P403094	
	SM 4500 F-C-2011	Fluoride	0.32		mg F/L	P403063	
2271373	EPA 350.1 Rev. 2.0	Ammonia-N	0.070		mg N/L	P403136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P403262	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.48		mg N/L	P403071	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P402951	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P403372	
2271374	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.18		mg P/L	P402911	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Bear Creek at Gulfport Blvd

Collection Date/Time: 08/23/2021 12:30

Field ID: G5SW0051

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271375	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P402913	
2271391	EPA 8321B	Acesulfame K	0.10	U	ug/L	P402974	
		2,4-D	0.0072	I	ug/L	P403027	
		AMPA	1.0	U	ug/L	P402974	
		2,4,5-T	0.0040	U	ug/L	P403027	
		Acetaminophen	0.0080	U	ug/L	P403027	
		Endothall	0.25	U	ug/L	P402974	
		Acetamiprid	0.0020	U	ug/L	P403027	
		Glufosinate	1.0	U	ug/L	P402974	
		Glyphosate	1.0	U	ug/L	P402974	
		Afidopyropen	0.0020	U	ug/L	P403027	
		Sucralose	0.45		ug/L	P402974	
		Bentazon	0.053		ug/L	P403027	
		Benzovindiflupyr	0.0020	U	ug/L	P403027	
		Carbamazepine	8.0E-04	U	ug/L	P403027	
		Clothianidin	0.0029	I	ug/L	P403027	
		Dinotefuran	0.0020	U	ug/L	P403027	
		Diuron	0.0043	I	ug/L	P403027	
		Fenuron	0.016	U	ug/L	P403027	
		Fluridone	0.0026	I	ug/L	P403027	
		Imazapyr	0.016	I	ug/L	P403027	
		Hydrocodone	0.0020	U	ug/L	P403027	
		Ibuprofen	0.020	U	ug/L	P403027	
		Imidacloprid	0.0057	I	ug/L	P403027	
		Linuron	0.0040	U	ug/L	P403027	
		Mandestrobin	0.0020	U	ug/L	P403027	
		MCPP	0.0035	I	ug/L	P403027	
		Naproxen	0.0080	U	ug/L	P403027	
		Primidone	0.0040	U	ug/L	P403027	MS, RPD
		Pyraclostrobin	0.0020	U	ug/L	P403027	
		Thiamethoxam	0.0020	U	ug/L	P403027	
		Tolfenpyrad	0.0020	U	ug/L	P403027	
		Triclopyr	0.0040	U	ug/L	P403027	
2271423	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P402916	
	SM 2320 B-2011	Total Alkalinity	101		mg CaCO3/L	P403061	
	SM 2540 D-2011	TSS	7	I A	mg/L	P403096	
	SM 4500 F-C-2011	Fluoride	0.62		mg F/L	P403065	
2271424	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P403135	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P403260	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P403008	
	EPA 365.1 Rev. 2.0	Total-P	0.085		mg P/L	P403083	

Field ID: G5SW0051

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 8321B: MDL for some parameters elevated due to matrix interference.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: PP Ditch #1 @ 71st St

Collection Date/Time: 08/23/2021 11:20

Field ID: G5SW0134

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271369	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P402915	
	SM 2320 B-2011	Total Alkalinity	159		mg CaCO3/L	P403059	
	SM 2540 D-2011	TSS	3	I	mg/L	P403094	
	SM 4500 F-C-2011	Fluoride	0.29		mg F/L	P403063	
2271370	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P403136	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P403262	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P403071	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P402951	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P403372	
2271371	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.042		mg P/L	P402911	
2271390	EPA 8276	Chlordane	5.3	U	ng/L	P402975	
		Toxaphene	32	U	ng/L	P402975	

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: P402915

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402916

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403135

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403136

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403260

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403262

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403071

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402951

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

Batch ID: P403083

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402911

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402913

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

Reference Method: EPA 8276

Batch ID: P402975

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B

Batch ID: P402974

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: EPA 8321B

Batch ID: P403027

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P403027

Component	Result	Code	Units
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
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: SM 2320 B-2011

Batch ID: P403059

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

Reference Method: SM 2320 B-2011

Batch ID: P403061

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

Reference Method: SM 2540 D-2011

Batch ID: P403094

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P403096

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P403063

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011

Batch ID: P403065

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P403372

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403135

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403136

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403260

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403262

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403071

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402951

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403083

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402911

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402913

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

Reference Method: EPA 8276
Batch ID: P402975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103	99.8	P/P	56 - 117
Toxaphene	73.5	71.4	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P402974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.6		P	40 - 150
AMPA	82.4		P	40 - 150
Endothall	68.1		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	107		P	40 - 150
Sucralose	90.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P403027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.8		P	40 - 150
2,4,5-T	106		P	40 - 150
Acetaminophen	80.2		P	30 - 150
Acetamiprid	96.1		P	40 - 150
Afidopyropen	83.2		P	40 - 150
Bentazon	119		P	30 - 150
Benzovindiflupyr	94.7		P	40 - 150
Carbamazepine	85.8		P	40 - 150
Clothianidin	98.4		P	40 - 150
Dinotefuran	84.8		P	40 - 150
Diuron	79.0		P	40 - 150
Fenuron	94.5		P	40 - 150
Fluridone	100		P	40 - 150
Hydrocodone	77.7		P	40 - 150
Ibuprofen	54.6		P	40 - 150
Imazapyr	85.0		P	40 - 150
Imidacloprid	97.3		P	40 - 150
Linuron	83.9		P	40 - 150
Mandestrobin	95.1		P	40 - 150
MCPP	91.7		P	40 - 150
Naproxen	98.6		P	40 - 150
Primidone	84.9		P	40 - 150
Pyraclostrobin	87.5		P	40 - 150
Thiamethoxam	92.7		P	40 - 150
Tolfenpyrad	51.5		P	30 - 150
Triclopyr	97.3		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P403059

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P403061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P403063

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P403065

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

Reference Method: SM 5310 B-2011
Batch ID: P403372

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 350.1 Rev. 2.0
Batch ID: P403135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271811	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271345	Ammonia-N	96.4	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403260

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270527	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271370	Kjeldahl Nitrogen	102	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270721	NO2NO3-N	98.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271365	NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271365	Total-P	108	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271646	Total-P	95.9	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271366	O-Phosphate-P	101	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271375	O-Phosphate-P	102	102	P/P	90 - 110

Reference Method: EPA 8276
Batch ID: P402975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270935	Chlordane	82.6	78.9	P/P	47 - 128
2270935	Toxaphene	60.6	76.9	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P402974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271284	Acesulfame K	56.7	57.9	P/P	40 - 150
2271284	AMPA	91.0	91.7	P/P	40 - 150
2271284	Endothall	101	103	P/P	40 - 150
2271284	Glufosinate	107	106	P/P	40 - 150
2271284	Glyphosate	108	110	P/P	40 - 150
2271284	Sucralose	93.6	94.0	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P403027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271466	2,4-D	105	96.8	P/P	40 - 150
2271466	2,4,5-T	111	101	P/P	40 - 150
2271466	Acetaminophen	81.5	84.3	P/P	30 - 150
2271466	Acetamiprid	91.7	84.6	P/P	40 - 150
2271466	Afidopyropen	111	99.8	P/P	40 - 150
2271466	Benzovindiflupyr	92.0	95.7	P/P	40 - 150
2271466	Carbamazepine	88.7	92.1	P/P	40 - 150
2271466	Clothianidin	68.7	70.6	P/P	40 - 150
2271466	Diuron	89.8	87.8	P/P	40 - 150
2271466	Fenuron	99.3	95.6	P/P	40 - 150
2271466	Fluridone	94.8	100	P/P	40 - 150
2271466	Hydrocodone	98.2	87.5	P/P	40 - 150
2271466	Ibuprofen	70.5	65.9	P/P	40 - 150
2271466	Imidacloprid	92.3	91.1	P/P	40 - 150
2271466	Linuron	99.3	77.0	P/P	40 - 150
2271466	Mandestrobin	104	101	P/P	40 - 150
2271466	MCPP	118	110	P/P	40 - 150
2271466	Naproxen	94.3	87.8	P/P	40 - 150
2271466	Primidone	32.3	50.6	F/P	40 - 150
2271466	Pyraclostrobin	91.3	87.3	P/P	40 - 150
2271466	Thiamethoxam	99.5	90.5	P/P	40 - 150
2271466	Tolfenpyrad	52.1	52.1	P/P	30 - 150
2271466	Triclopyr	106	96.9	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P403063

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

Reference Method: SM 4500 F-C-2011
Batch ID: P403063

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271671	Fluoride	99.2	98.7	P/P	92 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P403065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271785	Fluoride	99.6	102	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P403372

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271056	Organic Carbon	97.0	96.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402915

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271347	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271414	Turbidity	1.70	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271811	Ammonia-N	0.686	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271345	Ammonia-N	0.187	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403260

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270527	Kjeldahl Nitrogen	0.348	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271370	Kjeldahl Nitrogen	3.11	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270721	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271365	NO2NO3-N	0.509	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P402951

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271365	Total-P	0.173	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P403083

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271646	Total-P	0.523	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402911

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271366	O-Phosphate-P	0.199	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402913

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271375	O-Phosphate-P	0.302	Spike	P	0 - 20

Reference Method: EPA 8276

Batch ID: P402975

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270935	Chlordane	4.47	Spike	P	0 - 30
2270935	Toxaphene	23.7	Spike	P	0 - 30
LFB	Chlordane	3.32	LCS	P	0 - 30
LFB	Toxaphene	2.88	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P402974

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271284	Acesulfame K	2.14	Spike	P	0 - 30
2271284	AMPA	0.789	Spike	P	0 - 30
2271284	Endothall	2.32	Spike	P	0 - 30
2271284	Glufosinate	0.745	Spike	P	0 - 30
2271284	Glyphosate	2.50	Spike	P	0 - 30
2271284	Sucralose	0.483	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P403027

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271466	2,4-D	7.65	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P403027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271466	2,4,5-T	9.54	Spike	P	0 - 30
2271466	Acetaminophen	3.38	Spike	P	0 - 30
2271466	Acetamiprid	8.00	Spike	P	0 - 30
2271466	Afidopyropen	10.3	Spike	P	0 - 30
2271466	Bentazon	11.5	Spike	P	0 - 30
2271466	Benzovindiflupyr	3.81	Spike	P	0 - 30
2271466	Carbamazepine	3.45	Spike	P	0 - 30
2271466	Clothianidin	2.74	Spike	P	0 - 30
2271466	Dinotefuran	7.69	Spike	P	0 - 30
2271466	Diuron	2.22	Spike	P	0 - 30
2271466	Fenuron	3.73	Spike	P	0 - 30
2271466	Fluridone	5.58	Spike	P	0 - 30
2271466	Hydrocodone	11.5	Spike	P	0 - 30
2271466	Ibuprofen	6.74	Spike	P	0 - 30
2271466	Imazapyr	11.0	Spike	P	0 - 30
2271466	Imidacloprid	1.18	Spike	P	0 - 30
2271466	Linuron	25.3	Spike	P	0 - 30
2271466	Mandestrobin	3.39	Spike	P	0 - 30
2271466	MCPP	6.59	Spike	P	0 - 30
2271466	Naproxen	7.15	Spike	P	0 - 30
2271466	Primidone	44.0	Spike	F	0 - 30
2271466	Pyraclostrobin	4.52	Spike	P	0 - 30
2271466	Thiamethoxam	9.47	Spike	P	0 - 30
2271466	Tolfenpyrad	0.0501	Spike	P	0 - 30
2271466	Triclopyr	8.83	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P403059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271671	Total Alkalinity	0.0215	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P403061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271808	Total Alkalinity	0.0475	Sample	P	0 - 5.2

Reference Method: SM 4500 F-C-2011
Batch ID: P403063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271671	Fluoride	0.469	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P403065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271785	Fluoride	0.455	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P403372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271056	Organic Carbon	0.421	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2271390
Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	55.6	P	29 - 92.0
EPA 8276	PCNB	71.8	P	43 - 134

Lab Sample ID: 2271391
Field Sample ID: G5SW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.1	P	30 - 160
EPA 8321B	Diuron-d6	69.3	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	32.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	37.8	P	30 - 160
EPA 8321B	Primidone-d5	44.4	P	30 - 160
EPA 8321B	Sucralose-d6	93.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107438

Included Lab Sample IDs: 2271371, 2271374, 2271375

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107441

Included Lab Sample IDs: 2271369, 2271372, 2271423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105
Turbidity	102	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107475

Included Lab Sample IDs: 2271424

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107485

Included Lab Sample IDs: 2271370, 2271373

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	105	104	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A107502

Included Lab Sample IDs: 2271369, 2271372, 2271423

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	100	P/P	90 - 110
Total Alkalinity	99.8	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107502

Included Lab Sample IDs: 2271369, 2271372, 2271423

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107506

Included Lab Sample IDs: 2271370, 2271373

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A107519
Included Lab Sample IDs: 2271391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	78.1		P	60 - 160
Glufosinate	99.7		P	60 - 160
Glyphosate	101		P	60 - 160

Reference Method: EPA 8321B
Run ID: A107530
Included Lab Sample IDs: 2271391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	61.3	65.2	P/P	60 - 160
Endothall	69.1	73.4	P/P	60 - 160
Sucralose	94.7	90.6	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A107544
Included Lab Sample IDs: 2271370, 2271373, 2271424

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	97.7	P/P	90 - 110
Ammonia-N	99.0	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A107552
Included Lab Sample IDs: 2271424

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A107619
Included Lab Sample IDs: 2271370, 2271373, 2271424

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	97.1	P/P	90 - 110
Kjeldahl Nitrogen	102	99.8	P/P	90 - 110
Kjeldahl Nitrogen	98.4	101	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A107636
Included Lab Sample IDs: 2271390

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.1		P	80 - 120
Toxaphene	97.8		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A107644
Included Lab Sample IDs: 2271370, 2271373

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

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A107644

Included Lab Sample IDs: 2271370, 2271373

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107670

Included Lab Sample IDs: 2271391

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	116	P/P	50 - 150
2,4,5-T	114	93.3	P/P	50 - 150
Acetaminophen	106	110	P/P	60 - 160
Acetamiprid	111	111	P/P	50 - 150
Afidopyropen	106	109	P/P	50 - 150
Bentazon	110	104	P/P	50 - 160
Benzovindiflupyr	108	110	P/P	50 - 150
Carbamazepine	115	116	P/P	60 - 150
Clothianidin	109	118	P/P	60 - 150
Dinotefuran	103	101	P/P	50 - 150
Diuron	104	105	P/P	60 - 160
Fenuron	101	104	P/P	60 - 150
Fluridone	105	110	P/P	60 - 160
Hydrocodone	101	100	P/P	60 - 150
Ibuprofen	80.0	68.9	P/P	50 - 160
Imazapyr	93.2	89.9	P/P	50 - 150
Imidacloprid	113	110	P/P	60 - 150
Linuron	97.0	99.3	P/P	60 - 150
Mandestrobin	111	105	P/P	50 - 150
MCP	97.2	110	P/P	50 - 150
Naproxen	93.6	120	P/P	50 - 160
Primidone	109	117	P/P	60 - 150
Pyraclostrobin	112	112	P/P	60 - 150
Thiamethoxam	101	111	P/P	50 - 150
Tolfenpyrad	112	107	P/P	60 - 150
Triclopyr	115	112	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		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.0	
	Turbidity						1.70	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4		102	103			0.686
	Ammonia-N	98.4		96.4	96.2			0.187
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		101	101			0.348
	Kjeldahl Nitrogen	99.8		102	108			3.11
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		98.0	98.0			0.0
	NO2NO3-N	99.5		98.5	98.0			0.509
EPA 365.1 Rev. 2.0	Total-P	104		108	109			0.173
	Total-P	107		95.9	95.4			0.523
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		101	101			0.199
	O-Phosphate-P	102		102	102			0.302
EPA 8276	Chlordane	103	99.8	82.6	78.9	3.32		4.47
	Toxaphene	73.5	71.4	60.6	76.9	2.88		23.7
EPA 8321B	2,4-D	92.8		105	96.8			7.65
	2,4,5-T	106		111	101			9.54
	Acesulfame K	78.6		56.7	57.9			2.14
	Acetaminophen	80.2		81.5	84.3			3.38
	Acetamiprid	96.1		91.7	84.6			8.00
	Afidopyropen	83.2		111	99.8			10.3
	AMPA	82.4		91.0	91.7			0.789
	Bentazon	119						11.5
	Benzovindiflupyr	94.7		92.0	95.7			3.81
	Carbamazepine	85.8		88.7	92.1			3.45
	Clothianidin	98.4		68.7	70.6			2.74
	Dinotefuran	84.8						7.69
	Diuron	79.0		89.8	87.8			2.22
	Endothall	68.1		101	103			2.32
	Fenuron	94.5		99.3	95.6			3.73
	Fluridone	100		94.8	100			5.58
	Glufosinate	105		107	106			0.745
	Glyphosate	107		108	110			2.50
	Hydrocodone	77.7		98.2	87.5			11.5
	Ibuprofen	54.6		70.5	65.9			6.74
	Imazapyr	85.0						11.0
	Imidacloprid	97.3		92.3	91.1			1.18
	Linuron	83.9		99.3	77.0			25.3
	Mandestrobin	95.1		104	101			3.39
	MCPP	91.7		118	110			6.59
	Naproxen	98.6		94.3	87.8			7.15
	Primidone	84.9		32.3	50.6			44.0
	Pyraclostrobin	87.5		91.3	87.3			4.52
	Sucralose	90.2		93.6	94.0			0.483
	Thiamethoxam	92.7		99.5	90.5			9.47
	Tolfenpyrad	51.5		52.1	52.1			0.0501
	Triclopyr	97.3		106	96.9			8.83
SM 2320 B-2011	Total Alkalinity	103					0.0215	
	Total Alkalinity	103					0.0475	
SM 4500 F-C-2011	Fluoride	100		99.2	98.7			0.469
	Fluoride	101		99.6	102			0.455
SM 5310 B-2011	Organic Carbon	96.8		97.0	96.2			0.421

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2271369, 2271372, 2271423
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2271370, 2271373, 2271424
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2271370, 2271373, 2271424
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2271370, 2271373, 2271424
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2271370, 2271373, 2271424
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2271371, 2271374, 2271375
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2271390
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2271391
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2271369, 2271372, 2271423
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2271369, 2271372, 2271423
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2271369, 2271372, 2271423
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2271370, 2271373

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	08/24/2021			08/24/2021 14:59	Sarah A Nixon	2271369, 2271372, 2271423
EPA 350.1 Rev. 2.0	08/24/2021			08/30/2021 11:31	Ping Hua	2271424
	08/24/2021			08/30/2021 12:03	Ping Hua	2271370
	08/24/2021			08/30/2021 12:04	Ping Hua	2271373
EPA 351.2 Rev. 2.0	08/24/2021	09/01/2021 12:09	Benjamin T. Nordmann	09/02/2021 12:17	Alexandra J Mattheus	2271424
	08/24/2021	09/01/2021 12:09	Benjamin T. Nordmann	09/02/2021 12:55	Alexandra J Mattheus	2271370
	08/24/2021	09/01/2021 12:09	Benjamin T. Nordmann	09/02/2021 13:03	Alexandra J Mattheus	2271373
EPA 353.2 Rev. 2.0	08/24/2021			08/26/2021 09:17	Beverly Y. Sanders	2271424
	08/24/2021			08/27/2021 11:00	Beverly Y. Sanders	2271370
	08/24/2021			08/27/2021 11:01	Beverly Y. Sanders	2271373
EPA 365.1 Rev. 2.0	08/24/2021	08/25/2021 14:45	Simonne.V. Calhoun	08/26/2021 15:24	Shengyu Ding	2271370
	08/24/2021	08/25/2021 14:45	Simonne.V. Calhoun	08/26/2021 15:25	Shengyu Ding	2271373
	08/24/2021	08/27/2021 14:47	Simonne.V. Calhoun	08/30/2021 15:21	Lipi Saha	2271424
EPA 365.1 Rev. 2.0 dissolved	08/24/2021			08/24/2021 14:42	James L Waggeberby	2271371
	08/24/2021			08/24/2021 14:48	James L Waggeberby	2271374
	08/24/2021			08/24/2021 15:05	James L Waggeberby	2271375
EPA 8276	08/24/2021	08/26/2021 08:00	Rasheda Ghaffari	09/01/2021 08:46	Julie Wi	2271390
EPA 8321B	08/24/2021	08/27/2021 09:00	Juyoung Kim	08/27/2021 13:26	Juyoung Kim	2271391
	08/24/2021	08/27/2021 09:00	Juyoung Kim	08/28/2021 00:22	Juyoung Kim	2271391
	08/24/2021	08/27/2021 14:00	Hoor Shaik	08/28/2021 01:47	Juyoung Kim	2271391
SM 2320 B-2011	08/24/2021			08/26/2021 18:54	Dale L. Simmons	2271369
	08/24/2021			08/26/2021 19:09	Dale L. Simmons	2271372
	08/24/2021			08/27/2021 03:26	Dale L. Simmons	2271423
SM 2540 D-2011	08/24/2021			08/25/2021 14:16	Yijie Li	2271369, 2271372, 2271423
SM 4500 F-C-2011	08/24/2021			08/26/2021 18:54	Dale L. Simmons	2271369
	08/24/2021			08/26/2021 19:09	Dale L. Simmons	2271372
	08/24/2021			08/27/2021 01:34	Dale L. Simmons	2271423
SM 5310 B-2011	08/24/2021			09/03/2021 02:51	Touraj Touran	2271370
	08/24/2021			09/03/2021 03:33	Touraj Touran	2271373