

Chemical Analysis Report

NE-DIST-2020-01-31-01

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

Event Description: **Suwannee Central 2020**
Request ID: **RQ-2020-01-20-13**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 25-FEB-2020 11:35

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Rocky Creek at 156th Av

Collection Date/Time: 01/30/2020 11:00

Field ID: G1NE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153661	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P378103	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P378303	
		Sulfate	3.4		mg SO4/L	P378306	
	SM 2120 B-2011	Color (true)	290		PCU	P378112	
	SM 2320 B-2011	Total Alkalinity	29		mg CaCO3/L	P378420	
	SM 2540 C-2011	TDS	150		mg/L	P378767	
	SM 2540 D-2011	TSS	2	I	mg/L	P378580	
2153662	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P378424	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P378888	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P378489	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P378481	
	EPA 365.1 Rev. 2.0	Total-P	0.097		mg P/L	P378258	
2153663	SM 5310 B-2011	Organic Carbon	32		mg C/L	P378521	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.062		mg P/L	P378116	
2153666	EPA 8321B	2,4-D	0.0020	U	ug/L	P378093	
		Acesulfame K**	0.10	U	ug/L	P378149	MS
		AMPA**	0.10	U	ug/L	P378149	
		Sucralose**	0.036	I	ug/L	P378149	
		Acetaminophen**	0.0080	U	ug/L	P378093	
		Acetamidiprid**	0.0020	U	ug/L	P378093	
		Endothall**	0.25	U	ug/L	P378149	MS
		Glufosinate**	0.10	U	ug/L	P378149	
		Glyphosate**	0.10	U	ug/L	P378149	
		Afidopyropen**	0.0020	UJ	ug/L	P378093	
		Bentazon	8.0E-04	U	ug/L	P378093	MS
		Benzovindiflupyr**	0.0020	UJ	ug/L	P378093	
		Carbamazepine**	8.0E-04	U	ug/L	P378093	
		Clothianidin**	0.0020	U	ug/L	P378093	
		Dinotefuran**	0.0020	U	ug/L	P378093	
		Diuron	0.0020	U	ug/L	P378093	
		Fenuron	0.016	U	ug/L	P378093	
		Fluridone**	8.0E-04	U	ug/L	P378093	
		Imazapyr**	0.0059	I	ug/L	P378093	
		Hydrocodone**	0.0020	U	ug/L	P378093	
		Ibuprofen**	0.020	U	ug/L	P378093	
		Imidacloprid	0.0020	U	ug/L	P378093	
		Linuron	0.0040	U	ug/L	P378093	
		Mandestrobin**	0.0020	UJ	ug/L	P378093	
		MCPD	0.0020	U	ug/L	P378093	
		Naproxen**	0.0080	U	ug/L	P378093	
		Primidone**	0.0040	U	ug/L	P378093	
		Pyraclostrobin**	0.0020	U	ug/L	P378093	
		Thiamethoxam**	0.0020	U	ug/L	P378093	

Field ID: G1NE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153666	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P378093	
		Triclopyr**	0.0040	U	ug/L	P378093	
2153667	EPA 200.7 Rev. 4.4	Barium	8.3		ug/L	P378222	
		Calcium	13.4		mg/L	P378222	
		Iron	700		ug/L	P378222	
		Magnesium	4.51		mg/L	P378222	
		Potassium	1.0	I	mg/L	P378222	
		Sodium	7.3		mg/L	P378222	
		Zinc	5.0	U	ug/L	P378222	
	EPA 200.8 Rev. 5.4	Aluminum	364		ug/L	P378222	
		Antimony	0.074	I	ug/L	P378222	
		Arsenic	0.71		ug/L	P378222	
		Boron**	17.2		ug/L	P378222	
		Cadmium	0.020	U	ug/L	P378222	
		Chromium	1.4	I	ug/L	P378222	
		Copper	0.42	I	ug/L	P378222	
		Lead	0.25	I	ug/L	P378222	
		Nickel	0.77	I	ug/L	P378222	
		Selenium	0.20	I	ug/L	P378222	
		Silver	0.010	U	ug/L	P378222	
		Thallium	0.10	U	ug/L	P378222	
	SM 2340B	Hardness	52.0		mg/L	P378222	

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: J - second source check standards for some analytes were not available for analysis.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P378103

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378222

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378222

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	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: P378303

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378306

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378888

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378489

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378481

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378258

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P378116

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

Reference Method: EPA 8321B
Batch ID: P378093

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P378149

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 2120 B-2011
Batch ID: P378112

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P378420

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

Reference Method: SM 2540 C-2011
Batch ID: P378767

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P378580

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P378424

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P378521

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.9		P	85 - 115
Calcium	101		P	85 - 115
Iron	105		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	100		P	85 - 115
Sodium	99.7		P	85 - 115
Zinc	97.7		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	102		P	85 - 115
Boron	94.8		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	105		P	85 - 115
Copper	100		P	85 - 115
Lead	99.7		P	85 - 115
Nickel	99.8		P	85 - 115
Selenium	99.9		P	85 - 115
Silver	103		P	85 - 115
Thallium	97.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378303

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378306

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378888

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378489

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378481

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378258

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P378116

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

Reference Method: EPA 8321B
Batch ID: P378093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	136		P	30 - 160
Acetaminophen	77.7		P	30 - 160
Acetamiprid	71.3		P	30 - 160
Afidopyropen	72.0		P	30 - 160
Bentazon	70.9		P	30 - 160
Benzovindiflupyr	79.9		P	30 - 160
Carbamazepine	91.0		P	30 - 160
Clothianidin	77.3		P	30 - 160
Dinotefuran	82.8		P	30 - 160
Diuron	90.2		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	81.9		P	30 - 160
Hydrocodone	85.3		P	30 - 160
Ibuprofen	93.6		P	30 - 160
Imazapyr	83.3		P	30 - 160
Imidacloprid	87.1		P	30 - 160
Linuron	72.7		P	30 - 160
Mandestrobin	85.3		P	30 - 160
MCPP	137		P	30 - 160
Naproxen	82.8		P	30 - 160
Primidone	81.3		P	30 - 160
Pyraclostrobin	82.4		P	30 - 160
Thiamethoxam	85.5		P	30 - 160
Tolfenpyrad	53.8		P	30 - 160
Triclopyr	104		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P378149

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.9		P	40 - 150
AMPA	127		P	40 - 150
Endothall	121		P	40 - 150
Glufosinate	118		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P378149

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	117		P	40 - 140
Sucralose	95.5		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P378112

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

Reference Method: SM 2320 B-2011
Batch ID: P378420

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P378424

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P378521

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152859	Barium	96.5	90.3	P/P	70 - 130
2152859	Iron	101	98.1	P/P	70 - 130
2152859	Zinc	96.4	92.2	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152859	Aluminum	111	111	P/P	70 - 130
2152859	Antimony	109	110	P/P	70 - 130
2152859	Arsenic	112	112	P/P	80 - 120
2152859	Boron	96.3	86.9	P/P	70 - 130
2152859	Cadmium	103	103	P/P	80 - 120
2152859	Chromium	107	108	P/P	80 - 120
2152859	Copper	94.8	95.8	P/P	80 - 120
2152859	Lead	105	105	P/P	80 - 120
2152859	Nickel	96.1	97.6	P/P	80 - 120
2152859	Selenium	109	110	P/P	70 - 130
2152859	Silver	95.1	96.8	P/P	80 - 120
2152859	Thallium	104	106	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378303

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153485	Chloride	101		P	90 - 110
2153557	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153485	Sulfate	102		P	90 - 110
2153557	Sulfate	99.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153728	Ammonia-N	100	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153558	Kjeldahl Nitrogen	97.3	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378481

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153555	NO2NO3-N	98.7	98.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153565	Total-P	108	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P378116

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153559	O-Phosphate-P	95.0	97.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P378093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153067	2,4-D	97.7	99.4	P/P	30 - 160
2153067	Acetaminophen	68.7	58.8	P/P	30 - 160
2153067	Acetamiprid	79.2	74.6	P/P	30 - 160
2153067	Afidopyropen	67.4	69.6	P/P	30 - 160
2153067	Bentazon	11.3	13.7	F/F	30 - 160
2153067	Benzovindiflupyr	73.0	66.6	P/P	30 - 160
2153067	Carbamazepine	73.1	60.5	P/P	30 - 160
2153067	Clothianidin	70.1	69.3	P/P	30 - 160
2153067	Dinotefuran	92.4	83.1	P/P	30 - 160
2153067	Diuron	63.0	65.2	P/P	30 - 160
2153067	Fenuron	82.9	71.8	P/P	30 - 160
2153067	Fluridone	71.8	66.4	P/P	30 - 160
2153067	Hydrocodone	89.0	83.3	P/P	30 - 160
2153067	Ibuprofen	81.2	75.6	P/P	30 - 160
2153067	Imazapyr	69.6	68.7	P/P	30 - 160
2153067	Imidacloprid	144	130	P/P	30 - 160
2153067	Linuron	59.9	52.2	P/P	30 - 160
2153067	Mandestrobin	84.3	77.2	P/P	30 - 160
2153067	MCP	126	110	P/P	30 - 160
2153067	Naproxen	92.2	98.1	P/P	30 - 160
2153067	Primidone	66.2	65.1	P/P	30 - 160
2153067	Pyraclostrobin	71.3	66.7	P/P	30 - 160
2153067	Thiamethoxam	110	104	P/P	30 - 160
2153067	Tolfenpyrad	51.2	48.0	P/P	30 - 160
2153067	Triclopyr	94.6	81.0	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P378149

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152739	Acesulfame K	24.6	25.0	F/F	40 - 150
2152739	AMPA	127	127	P/P	40 - 150
2152739	Endothall	153	149	F/P	40 - 150
2152739	Glufosinate	117	108	P/P	40 - 150
2152739	Glyphosate	91.0	79.1	P/P	40 - 140
2152739	Sucralose	99.6	95.7	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P378424

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153388	Fluoride	98.1	98.8	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P378521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2154059	Organic Carbon	103	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P378103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153603	Turbidity	0.543	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152859	Barium	6.19	Spike	P	0 - 20
2152859	Calcium	6.77	Spike	P	0 - 20
2152859	Iron	2.74	Spike	P	0 - 20
2152859	Magnesium	3.00	Spike	P	0 - 20
2152859	Potassium	2.55	Spike	P	0 - 20
2152859	Sodium	2.87	Spike	P	0 - 20
2152859	Zinc	4.44	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152859	Aluminum	0.0668	Spike	P	0 - 20
2152859	Antimony	1.41	Spike	P	0 - 20
2152859	Arsenic	0.180	Spike	P	0 - 20
2152859	Boron	1.32	Spike	P	0 - 20
2152859	Cadmium	0.174	Spike	P	0 - 20
2152859	Chromium	1.05	Spike	P	0 - 20
2152859	Copper	0.999	Spike	P	0 - 20
2152859	Lead	0.285	Spike	P	0 - 20
2152859	Nickel	1.61	Spike	P	0 - 20
2152859	Selenium	1.31	Spike	P	0 - 20
2152859	Silver	1.75	Spike	P	0 - 20
2152859	Thallium	1.32	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378303

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153557	Chloride	0.999	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153557	Sulfate	0.778	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153728	Ammonia-N	1.56	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153558	Kjeldahl Nitrogen	2.97	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153555	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153565	Total-P	1.95	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P378116

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153559	O-Phosphate-P	2.60	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P378093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153067	2,4-D	1.77	Spike	P	0 - 30
2153067	Acetaminophen	15.6	Spike	P	0 - 30
2153067	Acetamiprid	5.98	Spike	P	0 - 30
2153067	Afidopyropen	3.30	Spike	P	0 - 30
2153067	Bentazon	2.32	Spike	P	0 - 30
2153067	Benzovindiflupyr	9.07	Spike	P	0 - 30
2153067	Carbamazepine	10.1	Spike	P	0 - 30
2153067	Clothianidin	1.09	Spike	P	0 - 30
2153067	Dinotefuran	10.6	Spike	P	0 - 30
2153067	Diuron	3.48	Spike	P	0 - 30
2153067	Fenuron	14.4	Spike	P	0 - 30
2153067	Fluridone	7.41	Spike	P	0 - 30
2153067	Hydrocodone	6.58	Spike	P	0 - 30
2153067	Ibuprofen	7.15	Spike	P	0 - 30
2153067	Imazapyr	1.20	Spike	P	0 - 30
2153067	Imidacloprid	10.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P378093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153067	Linuron	13.8	Spike	P	0 - 30
2153067	Mandestrobin	8.84	Spike	P	0 - 30
2153067	MCP	13.9	Spike	P	0 - 30
2153067	Naproxen	6.18	Spike	P	0 - 30
2153067	Primidone	1.50	Spike	P	0 - 30
2153067	Pyraclostrobin	6.60	Spike	P	0 - 30
2153067	Thiamethoxam	5.31	Spike	P	0 - 30
2153067	Tolfenpyrad	6.44	Spike	P	0 - 30
2153067	Triclopyr	15.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P378149

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152739	Acesulfame K	1.38	Spike	P	0 - 30
2152739	AMPA	0.275	Spike	P	0 - 30
2152739	Endothall	2.70	Spike	P	0 - 30
2152739	Glufosinate	8.06	Spike	P	0 - 30
2152739	Glyphosate	4.84	Spike	P	0 - 30
2152739	Sucralose	3.23	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P378112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153603	Color (true)	0.211	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P378420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153388	Total Alkalinity	0.0905	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
Batch ID: P378767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153554	TDS	4.12	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P378424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153388	Fluoride	0.470	Spike	P	0 - 2.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P378521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2154059	Organic Carbon	0.668	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2153666
Field Sample ID: G1NE0020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	87.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	46.1	P	30 - 160
EPA 8321B	Diuron-d6	53.7	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Endothall-d6	157	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.5	P	30 - 160
EPA 8321B	Primidone-d5	54.2	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97257

Included Lab Sample IDs: 2153661

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

Reference Method: SM 2120 B-2011

Run ID: A97258

Included Lab Sample IDs: 2153661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97259

Included Lab Sample IDs: 2153663

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.6	96.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97294

Included Lab Sample IDs: 2153666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	125	116	P/P	60 - 160
Glufosinate	114	111	P/P	60 - 160
Glyphosate	125	115	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97313

Included Lab Sample IDs: 2153666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.3	102	P/P	50 - 150
Acetaminophen	73.6	66.6	P/P	60 - 160
Acetamiprid	87.6	80.2	P/P	50 - 150
Afidopyropen	90.4	92.7	P/P	50 - 150
Bentazon	112	94.9	P/P	50 - 160
Benzovindiflupyr	98.8	91.0	P/P	50 - 150
Carbamazepine	99.3	91.0	P/P	60 - 150
Clothianidin	76.3	70.4	P/P	60 - 150
Dinotefuran	78.5	71.1	P/P	50 - 150
Diuron	94.5	111	P/P	60 - 150
Fenuron	101	99.1	P/P	60 - 150
Fluridone	94.9	94.3	P/P	60 - 160
Hydrocodone	91.0	87.4	P/P	60 - 150
Ibuprofen	90.9	95.2	P/P	50 - 160
Imazapyr	102	82.3	P/P	50 - 150
Imidacloprid	84.7	79.3	P/P	60 - 150
Linuron	94.3	92.4	P/P	60 - 150
Mandestrobin	107	104	P/P	50 - 150
MCPP	105	103	P/P	50 - 150
Naproxen	102	111	P/P	50 - 160
Primidone	72.4	72.0	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97313

Included Lab Sample IDs: 2153666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	102	102	P/P	60 - 150
Thiamethoxam	86.0	75.6	P/P	50 - 150
Tolfenpyrad	94.9	92.7	P/P	60 - 150
Triclopyr	89.3	102	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97327

Included Lab Sample IDs: 2153661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97340

Included Lab Sample IDs: 2153667

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.6	98.1	P/P	90 - 110
Calcium	99.9	101	P/P	90 - 110
Iron	101	102	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Zinc	99.9	97.2	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A97356

Included Lab Sample IDs: 2153661

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

Reference Method: SM 4500 F-C-2011

Run ID: A97356

Included Lab Sample IDs: 2153661

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97369

Included Lab Sample IDs: 2153662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	99.5	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97380

Included Lab Sample IDs: 2153662

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

Reference Method: SM 5310 B-2011

Run ID: A97392

Included Lab Sample IDs: 2153662

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97436

Included Lab Sample IDs: 2153662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.9	98.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97475

Included Lab Sample IDs: 2153666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	76.4	63.2	P/P	60 - 160
Endothall	156	146	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97525

Included Lab Sample IDs: 2153662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97560

Included Lab Sample IDs: 2153667

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	101	P/P	90 - 110
Antimony	103	104	P/P	90 - 110
Arsenic	103	101	P/P	90 - 110
Boron	107	104	P/P	90 - 110
Cadmium	98.9	100	P/P	90 - 110
Chromium	106	103	P/P	90 - 110
Copper	99.2	96.7	P/P	90 - 110
Lead	98.6	98.2	P/P	90 - 110
Nickel	100	96.9	P/P	90 - 110
Selenium	103	103	P/P	90 - 110
Silver	103	103	P/P	90 - 110
Thallium	96.8	96.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A97720
Included Lab Sample IDs: 2153666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.0	100	P/P	60 - 160

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.543	
EPA 200.7 Rev. 4.4	Barium	98.9		96.5	90.3			6.19
	Calcium	101						6.77
	Iron	105		101	98.1			2.74
	Magnesium	102						3.00
	Potassium	100						2.55
	Sodium	99.7						2.87
	Zinc	97.7		96.4	92.2			4.44
EPA 200.8 Rev. 5.4	Aluminum	102		111	111			0.0668
	Antimony	103		109	110			1.41
	Arsenic	102		112	112			0.180
	Boron	94.8		96.3	86.9			1.32
	Cadmium	103		103	103			0.174
	Chromium	105		107	108			1.05
	Copper	100		94.8	95.8			0.999
	Lead	99.7		105	105			0.285
	Nickel	99.8		96.1	97.6			1.61
	Selenium	99.9		109	110			1.31
	Silver	103		95.1	96.8			1.75
	Thallium	97.6		104	106			1.32
EPA 300.0 Rev. 2.1	Chloride	103		101	101		0.999	
	Sulfate	103		99.7	102		0.778	
EPA 350.1 Rev. 2.0	Ammonia-N	97.5		100	102			1.56
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		97.3	104			2.97
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		98.7	98.7			0.0
EPA 365.1 Rev. 2.0	Total-P	108		108	106			1.95
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.4		95.0	97.5			2.60
EPA 8321B	2,4-D	136		97.7	99.4			1.77
	Acesulfame K	92.9		24.6	25.0			1.38
	Acetaminophen	77.7		58.8	68.7			15.6
	Acetamiprid	71.3		79.2	74.6			5.98
	Afidopyropen	72.0		67.4	69.6			3.30
	AMPA	127		127	127			0.275
	Bentazon	70.9		13.7	11.3			2.32
	Benzovindiflupyr	79.9		73.0	66.6			9.07
	Carbamazepine	91.0		73.1	60.5			10.1
	Clothianidin	77.3		70.1	69.3			1.09
	Dinotefuran	82.8		92.4	83.1			10.6
	Diuron	90.2		63.0	65.2			3.48
	Endothall	121		153	149			2.70
	Fenuron	103		82.9	71.8			14.4
	Fluridone	81.9		66.4	71.8			7.41
	Glufosinate	118		117	108			8.06
	Glyphosate	117		91.0	79.1			4.84
	Hydrocodone	85.3		83.3	89.0			6.58
	Ibuprofen	93.6		81.2	75.6			7.15
	Imazapyr	83.3		69.6	68.7			1.20
	Imidacloprid	87.1		144	130			10.8
	Linuron	72.7		59.9	52.2			13.8
	Mandestrobin	85.3		84.3	77.2			8.84
	MCPD	137		110	126			13.9
	Naproxen	82.8		98.1	92.2			6.18
	Primidone	81.3		66.2	65.1			1.50
	Pyraclostrobin	82.4		71.3	66.7			6.60

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Sucralose	95.5	99.6	95.7		3.23
	Thiamethoxam	85.5	110	104		5.31
	Tolfenpyrad	53.8	48.0	51.2		6.44
	Triclopyr	104	94.6	81.0		15.5
SM 2120 B-2011	Color (true)	101			0.211	
SM 2320 B-2011	Total Alkalinity	103			0.0905	
SM 2540 C-2011	TDS				4.12	
SM 4500 F-C-2011	Fluoride	98.5	98.1	98.8		0.470
SM 5310 B-2011	Organic Carbon	102	103	104		0.668

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2153661
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2153667
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2153667
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2153661
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2153661
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2153662
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2153662
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2153662
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2153662
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2153663
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2153666
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2153666
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2153661
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2153661
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2153667
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2153661
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2153661
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2153661
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2153662

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	01/31/2020			01/31/2020 16:16	Yen Ta	2153661
EPA 200.7 Rev. 4.4	01/31/2020	02/04/2020 14:30	Elliott D. Healy	02/05/2020 18:18	Betina Topolski	2153667
EPA 200.8 Rev. 5.4	01/31/2020	02/04/2020 14:30	Elliott D. Healy	02/14/2020 22:05	Justin Cutchin	2153667
EPA 300.0 Rev. 2.1	01/31/2020			02/04/2020 10:41	Elliott Rodriguez	2153661
EPA 350.1 Rev. 2.0	01/31/2020			02/13/2020 13:45	Ping Hua	2153662
EPA 351.2 Rev. 2.0	01/31/2020	02/07/2020 11:00	Jhamieka S. Greenwood	02/10/2020 18:10	Jhamieka S. Greenwood	2153662
EPA 353.2 Rev. 2.0	01/31/2020			02/06/2020 12:18	Beverly Y. Sanders	2153662
EPA 365.1 Rev. 2.0	01/31/2020	02/04/2020 12:34	Yen Ta	02/06/2020 11:47	Benjamin T. Nordmann	2153662
EPA 365.1 Rev. 2.0 dissolved	01/31/2020			01/31/2020 16:50	Carlos Miranda	2153663
EPA 8321B	01/31/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 03:06	Rebecca Ware	2153666
	01/31/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 14:54	Rebecca Ware	2153666
	01/31/2020	02/03/2020 16:30	Rebecca Ware	02/18/2020 03:55	Rebecca Ware	2153666
	01/31/2020	02/04/2020 10:00	Hoor Shaik	02/05/2020 08:27	Juyoung Kim	2153666
SM 2120 B-2011	01/31/2020			01/31/2020 17:12	Madeline Funaro	2153661
SM 2320 B-2011	01/31/2020			02/05/2020 12:44	Dale L. Simmons	2153661
SM 2340B	01/31/2020			02/05/2020 18:18	Betina Topolski	2153667
SM 2540 C-2011	01/31/2020			02/04/2020 15:55	Sima Feizi	2153661
SM 2540 D-2011	01/31/2020			02/04/2020 15:55	Sima Feizi	2153661
SM 4500 F-C-2011	01/31/2020			02/05/2020 12:44	Dale L. Simmons	2153661
SM 5310 B-2011	01/31/2020			02/06/2020 20:53	Madeline Funaro	2153662