

Chemical Analysis Report

SE-DIST-2020-09-15-01

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

Event Description: **SMP- 3154A, 3188B**

Request ID: **RQ-2020-08-17-30**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

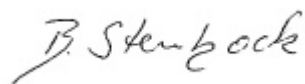
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Date Certified: 02-OCT-2020 15:36



Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Gore Branch @ 724

Collection Date/Time: 09/14/2020 11:45

Field ID: G4SE0130

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196092	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P387389	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P387638	
		Sulfate	3.1		mg SO4/L	P387640	
	SM 2120 B-2011	Color (true)	440		PCU	P387396	
	SM 2320 B-2011	Total Alkalinity	33		mg CaCO3/L	P387504	
	SM 2540 C-2011	TDS	126		mg/L	P387786	
	SM 2540 D-2011	TSS	3	I	mg/L	P387633	
	SM 4500 F-C-2011	Fluoride	0.084	I	mg F/L	P387505	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P387577	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P387783	
2196093	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P387471	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P387810	
	SM 5310 B-2011	Organic Carbon	35		mg C/L	P387677	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.10		mg P/L	P387400	
	dissolved						

Ref. Method and Comment:

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

Sample Location: Fort Drum Creek @ 441

Collection Date/Time: 09/14/2020 12:30

Field ID: G3SE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196089	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P387389	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P387638	
		Sulfate	0.20	U	mg SO4/L	P387640	
	SM 2120 B-2011	Color (true)	390		PCU	P387396	
	SM 2320 B-2011	Total Alkalinity	9.6		mg CaCO3/L	P387504	
	SM 2540 C-2011	TDS	90		mg/L	P387786	
	SM 2540 D-2011	TSS	3	I	mg/L	P387633	
2196090	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P387505	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P387577	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P387486	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P387471	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P387810	
2196091	SM 5310 B-2011	Organic Carbon	36		mg C/L	P387677	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.073		mg P/L	P387400	
2196124	EPA 8321B	2,4-D	0.0020	U	ug/L	P387357	
		Acesulfame K**	0.10	U	ug/L	P387349	
		AMPA**	0.10	U	ug/L	P387349	
		Sucralose**	0.020	I	ug/L	P387349	
		Acetaminophen**	0.0080	U	ug/L	P387357	
		Acetamiprid**	0.0020	U	ug/L	P387357	
		Endothall**	0.25	U	ug/L	P387349	
		Glufosinate**	0.10	U	ug/L	P387349	
		Glyphosate**	0.86		ug/L	P387349	
		Afidopyropen**	0.0020	U	ug/L	P387357	
		Bentazon	8.0E-04	U	ug/L	P387357	
		Benzovindiflupyr**	0.0020	U	ug/L	P387357	
		Carbamazepine**	8.0E-04	U	ug/L	P387357	
		Clothianidin**	0.0020	U	ug/L	P387357	
		Dinotefuran**	0.0020	U	ug/L	P387357	
		Diuron	0.0020	U	ug/L	P387357	
		Fenuron	0.016	U	ug/L	P387357	
		Fluridone**	8.0E-04	U	ug/L	P387357	
		Imazapyr**	0.0040	U	ug/L	P387357	
		Hydrocodone**	0.0020	U	ug/L	P387357	
		Ibuprofen**	0.020	U	ug/L	P387357	
		Imidacloprid	0.0020	U	ug/L	P387357	
		Linuron	0.0040	U	ug/L	P387357	
		Mandestrobin**	0.0020	U	ug/L	P387357	
		MCPD	0.0020	U	ug/L	P387357	
		Naproxen**	0.0080	U	ug/L	P387357	
		Primidone**	0.0040	U	ug/L	P387357	
		Pyraclostrobin**	0.0020	U	ug/L	P387357	
		Thiamethoxam**	0.0020	U	ug/L	P387357	

Field ID: G3SE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196124	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P387357	
		Triclopyr**	0.0040	U	ug/L	P387357	

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 8321B: MS accuracy and precision for diuron could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Fort Drum Creek @ 441

Collection Date/Time: 09/14/2020 12:40

Field ID: FB_09142020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196095	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P387389	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P387638	
		Sulfate	0.20	U	mg SO4/L	P387640	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P387396	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P387504	
	SM 2540 C-2011	TDS	15	U	mg/L	P387784	
	SM 2540 D-2011	TSS	2	U	mg/L	P387631	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P387505	
2196096	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P387577	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P387783	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P387471	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P387810	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P387677	
2196097	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P387400	
2196135	EPA 8321B	2,4-D	0.0020	U	ug/L	P387357	
		Acesulfame K**	0.10	U	ug/L	P387349	
		AMPA**	0.10	U	ug/L	P387349	
		Sucralose**	0.010	U	ug/L	P387349	
		Acetaminophen**	0.0080	U	ug/L	P387357	
		Acetamiprid**	0.0020	U	ug/L	P387357	
		Endothall**	0.25	U	ug/L	P387349	
		Glufosinate**	0.10	U	ug/L	P387349	
		Glyphosate**	0.10	U	ug/L	P387349	
		Afidopyropen**	0.0020	U	ug/L	P387357	
		Bentazon	8.0E-04	U	ug/L	P387357	
		Benzovindiflupyr**	0.0020	U	ug/L	P387357	
		Carbamazepine**	8.0E-04	U	ug/L	P387357	
		Clothianidin**	0.0020	U	ug/L	P387357	
		Dinotefuran**	0.0020	U	ug/L	P387357	
		Diuron	0.0020	U	ug/L	P387357	
		Fenuron	0.016	U	ug/L	P387357	
		Fluridone**	8.0E-04	U	ug/L	P387357	
		Imazapyr**	0.0040	U	ug/L	P387357	
		Hydrocodone**	0.0020	U	ug/L	P387357	
		Ibuprofen**	0.020	U	ug/L	P387357	
		Imidacloprid	0.0020	U	ug/L	P387357	
		Linuron	0.0040	U	ug/L	P387357	
		Mandestrobin**	0.0020	U	ug/L	P387357	
		MCPD	0.0020	U	ug/L	P387357	
		Naproxen**	0.0080	U	ug/L	P387357	
		Primidone**	0.0040	U	ug/L	P387357	
		Pyraclostrobin**	0.0020	U	ug/L	P387357	
		Thiamethoxam**	0.0020	U	ug/L	P387357	

Field ID: FB_09142020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2196135	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P387357	
		Triclopyr**	0.0040	U	ug/L	P387357	

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 and precision for diuron 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: P387389

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387638

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387640

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387577

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387486

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387783

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387471

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387810

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387400

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P387349

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: P387357

Component	Result	Code	Units
2,4-D	0.0020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P387396

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P387504

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P387784

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P387786

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387631

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P387633

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P387505

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P387677

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387577

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387471

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: P387810

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: P387400

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

Reference Method: EPA 8321B
Batch ID: P387349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.2		P	40 - 150
AMPA	92.7		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	98.1		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P387349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	138		P	40 - 140
Sucralose	108		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P387357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	137		P	30 - 160
Acetaminophen	91.5		P	30 - 160
Acetamiprid	74.9		P	30 - 160
Afidopyropen	52.7		P	30 - 160
Bentazon	64.2		P	30 - 160
Benzovindiflupyr	72.3		P	30 - 160
Carbamazepine	64.5		P	30 - 160
Clothianidin	81.5		P	30 - 160
Dinotefuran	93.9		P	30 - 160
Diuron	56.5		P	30 - 160
Fenuron	92.8		P	30 - 160
Fluridone	77.0		P	30 - 160
Hydrocodone	82.3		P	30 - 160
Ibuprofen	67.1		P	30 - 160
Imazapyr	106		P	30 - 160
Imidacloprid	100		P	30 - 160
Linuron	57.1		P	30 - 160
Mandestrobin	79.6		P	30 - 160
MCPP	120		P	30 - 160
Naproxen	72.2		P	30 - 160
Primidone	82.2		P	30 - 160
Pyraclostrobin	62.1		P	30 - 160
Thiamethoxam	76.3		P	30 - 160
Tolfenpyrad	46.1		P	30 - 160
Triclopyr	117		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P387396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	94.9		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P387504

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.0		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P387505

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.8		P	90 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P387677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195911	Chloride	95.8		P	90 - 110
2196098	Chloride	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195911	Sulfate	95.0		P	90 - 110
2196098	Sulfate	95.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196074	Ammonia-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196105	Kjeldahl Nitrogen	107	94.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196090	NO2NO3-N	95.0	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195988	Total-P	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196006	O-Phosphate-P	99.0	98.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P387349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195947	Acesulfame K	110	109	P/P	40 - 150
2195947	AMPA	92.1	95.0	P/P	40 - 150
2195947	Endothall	118	121	P/P	40 - 150
2195947	Glufosinate	88.2	93.1	P/P	40 - 150
2195947	Glyphosate	111	107	P/P	40 - 140
2195947	Sucralose	70.9	89.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P387357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196164	2,4-D	62.4	54.0	P/P	30 - 160
2196164	Acetaminophen	94.0	93.5	P/P	30 - 160
2196164	Acetamiprid	68.7	64.4	P/P	30 - 160
2196164	Afidopyropen	55.8	43.7	P/P	30 - 160
2196164	Bentazon	43.5	39.0	P/P	30 - 160
2196164	Benzovindiflupyr	69.2	64.5	P/P	30 - 160
2196164	Carbamazepine	56.7	52.3	P/P	30 - 160
2196164	Clothianidin	68.9	62.2	P/P	30 - 160
2196164	Dinotefuran	85.1	83.3	P/P	30 - 160
2196164	Fenuron	73.4	72.2	P/P	30 - 160
2196164	Fluridone	76.1	73.4	P/P	30 - 160
2196164	Hydrocodone	73.8	70.6	P/P	30 - 160
2196164	Ibuprofen	77.0	68.1	P/P	30 - 160
2196164	Imazapyr	86.4	81.7	P/P	30 - 160
2196164	Imidacloprid	136	127	P/P	30 - 160
2196164	Linuron	65.1	59.2	P/P	30 - 160
2196164	Mandestrobin	81.7	76.4	P/P	30 - 160
2196164	MCCP	101	99.6	P/P	30 - 160
2196164	Naproxen	81.8	75.5	P/P	30 - 160
2196164	Primidone	73.3	67.8	P/P	30 - 160
2196164	Pyraclostrobin	62.0	52.5	P/P	30 - 160
2196164	Thiamethoxam	82.1	80.3	P/P	30 - 160
2196164	Tolfenpyrad	41.6	40.4	P/P	30 - 160
2196164	Triclopyr	95.8	88.4	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P387505

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2195911	Fluoride	98.7	98.7	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P387677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2196342	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P387389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196072	Turbidity	1.89	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195911	Chloride	0.0194	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P387640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195911	Sulfate	0.285	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P387577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196074	Ammonia-N	0.414	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196005	Kjeldahl Nitrogen	6.15	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P387783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196105	Kjeldahl Nitrogen	7.14	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P387471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196090	NO2NO3-N	0.525	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P387810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195988	Total-P	0.0903	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P387400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196006	O-Phosphate-P	0.187	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P387349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195947	Acesulfame K	0.569	Spike	P	0 - 30
2195947	AMPA	3.06	Spike	P	0 - 30
2195947	Endothall	2.26	Spike	P	0 - 30
2195947	Glufosinate	5.37	Spike	P	0 - 30
2195947	Glyphosate	3.50	Spike	P	0 - 30
2195947	Sucralose	22.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P387357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196164	2,4-D	10.9	Spike	P	0 - 30
2196164	Acetaminophen	0.585	Spike	P	0 - 30
2196164	Acetamiprid	6.51	Spike	P	0 - 30
2196164	Afidopyropen	24.3	Spike	P	0 - 30
2196164	Bentazon	10.9	Spike	P	0 - 30
2196164	Benzovindiflupyr	6.99	Spike	P	0 - 30
2196164	Carbamazepine	8.02	Spike	P	0 - 30
2196164	Clothianidin	10.1	Spike	P	0 - 30
2196164	Dinotefuran	2.15	Spike	P	0 - 30
2196164	Fenuron	1.69	Spike	P	0 - 30
2196164	Fluridone	3.56	Spike	P	0 - 30
2196164	Hydrocodone	4.41	Spike	P	0 - 30
2196164	Ibuprofen	12.2	Spike	P	0 - 30
2196164	Imazapyr	2.35	Spike	P	0 - 30
2196164	Imidacloprid	7.17	Spike	P	0 - 30
2196164	Linuron	9.50	Spike	P	0 - 30
2196164	Mandestrobin	6.74	Spike	P	0 - 30
2196164	MCPP	1.41	Spike	P	0 - 30
2196164	Naproxen	8.01	Spike	P	0 - 30
2196164	Primidone	7.75	Spike	P	0 - 30
2196164	Pyraclostrobin	16.6	Spike	P	0 - 30
2196164	Thiamethoxam	2.16	Spike	P	0 - 30
2196164	Tolfenpyrad	3.05	Spike	P	0 - 30
2196164	Triclopyr	8.07	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P387396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196073	Color (true)	1.11	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
 Batch ID: P387504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195911	Total Alkalinity	4.54	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P387784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195676	TDS	8.61	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
 Batch ID: P387786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196104	TDS	2.96	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P387505

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2195911	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P387677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2196342	Organic Carbon	0.710	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2196124
Field Sample ID: G3SE0024

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	63.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.2	P	30 - 160
EPA 8321B	Diuron-d6	52.2	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Endothall-d6	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.5	P	30 - 160
EPA 8321B	Primidone-d5	61.3	P	30 - 160
EPA 8321B	Sucralose-d6	78.4	P	30 - 160
EPA 8321B	Sucralose-d6	78.4	P	30 - 160

Lab Sample ID: 2196135
Field Sample ID: FB_09142020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	87.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.4	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Endothall-d6	104	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.9	P	30 - 160
EPA 8321B	Primidone-d5	68.4	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100980

Included Lab Sample IDs: 2196089, 2196092, 2196095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Chloride	100	101	P/P	90 - 110
Sulfate	99.8	99.8	P/P	90 - 110
Sulfate	99.8	99.9	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100985

Included Lab Sample IDs: 2196089, 2196092, 2196095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A100987

Included Lab Sample IDs: 2196089, 2196092, 2196095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.5	98.7	P/P	90 - 115
Color (true)	98.7	98.4	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100988

Included Lab Sample IDs: 2196091, 2196094, 2196097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101029

Included Lab Sample IDs: 2196090, 2196093, 2196096

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101044

Included Lab Sample IDs: 2196124, 2196135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	107	110	P/P	50 - 150
Acetaminophen	112	114	P/P	60 - 160
Acetamiprid	111	114	P/P	50 - 150
Afidopyropen	98.1	103	P/P	50 - 150
Bentazon	111	114	P/P	50 - 160
Benzovindiflupyr	109	107	P/P	50 - 150
Carbamazepine	99.0	102	P/P	60 - 150
Clothianidin	89.6	93.0	P/P	60 - 150
Dinotefuran	82.2	93.2	P/P	50 - 150
Diuron	102	104	P/P	60 - 160
Fenuron	105	107	P/P	60 - 150
Fluridone	109	114	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A101044

Included Lab Sample IDs: 2196124, 2196135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hydrocodone	103	105	P/P	60 - 150
Ibuprofen	101	94.4	P/P	50 - 160
Imazapyr	88.5	107	P/P	50 - 160
Imidacloprid	90.6	92.2	P/P	60 - 150
Linuron	104	103	P/P	60 - 150
Mandestrobin	106	100	P/P	50 - 150
MCPP	120	113	P/P	50 - 150
Naproxen	99.5	105	P/P	50 - 160
Primidone	85.4	104	P/P	60 - 150
Pyraclostrobin	97.1	89.2	P/P	60 - 150
Thiamethoxam	94.7	99.9	P/P	50 - 150
Tolfenpyrad	95.0	86.6	P/P	60 - 150
Triclopyr	97.7	112	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A101049

Included Lab Sample IDs: 2196124, 2196135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	89.0	90.3	P/P	60 - 160
Endothall	104	111	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A101051

Included Lab Sample IDs: 2196124, 2196135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	91.4	89.5	P/P	60 - 160
Glufosinate	95.2	92.5	P/P	60 - 160
Glyphosate	141	144	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A101053

Included Lab Sample IDs: 2196089, 2196092, 2196095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.8	99.7	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101053

Included Lab Sample IDs: 2196089, 2196092, 2196095

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101073

Included Lab Sample IDs: 2196090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101085

Included Lab Sample IDs: 2196090, 2196093, 2196096

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

Reference Method: SM 5310 B-2011

Run ID: A101131

Included Lab Sample IDs: 2196090, 2196093, 2196096

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

Reference Method: EPA 8321B

Run ID: A101182

Included Lab Sample IDs: 2196124, 2196135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	118	119	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101189

Included Lab Sample IDs: 2196093, 2196096

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.7	92.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101204

Included Lab Sample IDs: 2196090, 2196093

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101251

Included Lab Sample IDs: 2196096

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.2	95.5	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	
EPA 180.1 Rev. 2.0	Turbidity					1.89	
EPA 300.0 Rev. 2.1	Chloride	95.4	95.8	95.8		0.0194	
	Sulfate	94.6	95.0	95.5		0.285	
EPA 350.1 Rev. 2.0	Ammonia-N	101	99.0	99.5			0.414
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.1					6.15
	Kjeldahl Nitrogen	97.7	107	94.2			7.14
EPA 353.2 Rev. 2.0	NO2NO3-N	102	95.0	95.5			0.525
EPA 365.1 Rev. 2.0	Total-P	105	101	101			0.0903
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104	99.0	98.8			0.187
EPA 8321B	2,4-D	137	62.4	54.0			10.9
	Acesulfame K	99.2	110	109			0.569
	Acetaminophen	91.5	94.0	93.5			0.585
	Acetamiprid	74.9	68.7	64.4			6.51
	Afidopyropen	52.7	55.8	43.7			24.3
	AMPA	92.7	92.1	95.0			3.06
	Bentazon	64.2	43.5	39.0			10.9
	Benzovindiflupyr	72.3	69.2	64.5			6.99
	Carbamazepine	64.5	56.7	52.3			8.02
	Clothianidin	81.5	68.9	62.2			10.1
	Dinotefuran	93.9	85.1	83.3			2.15
	Diuron	56.5					
	Endothall	102	118	121			2.26
	Fenuron	92.8	73.4	72.2			1.69
	Fluridone	77.0	76.1	73.4			3.56
	Glufosinate	98.1	88.2	93.1			5.37
	Glyphosate	138	111	107			3.50
	Hydrocodone	82.3	73.8	70.6			4.41
	Ibuprofen	67.1	77.0	68.1			12.2
	Imazapyr	106	86.4	81.7			2.35
	Imidacloprid	100	136	127			7.17
	Linuron	57.1	65.1	59.2			9.50
	Mandestrobin	79.6	81.7	76.4			6.74
	MCPP	120	101	99.6			1.41
	Naproxen	72.2	81.8	75.5			8.01
	Primidone	82.2	73.3	67.8			7.75
	Pyraclostrobin	62.1	62.0	52.5			16.6
	Sucralose	108	70.9	89.1			22.2
	Thiamethoxam	76.3	82.1	80.3			2.16
	Tolfenpyrad	46.1	41.6	40.4			3.05
	Triclopyr	117	95.8	88.4			8.07
SM 2120 B-2011	Color (true)	94.9				1.11	
SM 2320 B-2011	Total Alkalinity	99.0				4.54	
SM 2540 C-2011	TDS					8.61	
	TDS					2.96	
SM 4500 F-C-2011	Fluoride	95.8	98.7	98.7			0.0
SM 5310 B-2011	Organic Carbon	99.8	102	103			0.710

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2196089, 2196092, 2196095
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2196089, 2196092, 2196095
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2196089, 2196092, 2196095

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2196090, 2196093, 2196096
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2196090, 2196093, 2196096
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2196090, 2196093, 2196096
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2196090, 2196093, 2196096
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2196091, 2196094, 2196097
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2196124, 2196135
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2196124, 2196135
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2196089, 2196092, 2196095
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2196089, 2196092, 2196095
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2196089, 2196092, 2196095
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2196089, 2196092, 2196095
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2196089, 2196092, 2196095
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2196090, 2196093, 2196096

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	09/15/2020			09/15/2020 14:32	Yen Ta	2196089, 2196092, 2196095
EPA 300.0 Rev. 2.1	09/15/2020			09/18/2020 22:16	Lipi Saha	2196089
	09/15/2020			09/18/2020 22:29	Lipi Saha	2196092
	09/15/2020			09/18/2020 23:08	Lipi Saha	2196095
EPA 350.1 Rev. 2.0	09/15/2020			09/19/2020 12:37	Ping Hua	2196090
	09/15/2020			09/19/2020 12:46	Ping Hua	2196093
	09/15/2020			09/19/2020 12:50	Ping Hua	2196096
EPA 351.2 Rev. 2.0	09/15/2020	09/17/2020 10:50	Elliott Rodriguez	09/18/2020 10:22	Elliott Rodriguez	2196090
	09/15/2020	09/22/2020 11:40	David Boose	09/24/2020 14:02	Elliott Rodriguez	2196093
	09/15/2020	09/22/2020 11:40	David Boose	09/24/2020 14:03	Elliott Rodriguez	2196096
EPA 353.2 Rev. 2.0	09/15/2020			09/16/2020 12:17	Beverly Y. Sanders	2196090
	09/15/2020			09/16/2020 12:30	Beverly Y. Sanders	2196093
	09/15/2020			09/16/2020 12:32	Beverly Y. Sanders	2196096
EPA 365.1 Rev. 2.0	09/15/2020	09/24/2020 11:57	Yen Ta	09/25/2020 14:55	Benjamin T. Nordmann	2196090
	09/15/2020	09/24/2020 11:57	Yen Ta	09/25/2020 14:56	Benjamin T. Nordmann	2196093
	09/15/2020	09/24/2020 11:57	Yen Ta	09/29/2020 12:11	Lipi Saha	2196096
EPA 365.1 Rev. 2.0 dissolved	09/15/2020			09/15/2020 16:29	Virginia P. Brown	2196091
	09/15/2020			09/15/2020 16:30	Virginia P. Brown	2196094
	09/15/2020			09/15/2020 16:31	Virginia P. Brown	2196097
EPA 8321B	09/15/2020	09/15/2020 13:25	Rebecca Ware	09/15/2020 13:55	Rebecca Ware	2196124
	09/15/2020	09/15/2020 13:25	Rebecca Ware	09/15/2020 14:06	Rebecca Ware	2196135
	09/15/2020	09/15/2020 13:25	Rebecca Ware	09/15/2020 19:36	Rebecca Ware	2196124
	09/15/2020	09/15/2020 13:25	Rebecca Ware	09/15/2020 19:50	Rebecca Ware	2196135
	09/15/2020	09/15/2020 13:25	Rebecca Ware	09/23/2020 17:20	Rebecca Ware	2196124
	09/15/2020	09/15/2020 13:25	Rebecca Ware	09/23/2020 17:32	Rebecca Ware	2196135
	09/15/2020	09/16/2020 09:00	Hoor Shaik	09/19/2020 10:49	Juyoung Kim	2196124
	09/15/2020	09/16/2020 09:00	Hoor Shaik	09/19/2020 11:24	Juyoung Kim	2196135
SM 2120 B-2011	09/15/2020			09/15/2020 16:02	Samantha Davila	2196095
	09/15/2020			09/15/2020 16:20	Samantha Davila	2196089, 2196092
SM 2320 B-2011	09/15/2020			09/16/2020 16:16	Dale L. Simmons	2196089
	09/15/2020			09/16/2020 16:28	Dale L. Simmons	2196092
	09/15/2020			09/16/2020 16:37	Dale L. Simmons	2196095
SM 2540 C-2011	09/15/2020			09/16/2020 15:09	Yijie Li	2196089, 2196092, 2196095
SM 2540 D-2011	09/15/2020			09/16/2020 15:09	Yijie Li	2196089, 2196092, 2196095
SM 4500 F-C-2011	09/15/2020			09/16/2020 16:16	Dale L. Simmons	2196089
	09/15/2020			09/16/2020 16:28	Dale L. Simmons	2196092
	09/15/2020			09/16/2020 16:37	Dale L. Simmons	2196095
SM 5310 B-2011	09/15/2020			09/22/2020 01:44	David Boose	2196090
	09/15/2020			09/22/2020 01:56	David Boose	2196093
	09/15/2020			09/22/2020 02:08	David Boose	2196096