

Chemical Analysis Report

SE-DIST-2022-04-05-01

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

Event Description: **Stuart/Stuart Deploy**
Request ID: **RQ-2022-04-04-60**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 25-APR-2022 09:11

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, 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: Danforth Creek @ Martin Hwy

Collection Date/Time: 04/04/2022 14:10

Field ID: G2SE0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316698	DEP SOP: NU-094-1	Color (true)**	82		PCU	P411984	
	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P411991	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P412226	
		Sulfate	13		mg SO4/L	P412235	
	SM 2320 B-2011	Total Alkalinity	214		mg CaCO3/L	P412137	
	SM 2540 C-2011	TDS	383	A	mg/L	P412257	
	SM 2540 D-2011	TSS	3	IA	mg/L	P412128	
2316699	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P412140	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.064		mg N/L	P412081	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P412209	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P412067	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P412091	
2316704	SM 5310 B-2011	Organic Carbon	19		mg C/L	P412108	
	EPA 8321B	2,4-D	0.011		ug/L	P412044	
		Acesulfame K	0.23	I	ug/L	P412075	
		2,4,5-T	0.0040	U	ug/L	P412044	
		AMPA	0.42		ug/L	P412075	
		Acetaminophen	0.0080	U	ug/L	P412044	
		Acetamiprid	0.0020	U	ug/L	P412044	
		Endothall	0.25	U	ug/L	P412075	
		Glufosinate	0.10	U	ug/L	P412075	
		Glyphosate	0.79		ug/L	P412075	
		Afidopyropen	0.0020	U	ug/L	P412044	
		Sucralose	0.28		ug/L	P412075	
		Bentazon	0.15		ug/L	P412044	MS
		Benzovindiflupyr	0.0020	U	ug/L	P412044	
		Carbamazepine	8.0E-04	U	ug/L	P412044	
		Clothianidin	0.080		ug/L	P412044	MS
		Dinotefuran	0.0020	U	ug/L	P412044	MS
		Diuron	0.0020	U	ug/L	P412044	
		Fenuron	0.016	U	ug/L	P412044	
		Fluridone	0.0044		ug/L	P412044	
		Imazapyr	0.27		ug/L	P412044	
		Hydrocodone	0.0020	U	ug/L	P412044	
		Ibuprofen	0.020	U	ug/L	P412044	
		Imidacloprid	0.052		ug/L	P412044	MS
		Linuron	0.0040	U	ug/L	P412044	
		Mandestrobin	0.0020	U	ug/L	P412044	
		MCPP	0.0040	U	ug/L	P412044	
		Naproxen	0.0080	UJ	ug/L	P412044	CCV
		Primidone	0.0040	UJ	ug/L	P412044	MS, RPD, SUR
		Pyraclostrobin	0.0020	U	ug/L	P412044	
		Silvex	0.0040	U	ug/L	P412044	

Field ID: G2SE0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316704	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P412044	MS
		Tolfenpyrad	0.0020	U	ug/L	P412044	
		Triclopyr	0.0040	U	ug/L	P412044	

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: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Krueger Creek Near Commissioner's Park

Collection Date/Time: 04/04/2022 13:20

Field ID: G2SE0069

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316705	EPA 200.7 Rev. 4.4	Calcium	292		mg/L	P412052	
		Iron	160	I	ug/L	P412052	
		Magnesium	863		mg/L	P412052	
		Strontium	5.57E+03		ug/L	P412052	
		Tin	150	U	ug/L	P412052	
		Titanium	4.6	I	ug/L	P412052	
		Vanadium	6.0	U	ug/L	P412052	
	EPA 200.8 Rev. 5.4	Zinc	15	U	ug/L	P412052	
		Aluminum	95		ug/L	P412052	
		Antimony	0.20	U	ug/L	P412052	
		Arsenic	2.51		ug/L	P412052	
		Beryllium	0.10	U	ug/L	P412052	
		Cadmium	0.080	U	ug/L	P412052	
		Chromium	1.6	U	ug/L	P412052	
		Cobalt	0.32		ug/L	P412052	
		Copper	3.4		ug/L	P412052	
		Lead	0.80	U	ug/L	P412052	
		Manganese	15.1		ug/L	P412052	
		Molybdenum	8.2		ug/L	P412052	
		Nickel	2.0	U	ug/L	P412052	
		Selenium	0.80	U	ug/L	P412052	
		Silver	0.040	U	ug/L	P412052	
		Thallium	0.40	U	ug/L	P412052	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium and strontium are unavailable because of high analyte concentration in the QC sample. Precision data and spike recoveries for tin are unavailable because sample matrix interference necessitated a high dilution.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P411984

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411991

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412052

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412052

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412226

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412235

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412081

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412209

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412067

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412091

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

Reference Method: EPA 8321B
Batch ID: P412044

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	0.0040	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P412075

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: P412137

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

Reference Method: SM 2540 C-2011
Batch ID: P412257

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P412128

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412108

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P411984

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411991

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.2		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	104		P	85 - 115
Strontium	107		P	85 - 115
Tin	110		P	85 - 115
Titanium	107		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.3		P	85 - 115
Antimony	99.4		P	85 - 115
Arsenic	98.2		P	85 - 115
Beryllium	91.3		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	96.4		P	85 - 115
Cobalt	98.3		P	85 - 115
Copper	94.2		P	85 - 115
Lead	98.2		P	85 - 115
Manganese	98.0		P	85 - 115
Molybdenum	98.0		P	85 - 115
Nickel	95.9		P	85 - 115
Selenium	96.1		P	85 - 115
Silver	101		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412226

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412235

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412081

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412209

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: P412067

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412091

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

Reference Method: EPA 8321B
Batch ID: P412044

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.6		P	40 - 150
2,4,5-T	76.5		P	40 - 150
Acetaminophen	67.3		P	30 - 150
Acetamiprid	93.2		P	40 - 150
Afidopyropen	74.6		P	40 - 150
Bentazon	147		P	30 - 150
Benzovindiflupyr	110		P	40 - 150
Carbamazepine	104		P	40 - 150
Clothianidin	139		P	40 - 150
Dinotefuran	118		P	40 - 150
Diuron	94.9		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	103		P	40 - 150
Hydrocodone	111		P	40 - 150
Ibuprofen	67.3		P	40 - 150
Imazapyr	101		P	40 - 150
Imidacloprid	112		P	40 - 150
Linuron	84.4		P	40 - 150
Mandestrobin	105		P	40 - 150
MCPP	94.0		P	40 - 150
Naproxen	96.4		P	40 - 150
Primidone	100		P	40 - 150
Pyraclostrobin	98.1		P	40 - 150
Silvex	52.4		P	40 - 150
Thiamethoxam	111		P	40 - 150
Tolfenpyrad	50.3		P	30 - 150
Triclopyr	66.2		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P412075

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	108		P	40 - 150
AMPA	131		P	40 - 150
Endothall	75.7		P	40 - 150
Glufosinate	122		P	40 - 150
Glyphosate	130		P	40 - 150
Sucralose	114		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P412137

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P412108

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315632	Iron	105	106	P/P	70 - 130
2315632	Titanium	102	103	P/P	70 - 130
2315632	Vanadium	103	103	P/P	70 - 130
2315632	Zinc	97.6	97.7	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315632	Aluminum	103	103	P/P	70 - 130
2315632	Antimony	96.5	97.3	P/P	70 - 130
2315632	Arsenic	111	114	P/P	70 - 130
2315632	Beryllium	105	104	P/P	70 - 130
2315632	Cadmium	89.0	93.5	P/P	70 - 130
2315632	Chromium	97.6	102	P/P	70 - 130
2315632	Cobalt	113	117	P/P	70 - 130
2315632	Copper	106	109	P/P	70 - 130
2315632	Lead	106	109	P/P	70 - 130
2315632	Manganese	92.4	99.3	P/P	70 - 130
2315632	Molybdenum	113	120	P/P	70 - 130
2315632	Nickel	116	121	P/P	70 - 130
2315632	Selenium	97.7	99.2	P/P	70 - 130
2315632	Silver	89.4	91.8	P/P	70 - 130
2315632	Thallium	107	112	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P412226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316179	Chloride	97.7		P	90 - 110
2316422	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P412235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316179	Sulfate	99.0		P	90 - 110
2316422	Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P412081

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316563	Ammonia-N	93.2	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P412209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315512	Kjeldahl Nitrogen	97.2	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P412067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316451	NO2NO3-N	98.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P412091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316427	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 8321B

Batch ID: P412044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316353	2,4-D	101	84.0	P/P	40 - 150
2316353	2,4,5-T	89.2	84.2	P/P	40 - 150
2316353	Acetaminophen	116	111	P/P	30 - 150
2316353	Acetamiprid	111	105	P/P	40 - 150
2316353	Afidopyropen	88.4	68.8	P/P	40 - 150
2316353	Bentazon	154	133	F/P	30 - 150
2316353	Benzovindiflupyr	122	110	P/P	40 - 150
2316353	Carbamazepine	108	110	P/P	40 - 150
2316353	Clothianidin	199	193	F/F	40 - 150
2316353	Dinotefuran	161	155	F/F	40 - 150
2316353	Diuron	89.9	75.0	P/P	40 - 150
2316353	Fenuron	142	135	P/P	40 - 150
2316353	Fluridone	105	105	P/P	40 - 150
2316353	Hydrocodone	140	123	P/P	40 - 150
2316353	Ibuprofen	53.2	44.8	P/P	40 - 150
2316353	Imidacloprid	145	174	P/F	40 - 150
2316353	Linuron	89.0	70.1	P/P	40 - 150
2316353	Mandestrobin	113	104	P/P	40 - 150
2316353	MCP	106	113	P/P	40 - 150
2316353	Naproxen	103	127	P/P	40 - 150
2316353	Primidone	160	95.3	F/P	40 - 150
2316353	Pyraclostrobin	104	101	P/P	40 - 150
2316353	Silvex	67.4	79.1	P/P	40 - 150
2316353	Thiamethoxam	182	180	F/F	40 - 150
2316353	Tolfenpyrad	44.0	59.1	P/P	30 - 150
2316353	Triclopyr	74.0	78.3	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P412075

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316438	Acesulfame K	111	116	P/P	40 - 150
2316438	AMPA	110	104	P/P	40 - 150
2316438	Endothall	74.5	72.1	P/P	40 - 150
2316438	Glufosinate	94.3	87.1	P/P	40 - 150
2316438	Glyphosate	106	103	P/P	40 - 150
2316438	Sucralose	86.4	88.7	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316174	Fluoride	98.3	97.7	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P412108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316699	Organic Carbon	97.8	93.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P411984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316562	Color (true)	2.60	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411991

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316597	Turbidity	13.7	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315632	Calcium	1.68	Spike	P	0 - 20
2315632	Iron	1.31	Spike	P	0 - 20
2315632	Magnesium	0.787	Spike	P	0 - 20
2315632	Strontium	1.21	Spike	P	0 - 20
2315632	Titanium	0.788	Spike	P	0 - 20
2315632	Vanadium	0.350	Spike	P	0 - 20
2315632	Zinc	0.118	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315632	Aluminum	0.0791	Spike	P	0 - 20
2315632	Antimony	0.836	Spike	P	0 - 20
2315632	Arsenic	2.40	Spike	P	0 - 20
2315632	Beryllium	1.45	Spike	P	0 - 20
2315632	Cadmium	4.90	Spike	P	0 - 20
2315632	Chromium	4.66	Spike	P	0 - 20
2315632	Cobalt	3.65	Spike	P	0 - 20
2315632	Copper	3.49	Spike	P	0 - 20
2315632	Lead	2.86	Spike	P	0 - 20
2315632	Manganese	4.42	Spike	P	0 - 20
2315632	Molybdenum	4.54	Spike	P	0 - 20
2315632	Nickel	4.34	Spike	P	0 - 20
2315632	Selenium	1.53	Spike	P	0 - 20
2315632	Silver	2.70	Spike	P	0 - 20
2315632	Thallium	4.25	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316179	Chloride	0.281	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316179	Sulfate	0.186	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412081

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316563	Ammonia-N	3.53	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315512	Kjeldahl Nitrogen	4.55	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316451	NO2NO3-N	0.467	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316427	Total-P	1.33	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P412044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316353	2,4-D	18.2	Spike	P	0 - 30
2316353	2,4,5-T	5.78	Spike	P	0 - 30
2316353	Acetaminophen	4.02	Spike	P	0 - 30
2316353	Acetamiprid	5.78	Spike	P	0 - 30
2316353	Afidopyropen	25.0	Spike	P	0 - 30
2316353	Bentazon	9.06	Spike	P	0 - 30
2316353	Benzovindiflupyr	9.81	Spike	P	0 - 30
2316353	Carbamazepine	2.51	Spike	P	0 - 30
2316353	Clothianidin	3.07	Spike	P	0 - 30
2316353	Dinotefuran	3.02	Spike	P	0 - 30
2316353	Diuron	18.1	Spike	P	0 - 30
2316353	Fenuron	5.25	Spike	P	0 - 30
2316353	Fluridone	0.486	Spike	P	0 - 30
2316353	Hydrocodone	13.3	Spike	P	0 - 30
2316353	Ibuprofen	17.1	Spike	P	0 - 30
2316353	Imazapyr	6.11	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P412044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316353	Imidacloprid	18.1	Spike	P	0 - 30
2316353	Linuron	23.8	Spike	P	0 - 30
2316353	Mandestrobin	8.25	Spike	P	0 - 30
2316353	MCPP	7.05	Spike	P	0 - 30
2316353	Naproxen	21.2	Spike	P	0 - 30
2316353	Primidone	50.5	Spike	F	0 - 30
2316353	Pyraclostrobin	2.65	Spike	P	0 - 30
2316353	Silvex	16.0	Spike	P	0 - 30
2316353	Thiamethoxam	1.41	Spike	P	0 - 30
2316353	Tolfenpyrad	29.2	Spike	P	0 - 30
2316353	Triclopyr	5.64	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412075

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316438	Acesulfame K	4.66	Spike	P	0 - 30
2316438	AMPA	5.71	Spike	P	0 - 30
2316438	Endothall	3.27	Spike	P	0 - 30
2316438	Glufosinate	8.01	Spike	P	0 - 30
2316438	Glyphosate	3.11	Spike	P	0 - 30
2316438	Sucralose	2.62	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P412137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316174	Total Alkalinity	1.42	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P412257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316698	TDS	1.04	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316174	Fluoride	0.492	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P412108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316699	Organic Carbon	2.27	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2316704

Field Sample ID: G2SE0018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	68.0	P	30 - 160
EPA 8321B	Endothall-d6	77.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	40.1	P	30 - 160
EPA 8321B	Primidone-d5	206	F	30 - 160
EPA 8321B	Sucralose-d6	95.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A111313

Included Lab Sample IDs: 2316698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111318

Included Lab Sample IDs: 2316698

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111361

Included Lab Sample IDs: 2316699

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111365

Included Lab Sample IDs: 2316699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.1	97.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111368

Included Lab Sample IDs: 2316698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.7	96.8	P/P	90 - 110
Sulfate	99.1	99.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111373

Included Lab Sample IDs: 2316699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	98.2	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A111388

Included Lab Sample IDs: 2316698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.9	97.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111388

Included Lab Sample IDs: 2316698

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111401

Included Lab Sample IDs: 2316705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	101	102	P/P	90 - 110
Arsenic	102	104	P/P	90 - 110
Beryllium	99.5	97.7	P/P	90 - 110
Cadmium	99.5	100	P/P	90 - 110
Chromium	98.1	98.1	P/P	90 - 110
Cobalt	102	103	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	98.0	99.0	P/P	90 - 110
Manganese	98.7	99.4	P/P	90 - 110
Molybdenum	99.3	100	P/P	90 - 110
Nickel	102	103	P/P	90 - 110
Selenium	99.6	101	P/P	90 - 110
Silver	105	105	P/P	90 - 110
Thallium	97.6	97.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111413

Included Lab Sample IDs: 2316704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	149	116	P/P	60 - 160
Glufosinate	114	128	P/P	60 - 160
Glyphosate	129	126	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111419

Included Lab Sample IDs: 2316704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	83.0	82.4	P/P	60 - 160
Endothall	78.3	68.1	P/P	60 - 160
Sucralose	91.3	90.6	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111420

Included Lab Sample IDs: 2316705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.6	99.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111428

Included Lab Sample IDs: 2316704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.0	86.8	P/P	50 - 150
2,4,5-T	96.0	99.0	P/P	50 - 150
Acetaminophen	102	110	P/P	60 - 160
Acetamiprid	104	102	P/P	50 - 150
Afidopyropen	99.4	102	P/P	50 - 150
Bentazon	98.7	147	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A111428
Included Lab Sample IDs: 2316704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Benzovindiflupyr	111	110	P/P	50 - 150
Carbamazepine	109	90.9	P/P	60 - 150
Clothianidin	121	135	P/P	60 - 150
Dinotefuran	99.9	95.2	P/P	50 - 150
Diuron	104	116	P/P	60 - 160
Fenuron	87.9	98.7	P/P	60 - 150
Fluridone	101	81.5	P/P	60 - 160
Hydrocodone	107	96.8	P/P	60 - 150
Ibuprofen	85.7	134	P/P	50 - 160
Imazapyr	93.0	100	P/P	50 - 150
Imidacloprid	78.2	100	P/P	60 - 150
Linuron	80.1	91.4	P/P	60 - 150
Mandestrobin	99.6	101	P/P	50 - 150
MCPP	88.7	83.3	P/P	50 - 150
Naproxen	99.2	174*	P/F	50 - 160
Primidone	136	86.5	P/P	60 - 150
Pyraclostrobin	105	96.9	P/P	60 - 150
Silvex	84.1	86.1	P/P	50 - 150
Thiamethoxam	102	88.6	P/P	50 - 150
Tolfenpyrad	110	94.9	P/P	60 - 150
Triclopyr	104	101	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111430
Included Lab Sample IDs: 2316699

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A111510
Included Lab Sample IDs: 2316705

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	104	P/P	90 - 110
Iron	106	107	P/P	90 - 110
Magnesium	105	106	P/P	90 - 110
Strontium	99.6	102	P/P	90 - 110
Tin	101	98.9	P/P	90 - 110
Titanium	98.4	98.7	P/P	90 - 110
Vanadium	100	101	P/P	90 - 110
Zinc	101	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A111545
Included Lab Sample IDs: 2316699

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.6	96.4	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	101				2.60	
EPA 180.1 Rev. 2.0	Turbidity	96.2				13.7	
EPA 200.7 Rev. 4.4	Calcium	106					1.68
	Iron	107	105	106			1.31
	Magnesium	104					0.787
	Strontium	107					1.21
	Tin	110					
	Titanium	107	102	103			0.788
	Vanadium	101	103	103			0.350
	Zinc	106	97.6	97.7			0.118
EPA 200.8 Rev. 5.4	Aluminum	98.3	103	103			0.0791
	Antimony	99.4	96.5	97.3			0.836
	Arsenic	98.2	111	114			2.40
	Beryllium	91.3	105	104			1.45
	Cadmium	98.9	89.0	93.5			4.90
	Chromium	96.4	97.6	102			4.66
	Cobalt	98.3	113	117			3.65
	Copper	94.2	106	109			3.49
	Lead	98.2	106	109			2.86
	Manganese	98.0	92.4	99.3			4.42
	Molybdenum	98.0	113	120			4.54
	Nickel	95.9	116	121			4.34
	Selenium	96.1	97.7	99.2			1.53
	Silver	101	89.4	91.8			2.70
	Thallium	102	107	112			4.25
EPA 300.0 Rev. 2.1	Chloride	99.5	97.7	97.2		0.281	
	Sulfate	99.5	99.0	97.8		0.186	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	93.2	96.8			3.53
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	97.2	102			4.55
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	98.2				0.467
EPA 365.1 Rev. 2.0	Total-P	99.0	104	102			1.33
EPA 8321B	2,4-D	79.6	101	84.0			18.2
	2,4,5-T	76.5	89.2	84.2			5.78
	Acesulfame K	108	111	116			4.66
	Acetaminophen	67.3	116	111			4.02
	Acetamiprid	93.2	111	105			5.78
	Afidopyropen	74.6	88.4	68.8			25.0
	AMPA	131	110	104			5.71
	Bentazon	147	154	133			9.06
	Benzovindiflupyr	110	122	110			9.81
	Carbamazepine	104	108	110			2.51
	Clothianidin	139	199	193			3.07
	Dinotefuran	118	161	155			3.02
	Diuron	94.9	89.9	75.0			18.1
	Endothall	75.7	74.5	72.1			3.27
	Fenuron	112	142	135			5.25
	Fluridone	103	105	105			0.486
	Glufosinate	122	94.3	87.1			8.01
	Glyphosate	130	106	103			3.11
	Hydrocodone	111	140	123			13.3
	Ibuprofen	67.3	53.2	44.8			17.1
	Imazapyr	101					6.11
	Imidacloprid	112	145	174			18.1
	Linuron	84.4	89.0	70.1			23.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Mandestrobin	105	113	104		8.25
	MCPP	94.0	106	113		7.05
	Naproxen	96.4	103	127		21.2
	Primidone	100	160	95.3		50.5
	Pyraclostrobin	98.1	104	101		2.65
	Silvex	52.4	67.4	79.1		16.0
	Sucralose	114	86.4	88.7		2.62
	Thiamethoxam	111	182	180		1.41
	Tolfenpyrad	50.3	44.0	59.1		29.2
	Triclopyr	66.2	74.0	78.3		5.64
	Total Alkalinity	98.5			1.42	
SM 2320 B-2011	TDS				1.04	
SM 2540 C-2011	Fluoride	98.3	98.3	97.7		0.492
SM 4500-F- C-2011	Organic Carbon	98.1	97.8	93.4		2.27

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2316698
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2316698
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2316705
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2316705
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2316698
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2316698
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2316699
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2316699
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2316699
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2316699
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2316704
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2316698
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2316698
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2316698
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2316698
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2316699

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	04/05/2022			04/05/2022 15:05	Anna M. Plaviak	2316698
EPA 180.1 Rev. 2.0	04/05/2022			04/05/2022 14:47	Khloe J Berg	2316698
EPA 200.7 Rev. 4.4	04/05/2022	04/07/2022 10:25	Megan Whitefoot	04/14/2022 00:32	Josef B Mick	2316705
	04/05/2022	04/07/2022 10:25	Megan Whitefoot	04/14/2022 00:40	Josef B Mick	2316705
EPA 200.8 Rev. 5.4	04/05/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 16:34	Alexander Thompson	2316705
	04/05/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 18:49	Alexander Thompson	2316705
	04/05/2022	04/07/2022 10:25	Megan Whitefoot	04/11/2022 13:16	Alexander Thompson	2316705
EPA 300.0 Rev. 2.1	04/05/2022			04/08/2022 00:55	Anna M. Plaviak	2316698
EPA 350.1 Rev. 2.0	04/05/2022			04/07/2022 11:04	Ping Hua	2316699
EPA 351.2 Rev. 2.0	04/05/2022	04/14/2022 09:55	Samantha L Bates	04/18/2022 14:46	Alexandra J Mattheus	2316699
EPA 353.2 Rev. 2.0	04/05/2022			04/07/2022 10:18	Beverly Y. Sanders	2316699
EPA 365.1 Rev. 2.0	04/05/2022	04/11/2022 17:15	Simonne.V. Calhoun	04/12/2022 13:16	Sarah A Nixon	2316699
EPA 8321B	04/05/2022	04/07/2022 09:00	June Rhew	04/08/2022 04:48	Juyoung Kim	2316704
	04/05/2022	04/07/2022 09:00	June Rhew	04/08/2022 13:47	Juyoung Kim	2316704
	04/05/2022	04/08/2022 12:00	Manjita Shrestha	04/08/2022 15:08	Manjita Shrestha	2316704
	04/05/2022	04/08/2022 12:00	Manjita Shrestha	04/09/2022 05:13	Manjita Shrestha	2316704
SM 2320 B-2011	04/05/2022			04/08/2022 07:34	Dale L. Simmons	2316698
SM 2540 C-2011	04/05/2022			04/07/2022 13:30	Simonne.V. Calhoun	2316698
SM 2540 D-2011	04/05/2022			04/07/2022 13:30	Simonne.V. Calhoun	2316698
SM 4500-F- C-2011	04/05/2022			04/08/2022 07:34	Dale L. Simmons	2316698
SM 5310 B-2011	04/05/2022			04/07/2022 14:37	Khloe J Berg	2316699