

Chemical Analysis Report

SW-DIST-2022-09-20-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Run 7: Gilly Gamble Buffalo Manatee**
Request ID: **RQ-2022-09-19-24**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Ben Paswater

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 11-OCT-2022 12:34

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: Manatee River near River Isles Clubhouse

Collection Date/Time: 09/19/2022 14:55

Field ID: G2SW0119

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357762	EPA 8321B	2,4-D	0.012		ug/L	P419841	
		Acesulfame K	0.10	U	ug/L	P419829	
		2,4,5-T	0.0040	U	ug/L	P419841	
		AMPA	5.4		ug/L	P419829	
		Acetaminophen	0.0080	U	ug/L	P419841	
		Acetamiprid	0.0024	I	ug/L	P419841	
		Endothall	0.25	U	ug/L	P419829	MS
		Glufosinate	0.10	U	ug/L	P419829	
		Glyphosate	3.6		ug/L	P419829	
		Afidopyropen	0.0020	U	ug/L	P419841	
		Bentazon	0.46		ug/L	P419841	
		Sucralose	0.27		ug/L	P419829	
		Benzovindiflupyr	0.0020	U	ug/L	P419841	
		Carbamazepine	8.0E-04	U	ug/L	P419841	
		Clothianidin	0.0097		ug/L	P419841	
		Dinotefuran	0.053		ug/L	P419841	
		Diuron	0.0020	U	ug/L	P419841	
		Fenuron	0.016	U	ug/L	P419841	
		Fluridone	0.010		ug/L	P419841	
		Imazapyr	0.47		ug/L	P419841	
		Hydrocodone	0.0020	U	ug/L	P419841	
		Ibuprofen	0.020	U	ug/L	P419841	
		Imidacloprid	0.15		ug/L	P419841	
		Linuron	0.0040	U	ug/L	P419841	
		Mandestrobin	0.0020	U	ug/L	P419841	
		MCPP	0.0020	U	ug/L	P419841	
		Naproxen	0.0080	U	ug/L	P419841	
		Primidone	0.0040	U	ug/L	P419841	
		Pyraclostrobin	0.0020	U	ug/L	P419841	
		Silvex	0.0040	U	ug/L	P419841	
		Thiamethoxam	0.027		ug/L	P419841	
		Tolfenpyrad	0.0020	U	ug/L	P419841	
		Triclopyr	0.0040	U	ug/L	P419841	

Ref. Method and Comment:

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

Sample Location: Buffalo Creek Canal @ 115th Ave.

Collection Date/Time: 09/19/2022 11:20

Field ID: G1SW0123

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357760	EPA 8321B	2,4-D	0.025		ug/L	P419841	
		Acesulfame K	0.10	U	ug/L	P419829	
		2,4,5-T	0.0040	U	ug/L	P419841	
		AMPA	1.3		ug/L	P419829	
		Acetaminophen	0.0080	U	ug/L	P419841	
		Acetamiprid	0.0020	U	ug/L	P419841	
		Endothall	0.25	U	ug/L	P419829	MS
		Glufosinate	0.10	U	ug/L	P419829	
		Glyphosate	1.7		ug/L	P419829	
		Afidopyropen	0.0020	U	ug/L	P419841	
		Bentazon	0.048		ug/L	P419841	
		Sucralose	1.9		ug/L	P419829	
		Benzovindiflupyr	0.0020	U	ug/L	P419841	
		Carbamazepine	0.0013	I	ug/L	P419841	
		Clothianidin	0.023		ug/L	P419841	
		Dinotefuran	0.0031	I	ug/L	P419841	
		Diuron	0.010		ug/L	P419841	
		Fenuron	0.016	U	ug/L	P419841	
		Fluridone	1.0		ug/L	P419841	
		Imazapyr	0.24		ug/L	P419841	
		Hydrocodone	0.0020	U	ug/L	P419841	
		Ibuprofen	0.020	U	ug/L	P419841	
		Imidacloprid	0.032		ug/L	P419841	
		Linuron	0.0040	U	ug/L	P419841	
		Mandestrobin	0.0020	U	ug/L	P419841	
		MCPP	0.0029	I	ug/L	P419841	
		Naproxen	0.0080	U	ug/L	P419841	
		Primidone	0.0096	I	ug/L	P419841	
		Pyraclostrobin	0.0020	U	ug/L	P419841	
		Silvex	0.0040	U	ug/L	P419841	
		Thiamethoxam	0.011		ug/L	P419841	
		Tolfenpyrad	0.0020	U	ug/L	P419841	
		Triclopyr	0.0040	U	ug/L	P419841	

Ref. Method and Comment:

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

Sample Location: Gamble Creek West Branch @ CR 675

Collection Date/Time: 09/19/2022 13:30

Field ID: G2SW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357761	EPA 8321B	2,4-D	0.0068	I	ug/L	P419841	
		Acesulfame K	0.10	U	ug/L	P419829	
		2,4,5-T	0.0040	U	ug/L	P419841	
		AMPA	1.4		ug/L	P419829	
		Acetaminophen	0.0080	U	ug/L	P419841	
		Acetamiprid	0.021		ug/L	P419841	
		Endothall	0.25	U	ug/L	P419829	MS
		Glufosinate	0.10	U	ug/L	P419829	
		Glyphosate	2.1		ug/L	P419829	
		Afidopyropen	0.0020	U	ug/L	P419841	
		Bentazon	0.066		ug/L	P419841	
		Sucralose	0.094		ug/L	P419829	
		Benzovindiflupyr	0.0021	I	ug/L	P419841	
		Carbamazepine	8.0E-04	U	ug/L	P419841	
		Clothianidin	0.0024	I	ug/L	P419841	
		Dinotefuran	0.35		ug/L	P419841	
		Diuron	0.0020	U	ug/L	P419841	
		Fenuron	0.016	U	ug/L	P419841	
		Fluridone	8.0E-04	U	ug/L	P419841	
		Imazapyr	0.049		ug/L	P419841	
		Hydrocodone	0.0020	U	ug/L	P419841	
		Ibuprofen	0.020	U	ug/L	P419841	
		Imidacloprid	0.032		ug/L	P419841	
		Linuron	0.0040	U	ug/L	P419841	
		Mandestrobin	0.0020	U	ug/L	P419841	
		MCPP	0.0036	I	ug/L	P419841	
		Naproxen	0.0080	U	ug/L	P419841	
		Primidone	0.0040	U	ug/L	P419841	
		Pyraclostrobin	0.0020	U	ug/L	P419841	
		Silvex	0.0040	U	ug/L	P419841	
		Thiamethoxam	0.014		ug/L	P419841	
		Tolfenpyrad	0.0020	U	ug/L	P419841	
		Triclopyr	0.0040	U	ug/L	P419841	

Ref. Method and Comment:

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

Sample Location: Gamble Creek West Branch @ CR 675

Collection Date/Time: 09/19/2022 13:30

Field ID: G2SW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357750	DEP SOP: NU-094-1	Color (true)	280		PCU	P419864	
	EPA 180.1 Rev. 2.0	Turbidity	7.8		NTU	P419882	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P420255	
		Sulfate	48		mg SO4/L	P420259	
	SM 2320 B-2011	Total Alkalinity	45		mg CaCO3/L	P420278	
	SM 2540 C-2011	TDS	195		mg/L	P420295	
	SM 2540 D-2011	TSS	6	I	mg/L	P420240	
2357751	SM 4500-F- C-2011	Fluoride	0.33		mg F/L	P420216	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P420309	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P420074	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.19		mg N/L	P420157	
	EPA 365.1 Rev. 2.0	Total-P	0.77		mg P/L	P419950	
2357752	SM 5310 B-2011	Organic Carbon	29		mg C/L	P420034	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.62		mg P/L	P419865	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Gilley Crk @ Stricklands

Collection Date/Time: 09/19/2022 12:55

Field ID: G2SW0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357767	DEP SOP: NU-094-1	Color (true)	380		PCU	P419864	
	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P419882	
	EPA 300.0 Rev. 2.1	Chloride	9.1		mg Cl/L	P420255	
		Sulfate	11		mg SO4/L	P420259	
	SM 2320 B-2011	Total Alkalinity	9.6		mg CaCO3/L	P420278	
	SM 2540 C-2011	TDS	106		mg/L	P420295	
	SM 2540 D-2011	TSS	6	I	mg/L	P420240	
2357768	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P420216	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.029		mg N/L	P420309	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P420074	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P420157	
	EPA 365.1 Rev. 2.0	Total-P	0.49		mg P/L	P419950	
2357769	SM 5310 B-2011	Organic Carbon	32		mg C/L	P420034	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.40		mg P/L	P419865	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P419864

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419882

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420255

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420259

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420309

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420074

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420157

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419950

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419865

Component	Result	Code	Units
O-Phosphate-P	0.0040	U	mg P/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P419829

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: P419841

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
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: SM 2320 B-2011

Batch ID: P420278

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

Reference Method: SM 2540 C-2011

Batch ID: P420295

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P420240

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P420216

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P420034

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: P419864

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419882

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420255

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420259

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420309

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420074

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420157

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419950

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419865

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P419829

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	103		P	40 - 150
Endothall	90.7		P	40 - 150
Glufosinate	94.8		P	40 - 150
Glyphosate	94.1		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P419841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.6		P	30 - 160
2,4,5-T	65.9		P	30 - 160
Acetaminophen	99.5		P	30 - 150
Acetamiprid	86.2		P	30 - 160
Afidopyropen	71.1		P	30 - 160
Bentazon	90.7		P	30 - 150
Benzovindiflupyr	84.4		P	30 - 160
Carbamazepine	87.7		P	30 - 160
Clothianidin	98.6		P	30 - 160
Dinotefuran	105		P	30 - 160
Diuron	58.8		P	30 - 160
Fenuron	107		P	30 - 160
Fluridone	92.4		P	30 - 160
Hydrocodone	96.5		P	30 - 160
Ibuprofen	84.4		P	30 - 160
Imazapyr	91.7		P	30 - 160
Imidacloprid	93.3		P	30 - 160
Linuron	91.9		P	30 - 160
Mandestrobin	95.2		P	30 - 160
MCPP	78.9		P	30 - 160
Naproxen	81.2		P	30 - 160
Primidone	95.1		P	30 - 160
Pyraclostrobin	82.2		P	30 - 160
Silvex	61.4		P	30 - 160
Thiamethoxam	92.7		P	30 - 160
Tolfenpyrad	64.9		P	30 - 160
Triclopyr	64.4		P	30 - 160

Reference Method: SM 2320 B-2011

Batch ID: P420278

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P420216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.0		P	94 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P420034

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420255

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357609	Chloride	93.2		P	90 - 110
2357656	Chloride	95.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357609	Sulfate	95.5		P	90 - 110
2357656	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420309

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357786	Ammonia-N	107	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420157

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357588	NO2NO3-N	99.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357785	Total-P	103	107	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P419829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357422	Acesulfame K	72.8	72.3	P/P	40 - 150
2357422	AMPA	82.2	81.7	P/P	40 - 150
2357422	Endothall	159	153	F/F	40 - 150
2357422	Glufosinate	68.7	68.8	P/P	40 - 150
2357422	Glyphosate	90.2	96.1	P/P	40 - 150
2357422	Sucralose	97.2	101	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P419841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356890	2,4-D	97.8	107	P/P	30 - 160
2356890	2,4,5-T	86.4	83.7	P/P	30 - 160
2356890	Acetaminophen	119	119	P/P	30 - 150
2356890	Acetamiprid	60.8	60.4	P/P	30 - 160
2356890	Afidopyrophen	89.0	82.7	P/P	30 - 160
2356890	Benzovindiflupyr	79.8	79.4	P/P	30 - 160
2356890	Carbamazepine	69.7	70.2	P/P	30 - 160
2356890	Clothianidin	111	119	P/P	30 - 160
2356890	Dinotefuran	114	116	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P419841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356890	Diuron	51.9	50.9	P/P	30 - 160
2356890	Fenuron	96.6	94.4	P/P	30 - 160
2356890	Fluridone	96.5	88.1	P/P	30 - 160
2356890	Hydrocodone	100	101	P/P	30 - 160
2356890	Ibuprofen	81.4	92.6	P/P	30 - 160
2356890	Linuron	78.6	73.5	P/P	30 - 160
2356890	Mandestrobin	91.4	97.4	P/P	30 - 160
2356890	MCCP	89.3	96.1	P/P	30 - 160
2356890	Naproxen	102	95.2	P/P	30 - 160
2356890	Primidone	103	120	P/P	30 - 160
2356890	Pyraclostrobin	91.0	91.2	P/P	30 - 160
2356890	Silvex	85.6	89.3	P/P	30 - 160
2356890	Thiamethoxam	140	141	P/P	30 - 160
2356890	Tolfenpyrad	64.7	67.5	P/P	30 - 160
2356890	Triclopyr	79.8	94.7	P/P	30 - 160

Reference Method: SM 4500-F- C-2011
Batch ID: P420216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357589	Fluoride	99.9	100	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P420034

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357640	Organic Carbon	100	98.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357458	Color (true)	0.785	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357608	Turbidity	10.7	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420255

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357609	Chloride	0.245	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420259

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357609	Sulfate	0.327	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P420309

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357786	Ammonia-N	4.78	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P420074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357445	Kjeldahl Nitrogen	12.5	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420157

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357588	NO2NO3-N	2.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357785	Total-P	3.90	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P419865

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357769	O-Phosphate-P	1.11	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P419829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357422	Acesulfame K	0.742	Spike	P	0 - 30
2357422	AMPA	0.595	Spike	P	0 - 30
2357422	Endothall	3.89	Spike	P	0 - 30
2357422	Glufosinate	0.111	Spike	P	0 - 30
2357422	Glyphosate	6.25	Spike	P	0 - 30
2357422	Sucralose	3.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P419841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356890	2,4-D	6.97	Spike	P	0 - 30
2356890	2,4,5-T	3.17	Spike	P	0 - 30
2356890	Acetaminophen	0.0925	Spike	P	0 - 30
2356890	Acetamiprid	0.694	Spike	P	0 - 30
2356890	Afidopyropen	7.44	Spike	P	0 - 30
2356890	Bentazon	1.63	Spike	P	0 - 30
2356890	Benzovindiflupyr	0.440	Spike	P	0 - 30
2356890	Carbamazepine	0.686	Spike	P	0 - 30
2356890	Clothianidin	6.91	Spike	P	0 - 30
2356890	Dinotefuran	0.974	Spike	P	0 - 30
2356890	Diuron	1.96	Spike	P	0 - 30
2356890	Fenuron	2.20	Spike	P	0 - 30
2356890	Fluridone	7.75	Spike	P	0 - 30
2356890	Hydrocodone	0.537	Spike	P	0 - 30
2356890	Ibuprofen	12.9	Spike	P	0 - 30
2356890	Imazapyr	3.93	Spike	P	0 - 30
2356890	Imidacloprid	0.550	Spike	P	0 - 30
2356890	Linuron	6.80	Spike	P	0 - 30
2356890	Mandestrobin	6.27	Spike	P	0 - 30
2356890	MCPP	7.32	Spike	P	0 - 30
2356890	Naproxen	7.02	Spike	P	0 - 30
2356890	Primidone	15.9	Spike	P	0 - 30
2356890	Pyraclostrobin	0.318	Spike	P	0 - 30
2356890	Silvex	4.30	Spike	P	0 - 30
2356890	Thiamethoxam	0.00712	Spike	P	0 - 30
2356890	Tolfenpyrad	4.15	Spike	P	0 - 30
2356890	Triclopyr	17.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P420278

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357780	Total Alkalinity	0.269	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P420295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357612	TDS	4.24	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P420216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357589	Fluoride	0.479	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P420034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357640	Organic Carbon	1.06	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2357760

Field Sample ID: G1SW0123

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.8	P	30 - 160
EPA 8321B	Diuron-d6	50.7	P	30 - 160
EPA 8321B	Endothall-d6	155	P	30 - 160
EPA 8321B	Endothall-d6	155	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	94.9	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	93.7	P	30 - 160

Lab Sample ID: 2357761

Field Sample ID: G2SW0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.7	P	30 - 160
EPA 8321B	Diuron-d6	55.4	P	30 - 160
EPA 8321B	Endothall-d6	152	P	30 - 160
EPA 8321B	Endothall-d6	152	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	110	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.1	P	30 - 160
EPA 8321B	Primidone-d5	91.3	P	30 - 160
EPA 8321B	Sucralose-d6	94.5	P	30 - 160

Lab Sample ID: 2357762

Field Sample ID: G2SW0119

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	62.0	P	30 - 160
EPA 8321B	Diuron-d6	46.5	P	30 - 160
EPA 8321B	Endothall-d6	145	P	30 - 160
EPA 8321B	Endothall-d6	145	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.9	P	30 - 160
EPA 8321B	Primidone-d5	96.2	P	30 - 160
EPA 8321B	Sucralose-d6	93.0	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A114832

Included Lab Sample IDs: 2357750, 2357767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A114833

Included Lab Sample IDs: 2357752, 2357769

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114837

Included Lab Sample IDs: 2357750, 2357767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A114858

Included Lab Sample IDs: 2357760, 2357761, 2357762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	113	110	P/P	60 - 160
Endothall	98.8	99.4	P/P	60 - 160
Glufosinate	95.8	107	P/P	60 - 160
Glyphosate	107	109	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A114873

Included Lab Sample IDs: 2357760, 2357761, 2357762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	112	P/P	60 - 160
Sucralose	103	101	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A114912

Included Lab Sample IDs: 2357751, 2357768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114913

Included Lab Sample IDs: 2357751, 2357768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.9	P/P	90 - 110
Total-P	99.4	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A114916

Included Lab Sample IDs: 2357760, 2357761, 2357762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	89.8	P/P	50 - 150
2,4,5-T	112	95.9	P/P	50 - 150
Acetaminophen	110	109	P/P	60 - 160
Acetamiprid	103	102	P/P	50 - 150
Afidopyropen	112	116	P/P	50 - 150
Bentazon	102	113	P/P	50 - 160
Bentazon	99.2	113	P/P	50 - 160
Benzovindiflupyr	119	118	P/P	50 - 160
Carbamazepine	107	110	P/P	60 - 150
Clothianidin	104	110	P/P	60 - 150
Dinotefuran	112	113	P/P	50 - 150
Diuron	113	110	P/P	60 - 160
Fenuron	106	105	P/P	60 - 150
Fluridone	102	110	P/P	60 - 160
Fluridone	110	107	P/P	60 - 160
Hydrocodone	117	111	P/P	60 - 150
Ibuprofen	142	112	P/P	50 - 160
Imazapyr	99.0	106	P/P	50 - 150
Imidacloprid	100	105	P/P	60 - 150
Linuron	109	115	P/P	60 - 150
Mandestrobin	111	112	P/P	50 - 150
MCPP	101	99.2	P/P	50 - 150
Naproxen	86.5	79.4	P/P	50 - 160
Primidone	106	111	P/P	60 - 150
Pyraclostrobin	109	107	P/P	60 - 150
Silvex	104	104	P/P	50 - 150
Thiamethoxam	111	109	P/P	50 - 150
Tolfenpyrad	118	107	P/P	60 - 150
Triclopyr	106	116	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114957

Included Lab Sample IDs: 2357751, 2357768

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114974

Included Lab Sample IDs: 2357751, 2357768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	108	96.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A114980

Included Lab Sample IDs: 2357750, 2357767

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114999

Included Lab Sample IDs: 2357750, 2357767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.5	100	P/P	90 - 110
Sulfate	99.3	99.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A115007

Included Lab Sample IDs: 2357750, 2357767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.2	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115028

Included Lab Sample IDs: 2357751, 2357768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	98.6	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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	102				0.785	
EPA 180.1 Rev. 2.0	Turbidity	101				10.7	
EPA 300.0 Rev. 2.1	Chloride	98.9	93.2	95.0		0.245	
	Sulfate	97.5	95.5	95.8		0.327	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	107	98.0			4.78
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107					12.5
EPA 353.2 Rev. 2.0	NO2NO3-N	103	99.0	101			2.00
EPA 365.1 Rev. 2.0	Total-P	105	103	107			3.90
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	95.8					1.11
EPA 8321B	2,4-D	71.6	97.8	107			6.97
	2,4,5-T	65.9	86.4	83.7			3.17
	Acesulfame K	104	72.8	72.3			0.742
	Acetaminophen	99.5	119	119			0.0925
	Acetamiprid	86.2	60.8	60.4			0.694
	Afidopyropen	71.1	89.0	82.7			7.44
	AMPA	103	82.2	81.7			0.595
	Bentazon	90.7					1.63
	Benzovindiflupyr	84.4	79.8	79.4			0.440
	Carbamazepine	87.7	69.7	70.2			0.686
	Clothianidin	98.6	111	119			6.91
	Dinotefuran	105	114	116			0.974
	Diuron	58.8	51.9	50.9			1.96
	Endothall	90.7	159	153			3.89
	Fenuron	107	96.6	94.4			2.20
	Fluridone	92.4	96.5	88.1			7.75
	Glufosinate	94.8	68.7	68.8			0.111
	Glyphosate	94.1	90.2	96.1			6.25
	Hydrocodone	96.5	100	101			0.537
	Ibuprofen	84.4	81.4	92.6			12.9
	Imazapyr	91.7					3.93
	Imidacloprid	93.3					0.550
	Linuron	91.9	78.6	73.5			6.80
	Mandestrobin	95.2	91.4	97.4			6.27
	MCPP	78.9	89.3	96.1			7.32
	Naproxen	81.2	102	95.2			7.02
	Primidone	95.1	103	120			15.9
	Pyraclostrobin	82.2	91.0	91.2			0.318
	Silvex	61.4	85.6	89.3			4.30
	Sucralose	100	97.2	101			3.99
	Thiamethoxam	92.7	140	141			0.0071
	Tolfenpyrad	64.9	64.7	67.5			4.15
	Triclopyr	64.4	79.8	94.7			17.1
SM 2320 B-2011	Total Alkalinity	105				0.269	
SM 2540 C-2011	TDS					4.24	
SM 4500-F- C-2011	Fluoride	96.0	99.9	100			0.479
SM 5310 B-2011	Organic Carbon	96.2	100	98.5			1.06

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2357750, 2357767
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2357750, 2357767
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2357750, 2357767

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2357750, 2357767
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2357751, 2357768
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2357751, 2357768
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2357751, 2357768
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2357751, 2357768
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2357752, 2357769
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2357760, 2357761, 2357762
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2357750, 2357767
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2357750, 2357767
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2357750, 2357767
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2357750, 2357767
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2357751, 2357768

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	09/20/2022			09/20/2022 16:15	Anna M. Plaviak	2357750
	09/20/2022			09/20/2022 16:16	Anna M. Plaviak	2357767
EPA 180.1 Rev. 2.0	09/20/2022			09/20/2022 14:23	Chandler E Cox	2357750
	09/20/2022			09/20/2022 14:25	Chandler E Cox	2357767
EPA 300.0 Rev. 2.1	09/20/2022			09/27/2022 16:13	Anna M. Plaviak	2357750
	09/20/2022			09/27/2022 16:28	Anna M. Plaviak	2357767
EPA 350.1 Rev. 2.0	09/20/2022			09/29/2022 12:42	Ping Hua	2357751
	09/20/2022			09/29/2022 12:43	Ping Hua	2357768
EPA 351.2 Rev. 2.0	09/20/2022	09/26/2022 10:38	Alexandra J Mattheus	09/27/2022 11:32	Alexandra J Mattheus	2357751
	09/20/2022	09/26/2022 10:38	Alexandra J Mattheus	09/27/2022 11:33	Alexandra J Mattheus	2357768
EPA 353.2 Rev. 2.0	09/20/2022			09/27/2022 11:41	Judith K. Clark	2357751
	09/20/2022			09/27/2022 11:42	Judith K. Clark	2357768
EPA 365.1 Rev. 2.0	09/20/2022	09/22/2022 14:19	Adam P Silver	09/22/2022 19:34	Simonne.V. Calhoun	2357751
	09/20/2022	09/22/2022 14:19	Adam P Silver	09/22/2022 19:37	Simonne.V. Calhoun	2357768
EPA 365.1 Rev. 2.0 dissolved	09/20/2022			09/20/2022 16:48	Elise M. Gillis	2357769
	09/20/2022			09/20/2022 16:53	Elise M. Gillis	2357752
EPA 8321B	09/20/2022	09/21/2022 08:45	June Rhew	09/22/2022 22:17	Juyoung Kim	2357760
	09/20/2022	09/21/2022 08:45	June Rhew	09/22/2022 22:38	Juyoung Kim	2357761
	09/20/2022	09/21/2022 08:45	June Rhew	09/22/2022 22:59	Juyoung Kim	2357762
	09/20/2022	09/21/2022 08:45	June Rhew	09/23/2022 11:55	Juyoung Kim	2357760
	09/20/2022	09/21/2022 08:45	June Rhew	09/23/2022 12:16	Juyoung Kim	2357762
	09/20/2022	09/21/2022 11:00	Umesh Chiluwal	09/21/2022 12:34	Umesh Chiluwal	2357760
	09/20/2022	09/21/2022 11:00	Umesh Chiluwal	09/21/2022 12:47	Umesh Chiluwal	2357761
	09/20/2022	09/21/2022 11:00	Umesh Chiluwal	09/21/2022 13:00	Umesh Chiluwal	2357762
	09/20/2022	09/21/2022 11:00	Umesh Chiluwal	09/21/2022 19:43	Umesh Chiluwal	2357760
	09/20/2022	09/21/2022 11:00	Umesh Chiluwal	09/21/2022 19:58	Umesh Chiluwal	2357761
	09/20/2022	09/21/2022 11:00	Umesh Chiluwal	09/21/2022 20:13	Umesh Chiluwal	2357762
	09/20/2022			09/29/2022 05:42	Adam P Silver	2357750
	09/20/2022			09/29/2022 05:52	Adam P Silver	2357767
	09/20/2022			09/21/2022 15:39	Yijie Li	2357750, 2357767
	09/20/2022			09/21/2022 15:39	Yijie Li	2357750, 2357767
SM 4500-F- C-2011	09/20/2022			09/28/2022 08:29	Adam P Silver	2357750
	09/20/2022			09/28/2022 08:41	Adam P Silver	2357767
SM 5310 B-2011	09/20/2022			09/23/2022 00:02	Khloe J Berg	2357751
	09/20/2022			09/23/2022 00:19	Khloe J Berg	2357768