

Chemical Analysis Report

NE-DIST-2021-03-23-02

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

Event Description: **Nassau North 2021**
Request ID: **RQ-2021-02-15-15**
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
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Phone (850) 245-8085

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

Date Certified: 15-APR-2021 10:29

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.

NON-CONFORMANCE REPORT INCLUDED

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: Little St. Marys @ CR 121A

Collection Date/Time: 03/22/2021 14:40

Field ID: 19010046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233120	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P395386	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P395584	
		Sulfate	8.9		mg SO4/L	P395586	
	SM 2120 B-2011	Color (true)	230		PCU	P395382	
	SM 2320 B-2011	Total Alkalinity	26		mg CaCO3/L	P395512	
	SM 2540 C-2011	TDS	112		mg/L	P395816	
	SM 2540 D-2011	TSS	2	I	mg/L	P395853	
	SM 4500 F-C-2011	Fluoride	0.051	I	mg F/L	P395517	
2233121	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P395904	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P395719	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P395411	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P395487	
	SM 5310 B-2011	Organic Carbon	24		mg C/L	P395668	
2233122	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	IY	mg P/L	P395364	
2233125	EPA 8321B	2,4-D	0.0020	U	ug/L	P395318	
		Acesulfame K	0.13	I	ug/L	P395329	MS
		2,4,5-T	0.0040	U	ug/L	P395318	
		AMPA	0.10	U	ug/L	P395329	
		Sucralose	1.1		ug/L	P395329	
		Acetaminophen	0.0080	UJ	ug/L	P395318	LCS
		Acetamiprid	0.0020	U	ug/L	P395318	
		Endothall	0.25	U	ug/L	P395329	
		Glufosinate	0.10	U	ug/L	P395329	
		Glyphosate	0.10	U	ug/L	P395329	
		Afidopyropen	0.0020	U	ug/L	P395318	
		Bentazon	8.0E-04	U	ug/L	P395318	
		Benzovindiflupyr	0.0020	U	ug/L	P395318	
		Carbamazepine	0.0027	I	ug/L	P395318	
		Clothianidin	0.0020	U	ug/L	P395318	
		Dinotefuran	0.0020	U	ug/L	P395318	
		Diuron	0.0020	U	ug/L	P395318	
		Fenuron	0.016	U	ug/L	P395318	
		Fluridone	8.0E-04	U	ug/L	P395318	
		Imazapyr	0.14		ug/L	P395318	
		Hydrocodone	0.0020	U	ug/L	P395318	
		Ibuprofen	0.020	U	ug/L	P395318	
		Imidacloprid	0.0020	U	ug/L	P395318	
		Linuron	0.0040	U	ug/L	P395318	
		Mandestrobin	0.0020	U	ug/L	P395318	
		MCPP	0.0020	U	ug/L	P395318	
		Naproxen	0.0080	U	ug/L	P395318	
		Primidone	0.0040	U	ug/L	P395318	
		Pyraclostrobin	0.0020	U	ug/L	P395318	

Field ID: 19010046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2233125	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P395318	
		Tolfenpyrad	0.0020	U	ug/L	P395318	
		Triclopyr	0.0040	U	ug/L	P395318	
2233126	EPA 200.7 Rev. 4.4	Barium	28.9		ug/L	P395380	
		Calcium	13.8		mg/L	P395380	
		Iron	920		ug/L	P395380	
		Magnesium	4.00		mg/L	P395380	
		Manganese	33.5		ug/L	P395380	
		Potassium	1.2	I	mg/L	P395380	
		Sodium	11.5		mg/L	P395380	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P395380	
		Aluminum	358		ug/L	P395380	
		Antimony	0.050	U	ug/L	P395380	
		Arsenic	0.46		ug/L	P395380	
		Beryllium	0.028	I	ug/L	P395380	
		Boron**	23.6		ug/L	P395380	
		Cadmium	0.020	U	ug/L	P395380	
		Chromium	0.68	I	ug/L	P395380	
		Copper	0.40	U	ug/L	P395380	
		Lead	0.50		ug/L	P395380	
		Nickel	0.50	U	ug/L	P395380	
		Selenium	0.20	U	ug/L	P395380	
		Silver	0.010	U	ug/L	P395380	
		Thallium	0.10	U	ug/L	P395380	
	SM 2340B	Hardness	51.0		mg/L	P395380	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Sample was not filtered within 15 minutes of collection. Sample was analyzed as received.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Non-Conformance Report

NCR ID: 8735

Event(s)

NE-DIST-2021-03-23-02

Job(s)

TLH-2021-03-23-21

Sample(s)

2233122

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Sample not field-filtered

Observation: Sampler noted in email that the W-PO4-F sample was not field filtered within 15 minutes of collection.

Resolution: Data will be qualified as appropriate.
Email correspondence attached to sample submittal.

Authorized by/Date: Joshua Ayres 4/1/2021

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395386

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P395380

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
Manganese	1.0	U	ug/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: P395380

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
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: P395584

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395586

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395904

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: P395719

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P395411

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P395487

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P395364

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

Reference Method: EPA 8321B
 Batch ID: P395318

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.030	I	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: P395329

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: P395382

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P395512

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

Reference Method: SM 2540 C-2011
Batch ID: P395816

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P395853

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P395517

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395668

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: P395380

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	80 - 120
Calcium	108		P	80 - 120
Iron	103		P	80 - 120
Magnesium	105		P	80 - 120
Manganese	100		P	80 - 120
Potassium	99.2		P	80 - 120
Sodium	102		P	80 - 120
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P395380

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.9		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	100		P	85 - 115
Beryllium	92.2		P	85 - 115
Boron	96.6		P	85 - 115
Cadmium	99.7		P	85 - 115
Chromium	96.6		P	85 - 115
Copper	99.2		P	85 - 115
Lead	108		P	85 - 115
Nickel	98.1		P	85 - 115
Selenium	101		P	85 - 115
Silver	107		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395584

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395586

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395904

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395719

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P395411

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395487

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395364

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

Reference Method: EPA 8321B

Batch ID: P395318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	126		P	30 - 160
2,4,5-T	96.7		P	30 - 160
Acetaminophen	203		F	30 - 160
Acetamiprid	83.0		P	30 - 160
Afidopyropen	70.3		P	30 - 160
Bentazon	62.6		P	30 - 160
Benzovindiflupyr	86.8		P	30 - 160
Carbamazepine	91.1		P	30 - 160
Clothianidin	93.6		P	30 - 160
Dinotefuran	82.0		P	30 - 160
Diuron	68.1		P	30 - 160
Fenuron	87.9		P	30 - 160
Fluridone	79.5		P	30 - 160
Hydrocodone	91.3		P	30 - 160
Ibuprofen	80.2		P	30 - 160
Imazapyr	78.9		P	30 - 160
Imidacloprid	103		P	30 - 160
Linuron	67.1		P	30 - 160
Mandestrobin	85.2		P	30 - 160
MCPP	110		P	30 - 160
Naproxen	62.8		P	30 - 160
Primidone	91.1		P	30 - 160
Pyraclostrobin	78.8		P	30 - 160
Thiamethoxam	99.4		P	30 - 160
Tolfenpyrad	44.4		P	30 - 160
Triclopyr	111		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395329

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	146		P	40 - 150
AMPA	97.4		P	40 - 150
Endothall	95.3		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P395329

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glufosinate	111		P	40 - 150
Glyphosate	119		P	40 - 140
Sucralose	92.2		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P395382

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

Reference Method: SM 2320 B-2011
Batch ID: P395512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P395517

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P395668

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P395380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233048	Barium	106	110	P/P	80 - 120
2233048	Calcium	108		P	80 - 120
2233048	Iron	103	109	P/P	80 - 120
2233048	Magnesium	105	111	P/P	80 - 120
2233048	Manganese	101	106	P/P	80 - 120
2233048	Potassium	107	110	P/P	80 - 120
2233048	Sodium	100	107	P/P	80 - 120
2233048	Zinc	102	102	P/P	80 - 120
2233126	Barium	102		P	80 - 120
2233126	Calcium	109		P	80 - 120
2233126	Iron	104		P	80 - 120
2233126	Magnesium	101		P	80 - 120
2233126	Manganese	98.3		P	80 - 120
2233126	Potassium	100		P	80 - 120
2233126	Sodium	103		P	80 - 120
2233126	Zinc	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P395380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233048	Aluminum	87.7	82.5	P/P	80 - 120
2233048	Antimony	99.5	90.8	P/P	80 - 120
2233048	Arsenic	99.1	90.0	P/P	80 - 120
2233048	Beryllium	92.9	85.6	P/P	80 - 120
2233048	Boron	95.0	88.4	P/P	80 - 120
2233048	Cadmium	101	91.3	P/P	80 - 120
2233048	Chromium	96.6	87.2	P/P	80 - 120
2233048	Copper	98.7	91.3	P/P	80 - 120
2233048	Lead	108	98.2	P/P	80 - 120
2233048	Nickel	97.2	88.7	P/P	80 - 120
2233048	Selenium	97.7	89.8	P/P	80 - 120
2233048	Silver	106	106	P/P	80 - 120
2233048	Thallium	106	96.3	P/P	80 - 120
2233126	Aluminum	95.9		P	80 - 120
2233126	Antimony	100		P	80 - 120
2233126	Arsenic	98.6		P	80 - 120
2233126	Beryllium	93.3		P	80 - 120
2233126	Boron	102		P	80 - 120
2233126	Cadmium	102		P	80 - 120
2233126	Chromium	95.4		P	80 - 120
2233126	Copper	97.9		P	80 - 120
2233126	Lead	108		P	80 - 120
2233126	Nickel	97.1		P	80 - 120
2233126	Selenium	96.4		P	80 - 120
2233126	Silver	106		P	80 - 120
2233126	Thallium	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233010	Chloride	100		P	90 - 110
2233235	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233010	Sulfate	99.0		P	90 - 110
2233235	Sulfate	98.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233236	Ammonia-N	95.8	95.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233098	Kjeldahl Nitrogen	101	90.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233134	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233085	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233122	O-Phosphate-P	98.0	97.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P395318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232693	2,4-D	112	98.8	P/P	30 - 160
2232693	2,4,5-T	104	97.7	P/P	30 - 160
2232693	Acetaminophen	108	98.9	P/P	30 - 160
2232693	Acetamiprid	93.9	75.5	P/P	30 - 160
2232693	Afidopyrophen	80.5	64.6	P/P	30 - 160
2232693	Bentazon	36.4	37.6	P/P	30 - 160
2232693	Benzovindiflupyr	91.8	81.8	P/P	30 - 160
2232693	Carbamazepine	75.9	74.6	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P395318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232693	Clothianidin	83.2	96.8	P/P	30 - 160
2232693	Dinotefuran	120	113	P/P	30 - 160
2232693	Diuron	53.1	48.9	P/P	30 - 160
2232693	Fenuron	67.5	65.6	P/P	30 - 160
2232693	Fluridone	84.5	68.2	P/P	30 - 160
2232693	Hydrocodone	99.5	96.2	P/P	30 - 160
2232693	Ibuprofen	82.8	71.7	P/P	30 - 160
2232693	Imazapyr	93.7	83.8	P/P	30 - 160
2232693	Imidacloprid	152	142	P/P	30 - 160
2232693	Linuron	61.9	56.1	P/P	30 - 160
2232693	Mandestrobin	91.4	82.9	P/P	30 - 160
2232693	MCPP	103	94.5	P/P	30 - 160
2232693	Naproxen	58.5	48.2	P/P	30 - 160
2232693	Primidone	102	97.6	P/P	30 - 160
2232693	Pyraclostrobin	86.9	76.6	P/P	30 - 160
2232693	Thiamethoxam	135	127	P/P	30 - 160
2232693	Tolfenpyrad	55.5	55.3	P/P	30 - 160
2232693	Triclopyr	117	107	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233034	Acesulfame K	279	282	F/F	40 - 150
2233034	AMPA	117	114	P/P	40 - 150
2233034	Endothall	81.0	75.1	P/P	40 - 150
2233034	Glufosinate	138	138	P/P	40 - 150
2233034	Glyphosate	112	94.6	P/P	40 - 140
2233034	Sucralose	108	111	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P395517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233059	Fluoride	98.7	96.9	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P395668

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2233281	Organic Carbon	99.6		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P395386

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233087	Turbidity	1.94	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P395380

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233048	Barium	3.29	Spike	P	0 - 20
2233048	Calcium	3.76	Spike	P	0 - 20
2233048	Iron	4.29	Spike	P	0 - 20
2233048	Magnesium	4.28	Spike	P	0 - 20
2233048	Manganese	3.35	Spike	P	0 - 20
2233048	Potassium	3.07	Spike	P	0 - 20
2233048	Sodium	3.80	Spike	P	0 - 20
2233048	Zinc	0.0777	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P395380

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233048	Aluminum	3.99	Spike	P	0 - 20
2233048	Antimony	9.11	Spike	P	0 - 20
2233048	Arsenic	9.56	Spike	P	0 - 20
2233048	Beryllium	7.72	Spike	P	0 - 20
2233048	Boron	6.57	Spike	P	0 - 20
2233048	Cadmium	9.82	Spike	P	0 - 20
2233048	Chromium	9.73	Spike	P	0 - 20
2233048	Copper	7.82	Spike	P	0 - 20
2233048	Lead	9.81	Spike	P	0 - 20
2233048	Nickel	9.18	Spike	P	0 - 20
2233048	Selenium	8.42	Spike	P	0 - 20
2233048	Silver	0.831	Spike	P	0 - 20
2233048	Thallium	9.22	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395584

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233235	Chloride	0.570	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P395586

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233235	Sulfate	0.441	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P395904

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233236	Ammonia-N	0.326	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P395719

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233098	Kjeldahl Nitrogen	5.80	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P395411

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233134	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P395487

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233085	Total-P	0.157	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P395364

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233122	O-Phosphate-P	0.681	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P395318

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232693	2,4-D	12.1	Spike	P	0 - 30
2232693	2,4,5-T	5.77	Spike	P	0 - 30
2232693	Acetaminophen	8.43	Spike	P	0 - 30
2232693	Acetamiprid	21.7	Spike	P	0 - 30
2232693	Afidopyropen	21.8	Spike	P	0 - 30
2232693	Bentazon	3.25	Spike	P	0 - 30
2232693	Benzovindiflupyr	11.5	Spike	P	0 - 30
2232693	Carbamazepine	1.75	Spike	P	0 - 30
2232693	Clothianidin	15.1	Spike	P	0 - 30
2232693	Dinotefuran	5.98	Spike	P	0 - 30
2232693	Diuron	8.12	Spike	P	0 - 30
2232693	Fenuron	2.80	Spike	P	0 - 30
2232693	Fluridone	21.4	Spike	P	0 - 30
2232693	Hydrocodone	3.36	Spike	P	0 - 30
2232693	Ibuprofen	14.4	Spike	P	0 - 30
2232693	Imazapyr	5.74	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P395318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232693	Imidacloprid	7.06	Spike	P	0 - 30
2232693	Linuron	9.67	Spike	P	0 - 30
2232693	Mandestrobin	9.80	Spike	P	0 - 30
2232693	MCP	8.54	Spike	P	0 - 30
2232693	Naproxen	19.3	Spike	P	0 - 30
2232693	Primidone	4.40	Spike	P	0 - 30
2232693	Pyraclostrobin	12.6	Spike	P	0 - 30
2232693	Thiamethoxam	5.64	Spike	P	0 - 30
2232693	Tolfenpyrad	0.337	Spike	P	0 - 30
2232693	Triclopyr	8.82	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233034	Acesulfame K	1.15	Spike	P	0 - 30
2233034	AMPA	2.46	Spike	P	0 - 30
2233034	Endothall	7.53	Spike	P	0 - 30
2233034	Glufosinate	0.110	Spike	P	0 - 30
2233034	Glyphosate	13.0	Spike	P	0 - 30
2233034	Sucralose	2.92	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P395382

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233128	Color (true)	6.40	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P395512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233059	Total Alkalinity	0.279	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P395816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233280	TDS	4.29	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P395517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233059	Fluoride	0.946	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011

Batch ID: P395668

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2233281	Organic Carbon	0.273	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2233125

Field Sample ID: 19010046

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.4	P	30 - 160
EPA 8321B	Diuron-d6	56.6	P	30 - 160
EPA 8321B	Endothall-d6	114	P	40 - 160
EPA 8321B	Endothall-d6	114	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	76.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	76.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	80.2	P	30 - 160
EPA 8321B	Primidone-d5	89.6	P	30 - 160
EPA 8321B	Sucralose-d6	59.9	P	30 - 160
EPA 8321B	Sucralose-d6	59.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104216

Included Lab Sample IDs: 2233120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.0	98.9	P/P	90 - 110
Sulfate	98.7	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104225

Included Lab Sample IDs: 2233122

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.0	98.3	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A104228

Included Lab Sample IDs: 2233120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.6	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104229

Included Lab Sample IDs: 2233120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	101	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104242

Included Lab Sample IDs: 2233121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A104286

Included Lab Sample IDs: 2233126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.4	99.3	P/P	90 - 110
Antimony	97.7	97.4	P/P	90 - 110
Arsenic	97.6	97.6	P/P	90 - 110
Beryllium	98.9	95.6	P/P	90 - 110
Boron	98.4	102	P/P	90 - 110
Cadmium	97.7	98.0	P/P	90 - 110
Chromium	96.1	96.1	P/P	90 - 110
Copper	95.3	95.7	P/P	90 - 110
Lead	107	109	P/P	90 - 110
Nickel	97.2	95.9	P/P	90 - 110
Selenium	98.6	98.6	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A104288

Included Lab Sample IDs: 2233120

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.5	98.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104288

Included Lab Sample IDs: 2233120

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

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2233125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	112	P/P	50 - 150
2,4,5-T	99.0	98.4	P/P	50 - 150
Acetaminophen	102	101	P/P	60 - 160
Acetamiprid	107	108	P/P	50 - 150
Afidopyropen	105	93.3	P/P	50 - 150
Bentazon	81.3	82.8	P/P	50 - 160
Benzovindiflupyr	118	118	P/P	50 - 160
Carbamazepine	107	110	P/P	60 - 150
Clothianidin	112	113	P/P	60 - 150
Dinotefuran	102	111	P/P	50 - 150
Diuron	107	115	P/P	60 - 160
Fenuron	98.8	103	P/P	60 - 150
Fluridone	114	115	P/P	60 - 160
Hydrocodone	111	108	P/P	60 - 150
Ibuprofen	105	100	P/P	50 - 160
Imazapyr	84.2	75.7	P/P	50 - 160
Imidacloprid	104	107	P/P	60 - 150
Linuron	106	106	P/P	60 - 150
Mandestrobin	110	109	P/P	50 - 150
MCP	112	103	P/P	50 - 150
Naproxen	124	73.0	P/P	50 - 160
Primidone	97.0	99.5	P/P	60 - 150
Pyraclostrobin	108	112	P/P	60 - 150
Thiamethoxam	111	119	P/P	50 - 150
Tolfenpyrad	112	110	P/P	60 - 150
Triclopyr	108	103	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A104298

Included Lab Sample IDs: 2233121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	96.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A104344

Included Lab Sample IDs: 2233126

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	106	P/P	90 - 110
Calcium	102	99.7	P/P	90 - 110
Iron	104	101	P/P	90 - 110
Magnesium	102	99.6	P/P	90 - 110
Manganese	98.7	104	P/P	90 - 110
Potassium	100	98.1	P/P	90 - 110
Sodium	97.9	95.6	P/P	90 - 110
Zinc	104	110	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A104350

Included Lab Sample IDs: 2233125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	153	127	P/P	40 - 160
AMPA	99.2	105	P/P	40 - 160
Endothall	98.6	95.4	P/P	40 - 160
Glufosinate	114	111	P/P	40 - 160
Glyphosate	111	143	P/P	40 - 160

Reference Method: EPA 8321B

Run ID: A104354

Included Lab Sample IDs: 2233125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.0	93.1	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A104362

Included Lab Sample IDs: 2233121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A104425

Included Lab Sample IDs: 2233121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.4	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A104463

Included Lab Sample IDs: 2233121

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.94	
EPA 200.7 Rev. 4.4	Barium	104	106	110	102			3.29
	Calcium	108	108	109				3.76
	Iron	103	103	109	104			4.29
	Magnesium	105	105	111	101			4.28
	Manganese	100	101	106	98.3			3.35
	Potassium	99.2	107	110	100			3.07
	Sodium	102	100	107	103			3.80
	Zinc	102	102	102	104			0.0777
EPA 200.8 Rev. 5.4	Aluminum	95.9	87.7	82.5	95.9			3.99
	Antimony	102	99.5	90.8	100			9.11
	Arsenic	100	98.6	99.1	90.0			9.56
	Beryllium	92.2	92.9	85.6	93.3			7.72
	Boron	96.6	95.0	88.4	102			6.57
	Cadmium	99.7	101	91.3	102			9.82
	Chromium	96.6	96.6	87.2	95.4			9.73
	Copper	99.2	98.7	91.3	97.9			7.82
	Lead	108	108	98.2	108			9.81
	Nickel	98.1	97.2	88.7	97.1			9.18
	Selenium	101	97.7	89.8	96.4			8.42
	Silver	107	106	106	106			0.831
	Thallium	103	106	96.3	107			9.22
EPA 300.0 Rev. 2.1	Chloride	97.9	100	100			0.570	
	Sulfate	97.3	98.1	99.0			0.441	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	95.8	95.4				0.326
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	101	90.1				5.80
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	105	103	103				0.0
EPA 365.1 Rev. 2.0	Total-P	106	104	104				0.157
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	98.0	97.3				0.681
EPA 8321B	2,4-D	126	112	98.8				12.1
	2,4,5-T	96.7	104	97.7				5.77
	Acesulfame K	146	279	282				1.15
	Acetaminophen	203	108	98.9				8.43
	Acetamiprid	83.0	93.9	75.5				21.7
	Afidopyropen	70.3	80.5	64.6				21.8
	AMPA	97.4	117	114				2.46
	Bentazon	62.6	36.4	37.6				3.25
	Benzovindiflupyr	86.8	91.8	81.8				11.5
	Carbamazepine	91.1	75.9	74.6				1.75
	Clothianidin	93.6	83.2	96.8				15.1
	Dinotefuran	82.0	120	113				5.98
	Diuron	68.1	53.1	48.9				8.12
	Endothall	95.3	81.0	75.1				7.53
	Fenuron	87.9	67.5	65.6				2.80
	Fluridone	79.5	84.5	68.2				21.4
	Glufosinate	111	138	138				0.110
	Glyphosate	119	112	94.6				13.0
	Hydrocodone	91.3	99.5	96.2				3.36
	Ibuprofen	80.2	82.8	71.7				14.4
	Imazapyr	78.9	93.7	83.8				5.74
	Imidacloprid	103	152	142				7.06
	Linuron	67.1	61.9	56.1				9.67
	Mandestrobin	85.2	91.4	82.9				9.80
	MCPP	110	103	94.5				8.54

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Naproxen	62.8	58.5	48.2		19.3
	Primidone	91.1	102	97.6		4.40
	Pyraclostrobin	78.8	86.9	76.6		12.6
	Sucralose	92.2	108	111		2.92
	Thiamethoxam	99.4	135	127		5.64
	Tolfenpyrad	44.4	55.5	55.3		0.337
	Triclopyr	111	117	107		8.82
SM 2120 B-2011	Color (true)	100			6.40	
SM 2320 B-2011	Total Alkalinity	101			0.279	
SM 2540 C-2011	TDS				4.29	
SM 4500 F-C-2011	Fluoride	98.9	98.7	96.9		0.946
SM 5310 B-2011	Organic Carbon	95.4	99.6			0.273

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2233120
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2233126
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2233126
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2233120
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2233120
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2233121
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2233121
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2233121
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2233121
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2233122
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2233125
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2233125
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2233120
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2233120
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2233126
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2233120
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2233120
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2233120
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2233121

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	03/23/2021			03/23/2021 15:57	Yen Ta	2233120
EPA 200.7 Rev. 4.4	03/23/2021	03/23/2021 16:00	Elliott D. Healy	03/29/2021 18:41	Josef B Mick	2233126
EPA 200.8 Rev. 5.4	03/23/2021	03/23/2021 16:00	Elliott D. Healy	03/25/2021 18:29	McKinley C Carter	2233126
EPA 300.0 Rev. 2.1	03/23/2021			03/25/2021 17:38	Lipi Saha	2233120
EPA 350.1 Rev. 2.0	03/23/2021			04/02/2021 18:44	Ping Hua	2233121
EPA 351.2 Rev. 2.0	03/23/2021	03/31/2021 13:16	Benjamin T. Nordmann	04/01/2021 13:15	Virginia P. Brown	2233121
EPA 353.2 Rev. 2.0	03/23/2021			03/24/2021 10:28	Beverly Y. Sanders	2233121
EPA 365.1 Rev. 2.0	03/23/2021	03/25/2021 12:45	Yen Ta	03/26/2021 13:22	Shengyu Ding	2233121
EPA 365.1 Rev. 2.0 dissolved	03/23/2021			03/23/2021 14:10	Lipi Saha	2233122
EPA 8321B	03/23/2021	03/23/2021 14:30	Rebecca Ware	03/23/2021 15:04	Rebecca Ware	2233125
	03/23/2021	03/23/2021 14:30	Rebecca Ware	03/25/2021 12:40	Rebecca Ware	2233125
	03/23/2021	03/25/2021 09:00	Hoor Shaik	03/27/2021 00:26	Juyoung Kim	2233125
SM 2120 B-2011	03/23/2021			03/23/2021 16:17	Benjamin T. Nordmann	2233120
SM 2320 B-2011	03/23/2021			03/24/2021 20:17	Dale L. Simmons	2233120
SM 2340B	03/23/2021			03/29/2021 18:41	Josef B Mick	2233126
SM 2540 C-2011	03/23/2021			03/26/2021 15:08	Yijie Li	2233120
SM 2540 D-2011	03/23/2021			03/26/2021 15:08	Yijie Li	2233120
SM 4500 F-C-2011	03/23/2021			03/24/2021 20:17	Dale L. Simmons	2233120
SM 5310 B-2011	03/23/2021			03/30/2021 06:10	Madeline Gruver	2233121