

Chemical Analysis Report

NW-DIST-2020-10-23-01

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

Event Description: **Western Lakes**
Request ID: **RQ-2020-10-19-47**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 17-NOV-2020 09:38

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Lake Karick (Center)(Also 33040210)

Collection Date/Time: 10/22/2020 11:23

Field ID: G4NW0274

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2204595	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P389194	
	EPA 300.0 Rev. 2.1	Chloride	2.1		mg Cl/L	P389474	
		Sulfate	0.56		mg SO4/L	P389477	
	SM 2120 B-2011	Color (true)	28		PCU	P389183	
	SM 2320 B-2011	Total Alkalinity	2.6		mg CaCO3/L	P389619	
	SM 2540 C-2011	TDS	15	U	mg/L	P389662	
	SM 2540 D-2011	TSS	2	I	mg/L	P389610	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P389456	
2204597	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P389215	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P389337	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389306	
	EPA 365.1 Rev. 2.0	Total-P	0.074		mg P/L	P389404	MS
	SM 5310 B-2011	Organic Carbon	4.0		mg C/L	P389443	
2204599	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389180	

Ref. Method and Comment:

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

Sample Location: Locklin Lake Center

Collection Date/Time: 10/22/2020 10:58

Field ID: G4NW0437

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2204596	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P389194	
	EPA 300.0 Rev. 2.1	Chloride	5.7		mg Cl/L	P389474	
		Sulfate	1.5		mg SO4/L	P389477	
	SM 2120 B-2011	Color (true)	11		PCU	P389183	
	SM 2320 B-2011	Total Alkalinity	8.7		mg CaCO3/L	P389619	
	SM 2540 C-2011	TDS	32		mg/L	P389662	
	SM 2540 D-2011	TSS	2	U	mg/L	P389610	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P389456	
2204598	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P389215	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P389337	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.49		mg N/L	P389306	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P389675	
	SM 5310 B-2011	Organic Carbon	1.4		mg C/L	P389443	
2204600	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389180	

Ref. Method and Comment:

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

Sample Location: Lake Stone Center

Collection Date/Time: 10/22/2020 13:49

Field ID: G4NW0426

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2204629	EPA 180.1 Rev. 2.0	Turbidity	1.4	A	NTU	P389195	
	EPA 300.0 Rev. 2.1	Chloride	2.6		mg Cl/L	P389803	
		Sulfate	1.6		mg SO4/L	P389806	
	SM 2120 B-2011	Color (true)	47		PCU	P389183	
	SM 2320 B-2011	Total Alkalinity	7.2		mg CaCO3/L	P389619	
	SM 2540 C-2011	TDS	33		mg/L	P389662	
	SM 2540 D-2011	TSS	2	UA	mg/L	P389610	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P389456	
2204630	EPA 350.1 Rev. 2.0	Ammonia-N	0.069		mg N/L	P389215	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P389630	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P389306	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P389675	
	SM 5310 B-2011	Organic Carbon	7.3		mg C/L	P389443	
2204631	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389181	MS

Ref. Method and Comment:

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

Sample Location: FB_10222020

Collection Date/Time: 10/22/2020 13:59

Field ID: FB_10222020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2204641	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P389194	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P389803	
		Sulfate	0.20	U	mg SO4/L	P389806	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P389184	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P389619	
	SM 2540 C-2011	TDS	15	U	mg/L	P389660	
	SM 2540 D-2011	TSS	2	U	mg/L	P389608	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P389456	
2204642	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P389215	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P389630	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389306	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P389675	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P389443	
2204643	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389181	MS
2204644	EPA 8321B	2,4-D	0.0020	U	ug/L	P389300	
		Acesulfame K**	0.10	U	ug/L	P389220	MS
		AMPA**	0.10	U	ug/L	P389220	
		Sucralose**	0.027	I	ug/L	P389220	
		Acetaminophen**	0.0080	U	ug/L	P389300	
		Acetamiprid**	0.0020	U	ug/L	P389300	
		Endothall**	0.25	U	ug/L	P389220	
		Glufosinate**	0.10	U	ug/L	P389220	
		Glyphosate**	0.10	U	ug/L	P389220	
		Afidopyropen**	0.0020	U	ug/L	P389300	
		Bentazon	8.0E-04	U	ug/L	P389300	
		Benzovindiflupyr**	0.0020	U	ug/L	P389300	
		Carbamazepine**	8.0E-04	U	ug/L	P389300	
		Clothianidin**	0.0020	U	ug/L	P389300	
		Dinotefuran**	0.0020	U	ug/L	P389300	
		Diuron	0.0020	U	ug/L	P389300	
		Fenuron	0.016	U	ug/L	P389300	
		Fluridone**	8.0E-04	U	ug/L	P389300	
		Imazapyr**	0.0040	U	ug/L	P389300	
		Hydrocodone**	0.0020	U	ug/L	P389300	
		Ibuprofen**	0.020	U	ug/L	P389300	
		Imidacloprid	0.0020	U	ug/L	P389300	
		Linuron	0.0040	U	ug/L	P389300	
		Mandestrobin**	0.0020	U	ug/L	P389300	
		MCP	0.0020	U	ug/L	P389300	
		Naproxen**	0.0080	U	ug/L	P389300	
		Primidone**	0.0040	U	ug/L	P389300	RPD
		Pyraclostrobin**	0.0020	U	ug/L	P389300	
		Thiamethoxam**	0.0020	U	ug/L	P389300	

Field ID: FB_10222020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2204644	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P389300	
		Triclopyr**	0.0040	U	ug/L	P389300	

Ref. Method and Comment:

SM 2120 B-2011: 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 some analytes could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: Results confirmed in sample duplicate.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389194

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389195

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389474

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389477

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389803

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389806

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389215

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389337

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389630

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389306

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389404

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389675

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389180

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389181

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

Reference Method: EPA 8321B
Batch ID: P389220

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: P389300

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P389300

Component	Result	Code	Units
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P389183

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B-2011
Batch ID: P389184

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P389619

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P389660

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P389662

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P389608

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P389610

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P389456

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P389443

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: P389474

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389477

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389806

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389215

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389337

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389630

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389306

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389404

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389675

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389180

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389181

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

Reference Method: EPA 8321B
Batch ID: P389220

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	136		P	40 - 150
AMPA	96.6		P	40 - 150
Endothall	83.5		P	40 - 150
Glufosinate	97.6		P	40 - 150
Glyphosate	99.4		P	40 - 140
Sucralose	113		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P389300

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.3	70.5	P/P	30 - 160
Acetaminophen	30.1	33.3	P/P	30 - 160
Acetamiprid	49.9	55.1	P/P	30 - 160
Afidopyropen	65.4	68.3	P/P	30 - 160
Bentazon	49.5	51.1	P/P	30 - 160
Benzovindiflupyr	69.3	72.7	P/P	30 - 160
Carbamazepine	59.4	61.6	P/P	30 - 160
Clothianidin	76.6	83.6	P/P	30 - 160
Dinotefuran	44.7	49.7	P/P	30 - 160
Diuron	62.7	65.5	P/P	30 - 160
Fenuron	95.9	99.6	P/P	30 - 160
Fluridone	80.9	89.6	P/P	30 - 160
Hydrocodone	85.0	83.0	P/P	30 - 160
Ibuprofen	67.5	67.3	P/P	30 - 160
Imazapyr	93.0	107	P/P	30 - 160
Imidacloprid	75.6	80.5	P/P	30 - 160
Linuron	75.7	73.4	P/P	30 - 160
Mandestrobin	79.3	82.5	P/P	30 - 160
MCPP	63.9	67.2	P/P	30 - 160
Naproxen	57.0	58.3	P/P	30 - 160
Primidone	85.9	98.5	P/P	30 - 160
Pyraclostrobin	49.4	51.2	P/P	30 - 160
Thiamethoxam	95.3	105	P/P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P389300

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	32.6	35.5	P/P	30 - 160
Triclopyr	70.0	60.6	P/P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P389183

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

Reference Method: SM 2120 B-2011
Batch ID: P389184

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

Reference Method: SM 2320 B-2011
Batch ID: P389619

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.2		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P389456

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P389443

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389474

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204421	Chloride	102		P	90 - 110
2204498	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204421	Sulfate	103		P	90 - 110
2204498	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204621	Chloride	98.8		P	90 - 110
2204770	Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204621	Sulfate	98.5		P	90 - 110
2204770	Sulfate	98.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204598	Ammonia-N	96.8	96.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204597	Kjeldahl Nitrogen	102	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389630

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204630	Kjeldahl Nitrogen	109	110	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204597	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389404

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P389404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204495	Total-P	106	111	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P389675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204422	Total-P	109	110	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P389180

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204477	O-Phosphate-P	99.2	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P389181

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204625	O-Phosphate-P	88.3	88.6	F/F	90 - 110

Reference Method: EPA 8321B
 Batch ID: P389220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204274	Acesulfame K	31.6	34.4	F/F	40 - 150
2204274	AMPA	92.5	97.1	P/P	40 - 150
2204274	Endothall	83.0	95.1	P/P	40 - 150
2204274	Glufosinate	90.6	92.1	P/P	40 - 150
2204274	Glyphosate	77.5	95.9	P/P	40 - 140
2204274	Sucralose	66.2	56.8	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P389300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204450	2,4-D	59.8	49.4	P/P	30 - 160
2204450	Acetaminophen	35.8	42.0	P/P	30 - 160
2204450	Acetamiprid	50.4	39.4	P/P	30 - 160
2204450	Afidopyropen	53.1	47.8	P/P	30 - 160
2204450	Benzovindiflupyr	54.1	51.1	P/P	30 - 160
2204450	Carbamazepine	49.8	48.0	P/P	30 - 160
2204450	Clothianidin	66.4	51.0	P/P	30 - 160
2204450	Dinotefuran	38.5	42.5	P/P	30 - 160
2204450	Diuron	37.7	35.5	P/P	30 - 160
2204450	Fenuron	71.3	60.0	P/P	30 - 160
2204450	Hydrocodone	54.3	51.0	P/P	30 - 160
2204450	Ibuprofen	56.7	44.3	P/P	30 - 160
2204450	Imidacloprid	109	96.0	P/P	30 - 160
2204450	Linuron	53.2	68.8	P/P	30 - 160
2204450	Mandestrobin	69.0	64.1	P/P	30 - 160
2204450	MCP	49.8	45.1	P/P	30 - 160
2204450	Naproxen	44.7	42.6	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P389300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204450	Primidone	87.3	61.1	P/P	30 - 160
2204450	Pyraclostrobin	52.8	46.8	P/P	30 - 160
2204450	Thiamethoxam	91.5	74.9	P/P	30 - 160
2204450	Tolfenpyrad	48.8	44.3	P/P	30 - 160
2204450	Triclopyr	46.3	46.5	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P389456

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204595	Fluoride	103	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P389443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2204622	Organic Carbon	98.6	99.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389194

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204500	Turbidity	0.612	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204629	Turbidity	0.692	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204498	Chloride	0.530	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389477

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204498	Sulfate	0.369	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204621	Chloride	0.759	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P389806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204621	Sulfate	0.782	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204598	Ammonia-N	0.230	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204597	Kjeldahl Nitrogen	3.32	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389630

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204630	Kjeldahl Nitrogen	0.643	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204597	NO2NO3-N	0.496	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204495	Total-P	3.54	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204422	Total-P	0.320	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389180

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204477	O-Phosphate-P	0.176	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389181

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204625	O-Phosphate-P	0.339	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P389220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204274	Acesulfame K	8.69	Spike	P	0 - 30
2204274	AMPA	3.48	Spike	P	0 - 30
2204274	Endothall	13.6	Spike	P	0 - 30
2204274	Glufosinate	1.62	Spike	P	0 - 30
2204274	Glyphosate	18.0	Spike	P	0 - 30
2204274	Sucralose	14.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P389300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204450	2,4-D	13.9	Spike	P	0 - 30
2204450	Acetaminophen	15.8	Spike	P	0 - 30
2204450	Acetamiprid	24.5	Spike	P	0 - 30
2204450	Afidopyropen	10.6	Spike	P	0 - 30
2204450	Bentazon	12.7	Spike	P	0 - 30
2204450	Benzovindiflupyr	5.74	Spike	P	0 - 30
2204450	Carbamazepine	3.28	Spike	P	0 - 30
2204450	Clothianidin	20.1	Spike	P	0 - 30
2204450	Dinotefuran	9.70	Spike	P	0 - 30
2204450	Diuron	6.07	Spike	P	0 - 30
2204450	Fenuron	17.1	Spike	P	0 - 30
2204450	Fluridone	7.96	Spike	P	0 - 30
2204450	Hydrocodone	6.11	Spike	P	0 - 30
2204450	Ibuprofen	24.5	Spike	P	0 - 30
2204450	Imazapyr	4.82	Spike	P	0 - 30
2204450	Imidacloprid	6.81	Spike	P	0 - 30
2204450	Linuron	25.5	Spike	P	0 - 30
2204450	Mandestrobin	7.32	Spike	P	0 - 30
2204450	MCPP	9.30	Spike	P	0 - 30
2204450	Naproxen	4.82	Spike	P	0 - 30
2204450	Primidone	35.4	Spike	F	0 - 30
2204450	Pyraclostrobin	12.2	Spike	P	0 - 30
2204450	Thiamethoxam	19.9	Spike	P	0 - 30
2204450	Tolfenpyrad	9.62	Spike	P	0 - 30
2204450	Triclopyr	0.283	Spike	P	0 - 30
LFB	2,4-D	1.17	LCS	P	0 - 30
LFB	Acetaminophen	9.97	LCS	P	0 - 30
LFB	Acetamiprid	9.90	LCS	P	0 - 30
LFB	Afidopyropen	4.38	LCS	P	0 - 30
LFB	Bentazon	3.26	LCS	P	0 - 30
LFB	Benzovindiflupyr	4.75	LCS	P	0 - 30
LFB	Carbamazepine	3.65	LCS	P	0 - 30
LFB	Clothianidin	8.76	LCS	P	0 - 30
LFB	Dinotefuran	10.6	LCS	P	0 - 30
LFB	Diuron	4.45	LCS	P	0 - 30
LFB	Fenuron	3.76	LCS	P	0 - 30
LFB	Fluridone	10.1	LCS	P	0 - 30
LFB	Hydrocodone	2.34	LCS	P	0 - 30
LFB	Ibuprofen	0.324	LCS	P	0 - 30
LFB	Imazapyr	13.7	LCS	P	0 - 30
LFB	Imidacloprid	6.26	LCS	P	0 - 30
LFB	Linuron	3.02	LCS	P	0 - 30
LFB	Mandestrobin	3.90	LCS	P	0 - 30
LFB	MCPP	5.06	LCS	P	0 - 30
LFB	Naproxen	2.30	LCS	P	0 - 30
LFB	Primidone	13.7	LCS	P	0 - 30
LFB	Pyraclostrobin	3.46	LCS	P	0 - 30
LFB	Thiamethoxam	9.76	LCS	P	0 - 30
LFB	Tolfenpyrad	8.52	LCS	P	0 - 30
LFB	Triclopyr	14.4	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P389183

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204509	Color (true)	1.56	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P389619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204776	Total Alkalinity	1.12	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P389660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2203943	TDS	5.31	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P389662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2203695	TDS	8.63	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P389456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204595	Fluoride	0.995	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P389443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2204622	Organic Carbon	0.728	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2204644

Field Sample ID: FB_10222020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	60.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	36.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.2	P	30 - 160
EPA 8321B	Diuron-d6	64.9	P	30 - 160
EPA 8321B	Endothall-d6	88.5	P	30 - 160
EPA 8321B	Endothall-d6	88.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	119	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.7	P	30 - 160
EPA 8321B	Primidone-d5	83.8	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A101730

Included Lab Sample IDs: 2204595, 2204596, 2204629, 2204641

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A101731

Included Lab Sample IDs: 2204599, 2204600, 2204631, 2204643

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	97.5	P/P	90 - 110
O-Phosphate-P	97.5	99.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A101733

Included Lab Sample IDs: 2204595, 2204596, 2204629, 2204641

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	99.5	P/P	95 - 105
Turbidity	99.5	98.0	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A101740

Included Lab Sample IDs: 2204597, 2204598, 2204630, 2204642

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.1	98.3	P/P	90 - 110
Ammonia-N	98.3	98.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A101784

Included Lab Sample IDs: 2204597, 2204598, 2204630, 2204642

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

Reference Method: EPA 8321B

Run ID: A101788

Included Lab Sample IDs: 2204644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	120	120	P/P	50 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101798

Included Lab Sample IDs: 2204595, 2204596

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A101810

Included Lab Sample IDs: 2204644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	108	107	P/P	50 - 160
Glufosinate	103	98.3	P/P	50 - 160
Glyphosate	103	99.5	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A101811

Included Lab Sample IDs: 2204644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	128	134	P/P	50 - 160
Endothall	93.3	100	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101820

Included Lab Sample IDs: 2204597, 2204598

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	104	P/P	90 - 110
Kjeldahl Nitrogen	104	108	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A101841

Included Lab Sample IDs: 2204644

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.9	71.2	P/P	50 - 150
Acetaminophen	146	140	P/P	60 - 160
Acetamiprid	115	106	P/P	50 - 150
Afidopyropen	107	106	P/P	50 - 150
Bentazon	68.8	66.4	P/P	50 - 160
Benzovindiflupyr	84.0	90.9	P/P	50 - 150
Carbamazepine	98.5	93.4	P/P	60 - 150
Clothianidin	105	94.2	P/P	60 - 150
Dinotefuran	100	101	P/P	50 - 150
Diuron	91.7	82.2	P/P	60 - 160
Fenuron	111	106	P/P	60 - 150
Fluridone	75.2	91.4	P/P	60 - 160
Hydrocodone	88.1	93.4	P/P	60 - 150
Ibuprofen	60.5	71.3	P/P	50 - 160
Imazapyr	70.1	82.3	P/P	50 - 160
Imidacloprid	94.7	110	P/P	60 - 150
Linuron	109	88.5	P/P	60 - 150
Mandestrobin	128	123	P/P	50 - 150
MCPP	89.5	79.0	P/P	50 - 150
Naproxen	101	60.8	P/P	50 - 160
Primidone	96.1	98.5	P/P	60 - 150
Pyraclostrobin	102	95.4	P/P	60 - 150
Thiamethoxam	126	126	P/P	50 - 150
Tolfenpyrad	113	100	P/P	60 - 150
Triclopyr	77.0	71.2	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A101846

Included Lab Sample IDs: 2204597, 2204598, 2204630, 2204642

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.8	97.4	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A101852

Included Lab Sample IDs: 2204595, 2204596, 2204629, 2204641

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101879

Included Lab Sample IDs: 2204597

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

Reference Method: SM 2320 B-2011

Run ID: A101910

Included Lab Sample IDs: 2204595, 2204596, 2204629, 2204641

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.1	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A101932

Included Lab Sample IDs: 2204630, 2204642

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	107	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A101949

Included Lab Sample IDs: 2204629, 2204641

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.1	99.4	P/P	90 - 110
Sulfate	98.7	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A101996

Included Lab Sample IDs: 2204598, 2204630, 2204642

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

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	
							SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						0.612	
	Turbidity						0.692	
EPA 300.0 Rev. 2.1	Chloride	102		103	102		0.530	
	Chloride	99.7		98.8	98.9		0.759	
	Sulfate	101		102	103		0.369	
	Sulfate	99.3		98.5	98.9		0.782	
EPA 350.1 Rev. 2.0	Ammonia-N	97.3		96.8	96.6			0.230
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109		102	107			3.32
	Kjeldahl Nitrogen	106		109	110			0.643
EPA 353.2 Rev. 2.0	NO2NO3-N	101		101	100			0.496
EPA 365.1 Rev. 2.0	Total-P	110		106	111			3.54
	Total-P	109		109	110			0.320
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3		99.2	99.5			0.176
	O-Phosphate-P	98.9		88.3	88.6			0.339
EPA 8321B	2,4-D	71.3	70.5	59.8	49.4	1.17		13.9
	Acesulfame K	136		31.6	34.4			8.69
	Acetaminophen	30.1	33.3	35.8	42.0	9.97		15.8
	Acetamiprid	49.9	55.1	50.4	39.4	9.90		24.5
	Afidopyropen	65.4	68.3	53.1	47.8	4.38		10.6
	AMPA	96.6		92.5	97.1			3.48
	Bentazon	49.5	51.1			3.26		12.7
	Benzovindiflupyr	69.3	72.7	54.1	51.1	4.75		5.74
	Carbamazepine	59.4	61.6	49.8	48.0	3.65		3.28
	Clothianidin	76.6	83.6	66.4	51.0	8.76		20.1
	Dinotefuran	44.7	49.7	38.5	42.5	10.6		9.70
	Diuron	62.7	65.5	37.7	35.5	4.45		6.07
	Endothall	83.5		83.0	95.1			13.6
	Fenuron	95.9	99.6	71.3	60.0	3.76		17.1
	Fluridone	80.9	89.6			10.1		7.96
	Glufosinate	97.6		90.6	92.1			1.62
	Glyphosate	99.4		77.5	95.9			18.0
	Hydrocodone	85.0	83.0	54.3	51.0	2.34		6.11
	Ibuprofen	67.5	67.3	56.7	44.3	0.324		24.5
	Imazapyr	93.0	107			13.7		4.82
	Imidacloprid	75.6	80.5	109	96.0	6.26		6.81
	Linuron	75.7	73.4	53.2	68.8	3.02		25.5
	Mandestrobin	79.3	82.5	69.0	64.1	3.90		7.32
	MCP	63.9	67.2	49.8	45.1	5.06		9.30
	Naproxen	57.0	58.3	44.7	42.6	2.30		4.82
	Primidone	85.9	98.5	87.3	61.1	13.7		35.4
	Pyraclostrobin	49.4	51.2	52.8	46.8	3.46		12.2
	Sucralose	113		66.2	56.8			14.9
	Thiamethoxam	95.3	105	91.5	74.9	9.76		19.9
	Tolfenpyrad	32.6	35.5	48.8	44.3	8.52		9.62
	Triclopyr	70.0	60.6	46.3	46.5	14.4		0.283
SM 2120 B-2011	Color (true)	100					1.56	
	Color (true)	101						
SM 2320 B-2011	Total Alkalinity	99.2					1.12	
SM 2540 C-2011	TDS						5.31	
	TDS						8.63	
SM 4500 F-C-2011	Fluoride	100		103	102			0.995
SM 5310 B-2011	Organic Carbon	99.4		98.6	99.4			0.728

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2204595, 2204596, 2204629, 2204641
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2204595, 2204596, 2204629, 2204641
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2204595, 2204596, 2204629, 2204641
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2204597, 2204598, 2204630, 2204642
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2204597, 2204598, 2204630, 2204642
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2204597, 2204598, 2204630, 2204642
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2204597, 2204598, 2204630, 2204642
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2204599, 2204600, 2204631, 2204643
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2204644
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2204644
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2204595, 2204596, 2204629, 2204641
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2204595, 2204596, 2204629, 2204641
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2204595, 2204596, 2204629, 2204641
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2204595, 2204596, 2204629, 2204641
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2204595, 2204596, 2204629, 2204641
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2204597, 2204598, 2204630, 2204642

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	10/23/2020			10/23/2020 18:02	Samantha Davila	2204595, 2204596, 2204629, 2204641
EPA 300.0 Rev. 2.1	10/23/2020			10/29/2020 02:11	Lipi Saha	2204595
	10/23/2020			10/29/2020 02:24	Lipi Saha	2204596
	10/23/2020			11/04/2020 16:29	Lipi Saha	2204629
	10/23/2020			11/04/2020 16:42	Lipi Saha	2204641
EPA 350.1 Rev. 2.0	10/23/2020			10/25/2020 13:58	Ping Hua	2204598
	10/23/2020			10/25/2020 14:03	Ping Hua	2204597
	10/23/2020			10/25/2020 14:18	Ping Hua	2204630
	10/23/2020			10/25/2020 14:21	Ping Hua	2204642
EPA 351.2 Rev. 2.0	10/23/2020	10/27/2020 13:05	David Boose	10/28/2020 11:53	Elliott Rodriguez	2204597
	10/23/2020	10/27/2020 13:05	David Boose	10/28/2020 12:11	Elliott Rodriguez	2204598
	10/23/2020	11/02/2020 13:30	David Boose	11/03/2020 14:24	Elliott Rodriguez	2204630
	10/23/2020	11/02/2020 13:30	David Boose	11/03/2020 14:30	Elliott Rodriguez	2204642
EPA 353.2 Rev. 2.0	10/23/2020			10/27/2020 09:25	Beverly Y. Sanders	2204597
	10/23/2020			10/27/2020 09:31	Beverly Y. Sanders	2204598
	10/23/2020			10/27/2020 09:36	Beverly Y. Sanders	2204630
	10/23/2020			10/27/2020 09:37	Beverly Y. Sanders	2204642
EPA 365.1 Rev. 2.0	10/23/2020	10/28/2020 13:34	Yen Ta	10/30/2020 13:17	Benjamin T. Nordmann	2204597
	10/23/2020	11/03/2020 12:37	Yen Ta	11/05/2020 14:58	Shengyu Wang	2204642
	10/23/2020	11/03/2020 12:37	Yen Ta	11/05/2020 15:01	Shengyu Wang	2204598
	10/23/2020	11/03/2020 12:37	Yen Ta	11/05/2020 15:04	Shengyu Wang	2204630
EPA 365.1 Rev. 2.0 dissolved	10/23/2020			10/23/2020 15:32	Blanca Fach	2204599
	10/23/2020			10/23/2020 15:33	Blanca Fach	2204600
	10/23/2020			10/23/2020 15:45	Blanca Fach	2204631
	10/23/2020			10/23/2020 15:46	Blanca Fach	2204643
EPA 8321B	10/23/2020	10/26/2020 10:00	Rebecca Ware	10/26/2020 19:58	Rebecca Ware	2204644
	10/23/2020	10/26/2020 10:00	Rebecca Ware	10/27/2020 15:21	Rebecca Ware	2204644
	10/23/2020	10/26/2020 10:00	Rebecca Ware	10/27/2020 18:51	Rebecca Ware	2204644
	10/23/2020	10/27/2020 09:00	Hoor Shaik	10/28/2020 21:39	Juyoung Kim	2204644
SM 2120 B-2011	10/23/2020			10/23/2020 16:23	Benjamin T. Nordmann	2204595
	10/23/2020			10/23/2020 16:24	Benjamin T. Nordmann	2204596
	10/23/2020			10/23/2020 16:27	Benjamin T. Nordmann	2204629
	10/23/2020			10/23/2020 16:31	Benjamin T. Nordmann	2204641
SM 2320 B-2011	10/23/2020			10/30/2020 23:55	Samantha Davila	2204595
	10/23/2020			10/31/2020 00:05	Samantha Davila	2204596
	10/23/2020			10/31/2020 00:13	Samantha Davila	2204629
	10/23/2020			10/31/2020 00:19	Samantha Davila	2204641
SM 2540 C-2011	10/23/2020			10/26/2020 15:36	Yijie Li	2204595, 2204596, 2204629, 2204641
SM 2540 D-2011	10/23/2020			10/26/2020 15:36	Yijie Li	2204595, 2204596, 2204629, 2204641
SM 4500 F-C-2011	10/23/2020			10/29/2020 03:03	Samantha Davila	2204595

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	10/23/2020			10/29/2020 04:03	Samantha Davila	2204629
	10/23/2020			10/29/2020 04:15	Samantha Davila	2204596
	10/23/2020			10/29/2020 04:37	Samantha Davila	2204641
SM 5310 B-2011	10/23/2020			10/28/2020 17:53	Touraj Touran	2204597
	10/23/2020			10/28/2020 18:05	Touraj Touran	2204598
	10/23/2020			10/28/2020 18:30	Touraj Touran	2204630
	10/23/2020			10/28/2020 18:42	Touraj Touran	2204642