

Chemical Analysis Report

NW-DIST-2022-05-17-01

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

Event Description: **Escambia Bay Whaler Run**
Request ID: **RQ-2022-05-16-29**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 10-JUN-2022 14:56

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the "T" and a long, sweeping underline.

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: Trout Bayou

Collection Date/Time: 05/16/2022 11:50

Field ID: G4NW0443

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327401	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P413978	
	SM 2320 B-2011	Total Alkalinity	48	A	mg CaCO3/L	P414258	
	SM 2540 D-2011	TSS	8	I	mg/L	P414317	
	SM 4500-F- C-2011	Fluoride	0.36		mg F/L	P414265	
2327402	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P414361	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22	I	mg N/L	P414617	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P414143	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P414057	
	SM 5310 B-2011	Organic Carbon	4.0		mg C/L	P414518	

Sample Location: Judges Bayou Mouth

Collection Date/Time: 05/16/2022 11:00

Field ID: G4NW0441

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327399	EPA 180.1 Rev. 2.0	Turbidity	7.8		NTU	P413978	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P414067	
	SM 2540 D-2011	TSS	13		mg/L	P414315	
	SM 4500-F- C-2011	Fluoride	0.20		mg F/L	P414070	
2327400	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P414361	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P414241	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P414143	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P414057	
	SM 5310 B-2011	Organic Carbon	5.1		mg C/L	P414079	
2327417	EPA 8321B	Acesulfame K	0.10	U	ug/L	P414088	
		2,4-D	0.0039	I	ug/L	P414017	
		AMPA	1.0	U	ug/L	P414088	
		2,4,5-T	0.0040	U	ug/L	P414017	
		Acetaminophen	0.0080	U	ug/L	P414017	
		Endothall	0.25	U	ug/L	P414088	
		Acetamiprid	0.0020	U	ug/L	P414017	
		Glufosinate	1.0	U	ug/L	P414088	
		Glyphosate	1.0	U	ug/L	P414088	
		Afidopyropen	0.0020	U	ug/L	P414017	
		Sucralose	0.13		ug/L	P414088	
		Bentazon	8.0E-04	U	ug/L	P414017	MS
		Benzovindiflupyr	0.0020	U	ug/L	P414017	
		Carbamazepine	8.0E-04	U	ug/L	P414017	
		Clothianidin	0.0020	U	ug/L	P414017	
		Dinotefuran	0.0020	U	ug/L	P414017	
		Diuron	0.0020	U	ug/L	P414017	
		Fenuron	0.032	U	ug/L	P414017	
		Fluridone	8.0E-04	U	ug/L	P414017	
		Imazapyr	0.010	I	ug/L	P414017	
		Hydrocodone	0.0020	U	ug/L	P414017	
		Ibuprofen	0.020	U	ug/L	P414017	
		Imidacloprid	0.0020	U	ug/L	P414017	
		Linuron	0.0040	U	ug/L	P414017	
		Mandestrobin	0.0020	U	ug/L	P414017	
		MCPP	0.0040	U	ug/L	P414017	
		Naproxen	0.0080	U	ug/L	P414017	
		Primidone	0.0040	U	ug/L	P414017	
		Pyraclostrobin	0.0020	U	ug/L	P414017	
		Silvex	0.0040	U	ug/L	P414017	
		Thiamethoxam	0.0020	U	ug/L	P414017	
		Tolfenpyrad	0.0020	U	ug/L	P414017	
		Triclopyr	0.0040	U	ug/L	P414017	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. Some MDLs are elevated due to required dilution of sample matrix.

Sample Location: FB

Collection Date/Time: 05/16/2022 11:10

Field ID: FB_05162022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2327403	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P413978	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P414067	
	SM 2540 D-2011	TSS	2	U	mg/L	P414315	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P414070	
2327404	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P414364	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P414239	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P414276	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P414058	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P414079	
2327418	EPA 8321B	Acesulfame K	0.10	U	ug/L	P414088	
		2,4-D	0.0020	U	ug/L	P414017	
		AMPA	0.10	U	ug/L	P414088	
		2,4,5-T	0.0040	U	ug/L	P414017	
		Acetaminophen	0.0080	U	ug/L	P414017	
		Endothall	0.25	U	ug/L	P414088	
		Acetamiprid	0.0020	U	ug/L	P414017	
		Glufosinate	0.10	U	ug/L	P414088	
		Glyphosate	0.10	U	ug/L	P414088	
		Afidopyropen	0.0020	U	ug/L	P414017	
		Sucralose	0.010	U	ug/L	P414088	
		Bentazon	8.0E-04	U	ug/L	P414017	MS
		Benzovindiflupyr	0.0020	U	ug/L	P414017	
		Carbamazepine	8.0E-04	U	ug/L	P414017	
		Clothianidin	0.0020	U	ug/L	P414017	
		Dinotefuran	0.0020	U	ug/L	P414017	
		Diuron	0.0020	U	ug/L	P414017	
		Fenuron	0.032	U	ug/L	P414017	
		Fluridone	8.0E-04	U	ug/L	P414017	
		Imazapyr	0.0040	U	ug/L	P414017	
		Hydrocodone	0.0020	U	ug/L	P414017	
		Ibuprofen	0.020	U	ug/L	P414017	
		Imidacloprid	0.0020	U	ug/L	P414017	
		Linuron	0.0040	U	ug/L	P414017	
		Mandestrobin	0.0020	U	ug/L	P414017	
		MCPP	0.0040	U	ug/L	P414017	
		Naproxen	0.0080	U	ug/L	P414017	
		Primidone	0.0040	U	ug/L	P414017	
		Pyraclostrobin	0.0020	U	ug/L	P414017	
		Silvex	0.0040	U	ug/L	P414017	
		Thiamethoxam	0.0020	U	ug/L	P414017	
		Tolfenpyrad	0.0020	U	ug/L	P414017	
		Triclopyr	0.0040	U	ug/L	P414017	

Ref. Method and Comment:

EPA 350.1 Rev. 2.0: The result was confirmed on 05/25/2022.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413978

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414361

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414364

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414239

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414241

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414617

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414143

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414276

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414057

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: P414058

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

Reference Method: EPA 8321B

Batch ID: P414017

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	0.032	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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P414088

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 2320 B-2011

Batch ID: P414067

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P414258

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011
Batch ID: P414315

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P414317

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P414070

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P414265

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P414079

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

Reference Method: SM 5310 B-2011
Batch ID: P414518

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413978

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414361

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414239

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414241

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: P414617

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414143

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414276

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414057

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P414058

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

Reference Method: EPA 8321B

Batch ID: P414017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.0		P	40 - 150
2,4,5-T	61.3		P	40 - 150
Acetaminophen	59.2		P	30 - 150
Acetamiprid	91.9		P	40 - 150
Afidopyropen	65.8		P	30 - 150
Bentazon	138		P	30 - 150
Benzovindiflupyr	85.8		P	40 - 150
Carbamazepine	95.5		P	40 - 150
Clothianidin	99.2		P	40 - 150
Dinotefuran	96.6		P	40 - 150
Diuron	81.8		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	71.4		P	40 - 150
Hydrocodone	92.2		P	40 - 150
Ibuprofen	70.8		P	40 - 150
Imazapyr	84.9		P	40 - 150
Imidacloprid	83.8		P	40 - 150
Linuron	68.6		P	40 - 150
Mandestrobin	75.8		P	40 - 150
MCPP	93.6		P	40 - 150
Naproxen	66.4		P	40 - 150
Primidone	90.5		P	40 - 150
Pyraclostrobin	81.1		P	40 - 150
Silvex	56.9		P	40 - 150
Thiamethoxam	97.5		P	40 - 150
Tolfenpyrad	44.6		P	30 - 150
Triclopyr	66.6		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	139		P	40 - 150
AMPA	112		P	40 - 150
Endothall	88.7		P	40 - 150
Glufosinate	102		P	40 - 150
Glyphosate	99.3		P	40 - 150
Sucralose	97.9		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P414067

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P414258

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P414070

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P414265

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P414079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P414518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414361

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326871	Ammonia-N	95.2	93.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327460	Ammonia-N	93.8	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327116	Kjeldahl Nitrogen	94.9	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414241

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2326873	Kjeldahl Nitrogen	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327402	Kjeldahl Nitrogen	95.1	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414143

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327358	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327325	NO2NO3-N	97.4	95.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327400	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327392	Total-P	109	108	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P414017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327564	2,4-D	80.9	72.4	P/P	40 - 150
2327564	2,4,5-T	69.9	60.1	P/P	40 - 150
2327564	Acetaminophen	65.0	62.9	P/P	30 - 150
2327564	Acetamiprid	90.5	88.3	P/P	40 - 150
2327564	Afidopyropen	61.9	58.4	P/P	30 - 150
2327564	Bentazon	176	143	F/P	30 - 150
2327564	Benzovindiflupyr	100	87.0	P/P	40 - 150
2327564	Carbamazepine	112	101	P/P	40 - 150
2327564	Clothianidin	94.1	85.7	P/P	40 - 150
2327564	Dinotefuran	114	102	P/P	40 - 150
2327564	Diuron	97.3	88.1	P/P	40 - 150
2327564	Fenuron	112	98.0	P/P	40 - 150
2327564	Fluridone	83.4	75.6	P/P	40 - 150
2327564	Hydrocodone	108	98.8	P/P	40 - 150
2327564	Ibuprofen	69.7	62.9	P/P	40 - 150
2327564	Imazapyr	94.5	82.2	P/P	40 - 150
2327564	Imidacloprid	110	96.4	P/P	40 - 150
2327564	Linuron	71.1	67.4	P/P	40 - 150
2327564	Mandestrobin	77.9	73.4	P/P	40 - 150
2327564	MCCP	102	82.2	P/P	40 - 150
2327564	Naproxen	74.7	59.2	P/P	40 - 150
2327564	Primidone	85.3	80.9	P/P	40 - 150
2327564	Pyraclostrobin	92.4	84.4	P/P	40 - 150
2327564	Silvex	65.8	56.4	P/P	40 - 150
2327564	Thiamethoxam	110	101	P/P	40 - 150
2327564	Tolfenpyrad	54.2	47.1	P/P	30 - 150
2327564	Triclopyr	75.3	62.8	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P414088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327275	Acesulfame K	112	118	P/P	40 - 150
2327275	Endothall	89.4	96.5	P/P	40 - 150
2327275	Glufosinate	99.2	95.7	P/P	40 - 150
2327275	Sucralose	96.9	102	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P414070

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327257	Fluoride	97.5	96.7	P/P	94 - 104

Reference Method: SM 4500-F- C-2011

Batch ID: P414265

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327401	Fluoride	95.9	96.6	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P414079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2327376	Organic Carbon	94.9	95.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P414518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2328964	Organic Carbon	86.1	88.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327385	Turbidity	0.966	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326871	Ammonia-N	1.35	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P414364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327460	Ammonia-N	1.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327116	Kjeldahl Nitrogen	7.67	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414241

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326873	Kjeldahl Nitrogen	0.252	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327402	Kjeldahl Nitrogen	9.56	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414143

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327358	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P414276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327325	NO2NO3-N	1.61	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327400	Total-P	2.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327392	Total-P	0.807	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P414017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327564	2,4-D	11.2	Spike	P	0 - 30
2327564	2,4,5-T	15.0	Spike	P	0 - 30
2327564	Acetaminophen	3.33	Spike	P	0 - 30
2327564	Acetamiprid	2.47	Spike	P	0 - 30
2327564	Afidopyropen	5.79	Spike	P	0 - 30
2327564	Bentazon	17.1	Spike	P	0 - 30
2327564	Benzovindiflupyr	14.0	Spike	P	0 - 30
2327564	Carbamazepine	10.5	Spike	P	0 - 30
2327564	Clothianidin	9.29	Spike	P	0 - 30
2327564	Dinotefuran	10.9	Spike	P	0 - 30
2327564	Diuron	10.0	Spike	P	0 - 30
2327564	Fenuron	13.0	Spike	P	0 - 30
2327564	Fluridone	8.14	Spike	P	0 - 30
2327564	Hydrocodone	9.01	Spike	P	0 - 30
2327564	Ibuprofen	10.3	Spike	P	0 - 30
2327564	Imazapyr	13.1	Spike	P	0 - 30
2327564	Imidacloprid	13.5	Spike	P	0 - 30
2327564	Linuron	5.41	Spike	P	0 - 30
2327564	Mandestrobin	5.93	Spike	P	0 - 30
2327564	MCP	21.4	Spike	P	0 - 30
2327564	Naproxen	23.2	Spike	P	0 - 30
2327564	Primidone	5.29	Spike	P	0 - 30
2327564	Pyraclostrobin	8.97	Spike	P	0 - 30
2327564	Silvex	15.5	Spike	P	0 - 30
2327564	Thiamethoxam	8.31	Spike	P	0 - 30
2327564	Tolfenpyrad	14.1	Spike	P	0 - 30
2327564	Triclopyr	18.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P414088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327275	Acesulfame K	5.34	Spike	P	0 - 30
2327275	AMPA	4.17	Spike	P	0 - 30
2327275	Endothall	7.60	Spike	P	0 - 30
2327275	Glufosinate	3.60	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P414088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327275	Glyphosate	2.42	Spike	P	0 - 30
2327275	Sucralose	4.21	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P414067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327257	Total Alkalinity	1.61	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P414258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327401	Total Alkalinity	0.682	Sample	P	0 - 3.8

Reference Method: SM 2540 D-2011
Batch ID: P414315

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327115	TSS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P414317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2326865	TSS	7.14	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P414070

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327257	Fluoride	0.473	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P414265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327401	Fluoride	0.483	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P414079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2327376	Organic Carbon	0.455	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P414518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2328964	Organic Carbon	2.15	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2327417

Field Sample ID: G4NW0441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	49.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	117	P	30 - 160
EPA 8321B	Diuron-d6	75.4	P	30 - 160
EPA 8321B	Endothall-d6	91.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	86.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.2	P	30 - 160
EPA 8321B	Primidone-d5	88.4	P	30 - 160
EPA 8321B	Sucralose-d6	97.8	P	30 - 160

Lab Sample ID: 2327418

Field Sample ID: FB_05162022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	64.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	55.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	74.6	P	30 - 160
EPA 8321B	Endothall-d6	92.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.5	P	30 - 160
EPA 8321B	Primidone-d5	82.4	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112209

Included Lab Sample IDs: 2327399, 2327401, 2327403

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

Reference Method: SM 2320 B-2011

Run ID: A112245

Included Lab Sample IDs: 2327399, 2327403

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.2	96.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112245

Included Lab Sample IDs: 2327399, 2327403

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

Reference Method: SM 5310 B-2011

Run ID: A112250

Included Lab Sample IDs: 2327400, 2327404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112283

Included Lab Sample IDs: 2327400, 2327402

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112324

Included Lab Sample IDs: 2327417, 2327418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.4	89.1	P/P	50 - 150
2,4,5-T	83.7	87.8	P/P	50 - 150
Acetaminophen	105	104	P/P	60 - 160
Acetamiprid	110	108	P/P	50 - 150
Afidopyropen	91.9	89.5	P/P	50 - 150
Bentazon	101	95.5	P/P	50 - 160
Benzovindiflupyr	98.2	100	P/P	50 - 150
Carbamazepine	102	97.3	P/P	60 - 150
Clothianidin	124	113	P/P	60 - 150
Dinotefuran	98.9	100	P/P	50 - 150
Diuron	109	122	P/P	60 - 160
Fenuron	97.8	95.6	P/P	60 - 150
Fluridone	105	103	P/P	60 - 160
Hydrocodone	111	100	P/P	60 - 150
Ibuprofen	87.4	85.9	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A112324

Included Lab Sample IDs: 2327417, 2327418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	84.2	84.0	P/P	50 - 150
Imidacloprid	93.8	87.7	P/P	60 - 150
Linuron	97.2	94.3	P/P	60 - 150
Mandestrobin	101	99.5	P/P	50 - 150
MCPP	95.3	94.0	P/P	50 - 150
Naproxen	109	85.7	P/P	50 - 160
Primidone	92.8	99.1	P/P	60 - 150
Pyraclostrobin	102	102	P/P	60 - 150
Silvex	94.0	86.2	P/P	50 - 150
Thiamethoxam	102	100	P/P	50 - 150
Tolfenpyrad	92.2	94.0	P/P	60 - 150
Triclopyr	96.2	92.2	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A112330

Included Lab Sample IDs: 2327417, 2327418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	119	P/P	60 - 160
Endothall	88.1	112	P/P	60 - 160
Glufosinate	98.2	105	P/P	60 - 160
Glyphosate	98.7	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A112331

Included Lab Sample IDs: 2327417, 2327418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	148	154	P/P	60 - 160
Sucralose	105	105	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A112346

Included Lab Sample IDs: 2327401

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	99.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112346

Included Lab Sample IDs: 2327401

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112355

Included Lab Sample IDs: 2327404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112364

Included Lab Sample IDs: 2327400, 2327402, 2327404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	99.2	P/P	90 - 110
Total-P	99.8	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112397

Included Lab Sample IDs: 2327400, 2327402, 2327404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	97.9	P/P	90 - 110
Ammonia-N	98.7	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112417

Included Lab Sample IDs: 2327400, 2327404

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.6	P/P	90 - 110
Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A112492

Included Lab Sample IDs: 2327402

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.5	93.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112636

Included Lab Sample IDs: 2327402

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	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	97.4				0.966	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	95.2	93.8			1.35
	Ammonia-N	95.2	93.8	95.0			1.08
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	94.9	106			7.67
	Kjeldahl Nitrogen	107	105	105			0.252
	Kjeldahl Nitrogen	105	95.1	106			9.56
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5	100	100			0.499
	NO2NO3-N	98.5	97.4	95.4			1.61
EPA 365.1 Rev. 2.0	Total-P	102	105	107			2.02
	Total-P	104	109	108			0.807
EPA 8321B	2,4-D	71.0	80.9	72.4			11.2
	2,4,5-T	61.3	69.9	60.1			15.0
	Acesulfame K	139	112	118			5.34
	Acetaminophen	59.2	65.0	62.9			3.33
	Acetamiprid	91.9	90.5	88.3			2.47
	Afidopyropen	65.8	61.9	58.4			5.79
	AMPA	112					4.17
	Bentazon	138	176	143			17.1
	Benzovindiflupyr	85.8	100	87.0			14.0
	Carbamazepine	95.5	112	101			10.5
	Clothianidin	99.2	94.1	85.7			9.29
	Dinotefuran	96.6	114	102			10.9
	Diuron	81.8	97.3	88.1			10.0
	Endothall	88.7	89.4	96.5			7.60
	Fenuron	101	112	98.0			13.0
	Fluridone	71.4	83.4	75.6			8.14
	Glufosinate	102	99.2	95.7			3.60
	Glyphosate	99.3					2.42
	Hydrocodone	92.2	108	98.8			9.01
	Ibuprofen	70.8	69.7	62.9			10.3
	Imazapyr	84.9	94.5	82.2			13.1
	Imidacloprid	83.8	110	96.4			13.5
	Linuron	68.6	71.1	67.4			5.41
	Mandestrobin	75.8	77.9	73.4			5.93
	MCPP	93.6	102	82.2			21.4
	Naproxen	66.4	74.7	59.2			23.2
	Primidone	90.5	85.3	80.9			5.29
	Pyraclostrobin	81.1	92.4	84.4			8.97
	Silvex	56.9	65.8	56.4			15.5
	Sucralose	97.9	96.9	102			4.21
	Thiamethoxam	97.5	110	101			8.31
	Tolfenpyrad	44.6	54.2	47.1			14.1
	Triclopyr	66.6	75.3	62.8			18.1
SM 2320 B-2011	Total Alkalinity	98.7				1.61	
	Total Alkalinity	97.0				0.682	
SM 2540 D-2011	TSS					3.92	
	TSS					7.14	
SM 4500-F- C-2011	Fluoride	99.9	97.5	96.7			0.473
	Fluoride	97.5	95.9	96.6			0.483
SM 5310 B-2011	Organic Carbon	96.4	94.9	95.5			0.455
	Organic Carbon	95.6	86.1	88.5			2.15

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2327399, 2327401, 2327403
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2327400, 2327402, 2327404
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2327400, 2327402, 2327404
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2327400, 2327402, 2327404
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2327400, 2327402, 2327404
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2327417, 2327418
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2327399, 2327401, 2327403
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2327399, 2327401, 2327403
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2327399, 2327401, 2327403
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2327400, 2327402, 2327404

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	05/17/2022			05/17/2022 14:20	Khloe J Berg	2327399
	05/17/2022			05/17/2022 14:21	Khloe J Berg	2327401
	05/17/2022			05/17/2022 14:24	Khloe J Berg	2327403
EPA 350.1 Rev. 2.0	05/17/2022			05/25/2022 11:32	Ping Hua	2327400
	05/17/2022			05/25/2022 11:33	Ping Hua	2327402
	05/17/2022			05/25/2022 13:17	Ping Hua	2327404
EPA 351.2 Rev. 2.0	05/17/2022	05/24/2022 15:12	Samantha L Bates	05/25/2022 19:06	Alexandra J Mattheus	2327404
	05/17/2022	05/24/2022 15:13	Samantha L Bates	05/25/2022 17:12	Alexandra J Mattheus	2327400
	05/17/2022	06/03/2022 11:24	Samantha L Bates	06/07/2022 09:42	Alexandra J Mattheus	2327402
EPA 353.2 Rev. 2.0	05/17/2022			05/20/2022 09:39	Beverly Y. Sanders	2327400
	05/17/2022			05/20/2022 09:40	Beverly Y. Sanders	2327402
	05/17/2022			05/24/2022 09:50	Beverly Y. Sanders	2327404
EPA 365.1 Rev. 2.0	05/17/2022	05/20/2022 15:00	Simonne.V. Calhoun	05/24/2022 11:55	James L Waggeberby	2327400
	05/17/2022	05/20/2022 15:00	Simonne.V. Calhoun	05/24/2022 12:07	James L Waggeberby	2327402
	05/17/2022	05/20/2022 15:00	Simonne.V. Calhoun	05/24/2022 12:12	James L Waggeberby	2327404
EPA 8321B	05/17/2022	05/19/2022 10:00	June Rhew	05/21/2022 05:38	Juyoung Kim	2327417
	05/17/2022	05/19/2022 10:00	June Rhew	05/21/2022 06:13	Juyoung Kim	2327418
	05/17/2022	05/20/2022 08:00	Manjita Shrestha	05/21/2022 14:05	Manjita Shrestha	2327417
	05/17/2022	05/20/2022 08:00	Manjita Shrestha	05/21/2022 14:20	Manjita Shrestha	2327418
	05/17/2022	05/20/2022 08:00	Manjita Shrestha	05/22/2022 06:09	Manjita Shrestha	2327417
	05/17/2022	05/20/2022 08:00	Manjita Shrestha	05/22/2022 06:22	Manjita Shrestha	2327418
	05/17/2022	05/20/2022 08:00	Manjita Shrestha	05/22/2022 07:27	Manjita Shrestha	2327417
SM 2320 B-2011	05/17/2022			05/19/2022 01:32	Dale L. Simmons	2327403
	05/17/2022			05/19/2022 03:21	Dale L. Simmons	2327399
	05/17/2022			05/21/2022 05:10	Dale L. Simmons	2327401
SM 2540 D-2011	05/17/2022			05/18/2022 14:36	Yijie Li	2327399, 2327401, 2327403
SM 4500-F- C-2011	05/17/2022			05/19/2022 01:32	Dale L. Simmons	2327403
	05/17/2022			05/19/2022 03:21	Dale L. Simmons	2327399
	05/17/2022			05/21/2022 04:35	Dale L. Simmons	2327401
SM 5310 B-2011	05/17/2022			05/19/2022 07:06	Judith K. Clark	2327400
	05/17/2022			05/19/2022 07:26	Judith K. Clark	2327404
	05/17/2022			05/28/2022 09:03	Khloe J Berg	2327402