

Chemical Analysis Report

NE-DIST-2020-12-11-02

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

Event Description: **Pellicer Creek and Tribs**

Request ID: **RQ-2020-12-07-41**

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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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 05-JAN-2021 14:10



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: 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: Cracker Branch @ Pellicer Creek Campground Collection Date/Time: 12/10/2020 11:15

Field ID: G5NE0582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2212496	EPA 180.1 Rev. 2.0	Turbidity	2.1	A	NTU	P391054	
	EPA 300.0 Rev. 2.1	Chloride	42		mg Cl/L	P391258	
		Sulfate	4.2		mg SO4/L	P391259	
	SM 2120 B-2011	Color (true)	370		PCU	P391047	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P391136	
	SM 2540 C-2011	TDS	166		mg/L	P391521	
	SM 2540 D-2011	TSS	3	I	mg/L	P391525	
	SM 4500 F-C-2011	Fluoride	0.052	I	mg F/L	P391138	
2212497	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P391484	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P391647	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P391152	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P391158	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P391280	
2212498	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P391050	
2212517	EPA 8321B	2,4-D	0.0020	U	ug/L	P391438	
		Acesulfame K**	0.10	U	ug/L	P391110	MS
		AMPA**	0.10	U	ug/L	P391110	
		Sucralose**	0.15		ug/L	P391110	MS
		Acetaminophen**	0.025	I	ug/L	P391438	RPD
		Acetamiprid**	0.0020	U	ug/L	P391438	
		Endothall**	0.25	U	ug/L	P391110	MS
		Glufosinate**	0.10	U	ug/L	P391110	
		Glyphosate**	0.10	U	ug/L	P391110	
		Afidopyropen**	0.0020	U	ug/L	P391438	
		Bentazon	0.0042		ug/L	P391438	
		Benzovindiflupyr**	0.0020	U	ug/L	P391438	
		Carbamazepine**	8.0E-04	U	ug/L	P391438	
		Clothianidin**	0.0020	U	ug/L	P391438	
		Dinotefuran**	0.0020	U	ug/L	P391438	
		Diuron	0.0020	U	ug/L	P391438	
		Fenuron	0.016	U	ug/L	P391438	
		Fluridone**	8.0E-04	U	ug/L	P391438	
		Imazapyr**	0.22		ug/L	P391438	MS
		Hydrocodone**	0.0020	U	ug/L	P391438	
		Ibuprofen**	0.020	U	ug/L	P391438	
		Imidacloprid	0.0020	U	ug/L	P391438	
		Linuron	0.0040	U	ug/L	P391438	
		Mandestrobin**	0.0020	U	ug/L	P391438	
		MCP	0.0020	U	ug/L	P391438	
		Naproxen**	0.0080	U	ug/L	P391438	
		Primidone**	0.0040	U	ug/L	P391438	
		Pyraclostrobin**	0.0020	U	ug/L	P391438	
		Thiamethoxam**	0.0020	U	ug/L	P391438	

Field ID: G5NE0582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2212517	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P391438	
		Triclopyr**	0.0040	U	ug/L	P391438	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

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

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

Sample Location: Pellicer Creek Downstream Of Rr Tracks

Collection Date/Time: 12/10/2020 11:40

Field ID: G5NE0590

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2212499	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P391054	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P391258	
		Sulfate	4.6		mg SO4/L	P391259	
		Color (true)	350		PCU	P391047	
	SM 2320 B-2011	Total Alkalinity	48		mg CaCO3/L	P391136	
	SM 2540 C-2011	TDS	155		mg/L	P391522	
	SM 2540 D-2011	TSS	2	I	mg/L	P391526	
	SM 4500 F-C-2011	Fluoride	0.067	I	mg F/L	P391138	
2212502	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P391484	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P391451	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.019		mg N/L	P391152	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P391158	
	SM 5310 B-2011	Organic Carbon	34		mg C/L	P391280	
2212505	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P391050	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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.

Sample Location: Stevens Branch S Of Pelicer Cemetery Off Cr 204 **Collection Date/Time: 12/10/2020 12:20**

Field ID: 27010070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2212500	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P391054	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P391258	
		Sulfate	12		mg SO4/L	P391259	
	SM 2120 B-2011	Color (true)	420		PCU	P391047	
	SM 2320 B-2011	Total Alkalinity	72		mg CaCO3/L	P391136	
	SM 2540 C-2011	TDS	220	A	mg/L	P391522	
	SM 2540 D-2011	TSS	3	IA	mg/L	P391526	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P391138	
2212503	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P391484	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P391555	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.079		mg N/L	P391152	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P391158	
	SM 5310 B-2011	Organic Carbon	43		mg C/L	P391280	
2212506	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P391050	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Pringle Br Unnamed Dirt Rd 0.5mi S Dave Br

Collection Date/Time: 12/10/2020 12:45

Field ID: 27010203

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2212501	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P391054	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P391258	
		Sulfate	0.74		mg SO4/L	P391259	
	SM 2120 B-2011	Color (true)	370		PCU	P391047	
	SM 2320 B-2011	Total Alkalinity	29		mg CaCO3/L	P391136	
	SM 2540 C-2011	TDS	104		mg/L	P391522	
	SM 2540 D-2011	TSS	2	I	mg/L	P391526	
	SM 4500 F-C-2011	Fluoride	0.042	I	mg F/L	P391138	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P391484	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P391506	
2212504	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P391153	
	EPA 365.1 Rev. 2.0	Total-P	0.042		mg P/L	P391158	
	SM 5310 B-2011	Organic Carbon	32		mg C/L	P391280	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.026	Y	mg P/L	P391050	
	dissolved						

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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: Inadequate thermal preservation. Please see NCR.

Non-Conformance Report

NCR ID: 8584

Event(s)

NE-DIST-2020-12-11-02

Job(s)

TLH-2020-12-11-45

Sample(s)

2212507

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved on ice within fifteen minutes of collection.

Resolution: Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 1/5/2021

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: P391054

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391258

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391259

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391484

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391451

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391152

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391153

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391158

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P391050

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

Reference Method: EPA 8321B
Batch ID: P391110

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: P391438

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	0.030	I	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P391438

Component	Result	Code	Units
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P391047

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P391136

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

Reference Method: SM 2540 C-2011
Batch ID: P391521

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P391522

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P391525

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P391526

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P391138

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P391280

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: P391258

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391259

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391484

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391451

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391153

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	98.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391158

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: P391050

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.3		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P391110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	81.6		P	40 - 150
AMPA	101		P	40 - 150
Endothall	92.3		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	91.2		P	40 - 140
Sucralose	104		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P391438

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	68.4		P	30 - 160
Acetaminophen	68.2		P	30 - 150
Acetamiprid	96.5		P	30 - 160
Afidopyropen	70.6		P	30 - 160
Bentazon	52.0		P	30 - 150
Benzovindiflupyr	83.9		P	30 - 160
Carbamazepine	66.9		P	30 - 160
Clothianidin	87.6		P	30 - 160
Dinotefuran	82.9		P	30 - 160
Diuron	54.9		P	30 - 160
Fenuron	97.0		P	30 - 160
Fluridone	73.6		P	30 - 160
Hydrocodone	92.6		P	30 - 160
Ibuprofen	50.3		P	30 - 160
Imazapyr	68.4		P	30 - 160
Imidacloprid	96.9		P	30 - 160
Linuron	62.6		P	30 - 160
Mandestrobin	81.0		P	30 - 160
MCPP	80.0		P	30 - 160
Naproxen	48.0		P	30 - 160
Primidone	73.8		P	30 - 160
Pyraclostrobin	72.2		P	30 - 160
Thiamethoxam	91.6		P	30 - 160
Tolfenpyrad	49.7		P	30 - 160
Triclopyr	69.6		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P391047

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

Reference Method: SM 2320 B-2011
Batch ID: P391136

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P391138

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P391280

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212333	Chloride	100		P	90 - 110
2212500	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391259

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212333	Sulfate	101		P	90 - 110
2212500	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212492	Ammonia-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212524	Kjeldahl Nitrogen	96.4	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2211964	Kjeldahl Nitrogen	101	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2213049	Kjeldahl Nitrogen	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212383	NO2NO3-N	98.5	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391153

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212597	NO2NO3-N	94.8	94.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212433	Total-P	104	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P391050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212394	O-Phosphate-P	99.1	99.4	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P391110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212306	Acesulfame K	9.67	9.17	F/F	40 - 150
2212306	AMPA	72.0	76.9	P/P	40 - 150
2212306	Endothall	270	290	F/F	40 - 150
2212306	Glufosinate	89.8	78.1	P/P	40 - 150
2212306	Sucralose	33.6	32.3	F/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P391438

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212466	2,4-D	60.9	71.6	P/P	30 - 160
2212466	Acetaminophen	63.8	107	P/P	30 - 150
2212466	Acetamiprid	93.8	90.8	P/P	30 - 160
2212466	Afidopyropen	58.9	70.8	P/P	30 - 160
2212466	Benzovindiflupyr	74.6	74.7	P/P	30 - 160
2212466	Carbamazepine	58.9	59.8	P/P	30 - 160
2212466	Clothianidin	73.6	73.0	P/P	30 - 160
2212466	Dinotefuran	98.1	97.0	P/P	30 - 160
2212466	Diuron	42.3	40.6	P/P	30 - 160
2212466	Fenuron	76.9	77.6	P/P	30 - 160
2212466	Fluridone	69.6	58.1	P/P	30 - 160
2212466	Hydrocodone	101	102	P/P	30 - 160
2212466	Ibuprofen	37.2	48.6	P/P	30 - 160
2212466	Imazapyr	15.0	13.7	F/F	30 - 160
2212466	Imidacloprid	128	123	P/P	30 - 160
2212466	Linuron	56.1	58.4	P/P	30 - 160
2212466	Mandestrobin	70.8	68.2	P/P	30 - 160
2212466	MCPP	65.5	65.3	P/P	30 - 160
2212466	Naproxen	35.2	42.7	P/P	30 - 160
2212466	Primidone	69.4	71.7	P/P	30 - 160
2212466	Pyraclostrobin	73.9	75.0	P/P	30 - 160
2212466	Thiamethoxam	114	120	P/P	30 - 160
2212466	Tolfenpyrad	50.5	44.8	P/P	30 - 160
2212466	Triclopyr	64.4	66.0	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P391138

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212431	Fluoride	98.4	98.4	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P391280

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2212504	Organic Carbon	99.4		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P391054

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212496	Turbidity	1.41	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212333	Chloride	0.930	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391484

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212492	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212492	Kjeldahl Nitrogen	3.98	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212524	Kjeldahl Nitrogen	0.775	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211964	Kjeldahl Nitrogen	4.34	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2213049	Kjeldahl Nitrogen	0.583	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212383	NO2NO3-N	0.619	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391153

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212597	NO2NO3-N	0.464	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212433	Total-P	2.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P391050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212394	O-Phosphate-P	0.302	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P391110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212306	Acesulfame K	5.30	Spike	P	0 - 30
2212306	AMPA	6.67	Spike	P	0 - 30
2212306	Endothall	7.37	Spike	P	0 - 30
2212306	Glufosinate	13.9	Spike	P	0 - 30
2212306	Glyphosate	12.0	Spike	P	0 - 30
2212306	Sucralose	3.13	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P391438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212466	2,4-D	16.0	Spike	P	0 - 30
2212466	Acetaminophen	50.9	Spike	F	0 - 30
2212466	Acetamiprid	3.22	Spike	P	0 - 30
2212466	Afidopyrophen	18.4	Spike	P	0 - 30
2212466	Bentazon	4.05	Spike	P	0 - 30
2212466	Benzovindiflupyr	0.184	Spike	P	0 - 30
2212466	Carbamazepine	1.52	Spike	P	0 - 30
2212466	Clothianidin	0.915	Spike	P	0 - 30
2212466	Dinotefuran	1.09	Spike	P	0 - 30
2212466	Diuron	3.93	Spike	P	0 - 30
2212466	Fenuron	0.995	Spike	P	0 - 30
2212466	Fluridone	17.9	Spike	P	0 - 30
2212466	Hydrocodone	1.60	Spike	P	0 - 30
2212466	Ibuprofen	26.7	Spike	P	0 - 30
2212466	Imazapyr	1.65	Spike	P	0 - 30
2212466	Imidacloprid	4.29	Spike	P	0 - 30
2212466	Linuron	3.93	Spike	P	0 - 30
2212466	Mandestrobin	3.66	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P391438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212466	MCP	0.246	Spike	P	0 - 30
2212466	Naproxen	19.3	Spike	P	0 - 30
2212466	Primidone	3.21	Spike	P	0 - 30
2212466	Pyraclostrobin	1.41	Spike	P	0 - 30
2212466	Thiamethoxam	5.50	Spike	P	0 - 30
2212466	Tolfenpyrad	11.8	Spike	P	0 - 30
2212466	Triclopyr	2.49	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P391047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212382	Color (true)	2.29	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P391136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212431	Total Alkalinity	1.03	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P391521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2211734	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P391522

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212500	TDS	1.37	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P391138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212431	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P391280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2212504	Organic Carbon	0.651	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2212517
Field Sample ID: G5NE0582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	56.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	60.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	46.2	P	30 - 160
EPA 8321B	Diuron-d6	48.3	P	30 - 160
EPA 8321B	Endothall-d6	107	P	40 - 160
EPA 8321B	Endothall-d6	107	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	40 - 160
EPA 8321B	Ibuprofen-d3	49.8	P	30 - 160
EPA 8321B	Primidone-d5	66.0	P	30 - 160
EPA 8321B	Sucralose-d6	78.5	P	30 - 160
EPA 8321B	Sucralose-d6	78.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A102543

Included Lab Sample IDs: 2212496, 2212499, 2212500, 2212501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115
Color (true)	103	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102545

Included Lab Sample IDs: 2212496, 2212499, 2212500, 2212501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102546

Included Lab Sample IDs: 2212498, 2212505, 2212506, 2212507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	99.0	P/P	90 - 110
O-Phosphate-P	99.0	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102568

Included Lab Sample IDs: 2212517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	84.2	92.1	P/P	60 - 160
AMPA	79.1	107	P/P	60 - 160
Endothall	95.6	96.3	P/P	60 - 160
Glufosinate	76.8	81.4	P/P	60 - 160
Glyphosate	74.0	103	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A102580

Included Lab Sample IDs: 2212496, 2212499, 2212500, 2212501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A102580

Included Lab Sample IDs: 2212496, 2212499, 2212500, 2212501

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102586

Included Lab Sample IDs: 2212497, 2212502, 2212503, 2212504

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102617

Included Lab Sample IDs: 2212496, 2212499, 2212500, 2212501

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.3	P/P	90 - 110
Chloride	99.3	99.6	P/P	90 - 110
Sulfate	100	99.3	P/P	90 - 110
Sulfate	99.3	99.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A102621

Included Lab Sample IDs: 2212497, 2212502, 2212503, 2212504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.4	97.1	P/P	90 - 110
Organic Carbon	97.1	96.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102622

Included Lab Sample IDs: 2212517

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102686

Included Lab Sample IDs: 2212497, 2212502, 2212503, 2212504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	99.6	P/P	90 - 110
Ammonia-N	99.6	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102694

Included Lab Sample IDs: 2212502, 2212504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	100	P/P	90 - 110
Kjeldahl Nitrogen	105	98.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102718

Included Lab Sample IDs: 2212517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	76.1	78.8	P/P	50 - 150
Acetaminophen	108	128	P/P	60 - 160
Acetamiprid	108	128	P/P	50 - 150
Afidopyropen	89.1	119	P/P	50 - 150
Bentazon	107	137	P/P	50 - 160
Benzovindiflupyr	110	104	P/P	50 - 150
Carbamazepine	112	104	P/P	60 - 150
Clothianidin	126	113	P/P	60 - 150
Dinotefuran	104	108	P/P	50 - 150
Diuron	103	91.2	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A102718
Included Lab Sample IDs: 2212517

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	109	110	P/P	60 - 150
Fluridone	106	115	P/P	60 - 160
Hydrocodone	104	104	P/P	60 - 150
Ibuprofen	110	81.6	P/P	50 - 160
Imazapyr	84.0	83.1	P/P	50 - 150
Imidacloprid	100	102	P/P	60 - 150
Linuron	94.8	114	P/P	60 - 150
Mandestrobin	111	107	P/P	50 - 150
MCPD	84.1	87.1	P/P	50 - 150
Naproxen	93.2	98.0	P/P	50 - 160
Primidone	104	104	P/P	60 - 150
Pyraclostrobin	109	110	P/P	60 - 150
Thiamethoxam	110	108	P/P	50 - 150
Tolfenpyrad	114	107	P/P	60 - 150
Triclopyr	99.3	98.2	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A102722
Included Lab Sample IDs: 2212497, 2212502, 2212503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.9	99.6	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A102725
Included Lab Sample IDs: 2212504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A102729
Included Lab Sample IDs: 2212503

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A102770
Included Lab Sample IDs: 2212497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	102	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					1.41	
EPA 300.0 Rev. 2.1	Chloride	102	100	99.7		0.930	
	Sulfate	102	101	101			
EPA 350.1 Rev. 2.0	Ammonia-N	96.2	99.0	99.0			0.0
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102					3.98
	Kjeldahl Nitrogen	98.4	96.4	97.2			0.775
	Kjeldahl Nitrogen	101	101	95.2			4.34
	Kjeldahl Nitrogen	101	100	101			0.583
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	98.5	97.5			0.619
	NO2NO3-N	98.5	94.8	94.4			0.464
EPA 365.1 Rev. 2.0	Total-P	106	107	104			2.46
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	99.1	99.4			0.302
EPA 8321B	2,4-D	68.4	60.9	71.6			16.0
	Acesulfame K	81.6	9.67	9.17			5.30
	Acetaminophen	68.2	63.8	107			50.9
	Acetamiprid	96.5	93.8	90.8			3.22
	Afidopyropen	70.6	58.9	70.8			18.4
	AMPA	101	72.0	76.9			6.67
	Bentazon	52.0					4.05
	Benzovindiflupyr	83.9	74.6	74.7			0.184
	Carbamazepine	66.9	58.9	59.8			1.52
	Clothianidin	87.6	73.6	73.0			0.915
	Dinotefuran	82.9	98.1	97.0			1.09
	Diuron	54.9	42.3	40.6			3.93
	Endothall	92.3	270	290			7.37
	Fenuron	97.0	76.9	77.6			0.995
	Fluridone	73.6	69.6	58.1			17.9
	Glufosinate	104	89.8	78.1			13.9
	Glyphosate	91.2					12.0
	Hydrocodone	92.6	101	102			1.60
	Ibuprofen	50.3	37.2	48.6			26.7
	Imazapyr	68.4	15.0	13.7			1.65
	Imidacloprid	96.9	128	123			4.29
	Linuron	62.6	56.1	58.4			3.93
	Mandestrobin	81.0	70.8	68.2			3.66
	MCPP	80.0	65.5	65.3			0.246
	Naproxen	48.0	35.2	42.7			19.3
	Primidone	73.8	69.4	71.7			3.21
	Pyraclostrobin	72.2	73.9	75.0			1.41
	Sucralose	104	33.6	32.3			3.13
	Thiamethoxam	91.6	114	120			5.50
	Tolfenpyrad	49.7	50.5	44.8			11.8
	Triclopyr	69.6	64.4	66.0			2.49
SM 2120 B-2011	Color (true)	100				2.29	
SM 2320 B-2011	Total Alkalinity	103				1.03	
SM 2540 C-2011	TDS					0.0	
	TDS					1.37	
SM 4500 F-C-2011	Fluoride	98.8	98.4	98.4			0.0
SM 5310 B-2011	Organic Carbon	96.0	99.4				0.651

Reference Method Descriptions

Method	Description	Associated Samples
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Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2212496, 2212499, 2212500, 2212501
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2212496, 2212499, 2212500, 2212501
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2212496, 2212499, 2212500, 2212501
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2212497, 2212502, 2212503, 2212504
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2212497, 2212502, 2212503, 2212504
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2212497, 2212502, 2212503, 2212504
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2212497, 2212502, 2212503, 2212504
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2212498, 2212505, 2212506, 2212507
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2212517
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2212517
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2212496, 2212499, 2212500, 2212501
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2212496, 2212499, 2212500, 2212501
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2212496, 2212499, 2212500, 2212501
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2212496, 2212499, 2212500, 2212501
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2212496, 2212499, 2212500, 2212501
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2212497, 2212502, 2212503, 2212504

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	12/11/2020			12/11/2020 14:53	Yen Ta	2212496, 2212499, 2212500, 2212501
EPA 300.0 Rev. 2.1	12/11/2020			12/15/2020 22:36	Lipi Saha	2212500
	12/11/2020			12/16/2020 01:01	Lipi Saha	2212496
	12/11/2020			12/16/2020 01:13	Lipi Saha	2212499
	12/11/2020			12/16/2020 01:25	Lipi Saha	2212501
EPA 350.1 Rev. 2.0	12/11/2020			12/20/2020 16:33	Ping Hua	2212497
	12/11/2020			12/20/2020 16:35	Ping Hua	2212502
	12/11/2020			12/20/2020 16:43	Ping Hua	2212503
	12/11/2020			12/20/2020 16:44	Ping Hua	2212504
EPA 351.2 Rev. 2.0	12/11/2020	12/18/2020 10:54	David Boose	12/20/2020 18:52	Julia Storbeck	2212502
	12/11/2020	12/18/2020 14:40	David Boose	12/20/2020 20:07	Julia Storbeck	2212504
	12/11/2020	12/21/2020 14:46	David Boose	12/22/2020 14:26	Julia Storbeck	2212503
	12/11/2020	12/22/2020 14:29	David Boose	12/23/2020 16:18	Julia Storbeck	2212497
EPA 353.2 Rev. 2.0	12/11/2020			12/15/2020 10:06	Beverly Y. Sanders	2212497
	12/11/2020			12/15/2020 10:07	Beverly Y. Sanders	2212502
	12/11/2020			12/15/2020 10:08	Beverly Y. Sanders	2212503
	12/11/2020			12/15/2020 10:29	Beverly Y. Sanders	2212504
EPA 365.1 Rev. 2.0	12/11/2020	12/15/2020 12:45	Yen Ta	12/21/2020 15:23	Benjamin T. Nordmann	2212497
	12/11/2020	12/15/2020 12:45	Yen Ta	12/21/2020 15:24	Benjamin T. Nordmann	2212502
	12/11/2020	12/15/2020 12:45	Yen Ta	12/21/2020 15:25	Benjamin T. Nordmann	2212503
	12/11/2020	12/15/2020 12:45	Yen Ta	12/22/2020 14:17	Shengyu Wang	2212504
EPA 365.1 Rev. 2.0 dissolved	12/11/2020			12/11/2020 15:51	Ping Hua	2212498
	12/11/2020			12/11/2020 15:56	Ping Hua	2212505
	12/11/2020			12/11/2020 15:57	Ping Hua	2212506
	12/11/2020			12/11/2020 15:58	Ping Hua	2212507
EPA 8321B	12/11/2020	12/11/2020 11:30	Rebecca Ware	12/12/2020 08:03	Rebecca Ware	2212517
	12/11/2020	12/11/2020 11:30	Rebecca Ware	12/15/2020 22:03	Rebecca Ware	2212517
	12/11/2020	12/17/2020 11:00	Hoor Shaik	12/21/2020 06:40	Juyoung Kim	2212517
SM 2120 B-2011	12/11/2020			12/11/2020 15:52	Benjamin T. Nordmann	2212496
	12/11/2020			12/11/2020 15:59	Benjamin T. Nordmann	2212499
	12/11/2020			12/11/2020 16:00	Benjamin T. Nordmann	2212500, 2212501
SM 2320 B-2011	12/11/2020			12/14/2020 18:27	Dale L. Simmons	2212496
	12/11/2020			12/14/2020 18:40	Dale L. Simmons	2212499
	12/11/2020			12/14/2020 18:53	Dale L. Simmons	2212500
	12/11/2020			12/14/2020 19:05	Dale L. Simmons	2212501
SM 2540 C-2011	12/11/2020			12/14/2020 14:56	Yijie Li	2212496, 2212499, 2212500, 2212501
SM 2540 D-2011	12/11/2020			12/14/2020 15:56	Yijie Li	2212496, 2212499, 2212500, 2212501
SM 4500 F-C-2011	12/11/2020			12/14/2020 18:27	Dale L. Simmons	2212496
	12/11/2020			12/14/2020 18:40	Dale L. Simmons	2212499
	12/11/2020			12/14/2020 18:53	Dale L. Simmons	2212500

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-2011	12/11/2020			12/14/2020 19:05	Dale L. Simmons	2212501
SM 5310 B-2011	12/11/2020			12/15/2020 04:19	Touraj Touran	2212504
	12/11/2020			12/15/2020 07:00	Touraj Touran	2212497
	12/11/2020			12/15/2020 07:13	Touraj Touran	2212502
	12/11/2020			12/15/2020 07:27	Touraj Touran	2212503