

Chemical Analysis Report

SW-DIST-2020-08-05-03

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

Event Description: **Run 7**
Request ID: **RQ-2020-07-27-04**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 26-AUG-2020 12:53

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular 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: Phillippe Tributary @ Cattleman Rd

Collection Date/Time: 08/04/2020 10:30

Field ID: G3SW0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188503	EPA 180.1 Rev. 2.0	Turbidity	9.6		NTU	P385690	
	EPA 300.0 Rev. 2.1	Chloride	47		mg Cl/L	P385889	
		Sulfate	74		mg SO4/L	P385894	
	SM 2120 B-2011	Color (true)	54		PCU	P385687	
	SM 2320 B-2011	Total Alkalinity	160		mg CaCO3/L	P385770	
	SM 2540 C-2011	TDS	402		mg/L	P386159	
	SM 2540 D-2011	TSS	4	I	mg/L	P386004	
	SM 4500 F-C-2011	Fluoride	0.39		mg F/L	P385773	
2188504	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P385800	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P385830	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P385719	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P385778	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P385775	
2188505	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.091		mg P/L	P385693	

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.

Sample Location: Phillippe Tributary @ Cattleman Rd

Collection Date/Time: 08/04/2020 10:30

Field ID: G3SW0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188520	EPA 8321B	2,4-D	0.031		ug/L	P385679	
		Acesulfame K**	0.10	U	ug/L	P385636	
		AMPA**	0.63		ug/L	P385636	
		Sucralose**	0.56		ug/L	P385636	
		Acetaminophen**	0.0080	U	ug/L	P385679	
		Acetamiprid**	0.0020	U	ug/L	P385679	
		Endothall**	0.25	U	ug/L	P385636	
		Glufosinate**	0.10	U	ug/L	P385636	
		Glyphosate**	0.85		ug/L	P385636	
		Afidopyropen**	0.0023	I	ug/L	P385679	
		Bentazon	0.020		ug/L	P385679	
		Benzovindiflupyr**	0.0020	U	ug/L	P385679	
		Carbamazepine**	0.0018	I	ug/L	P385679	
		Clothianidin**	0.0046	I	ug/L	P385679	
		Dinotefuran**	0.0020	U	ug/L	P385679	
		Diuron	0.0042	I	ug/L	P385679	
		Fenuron	0.016	U	ug/L	P385679	
		Fluridone**	0.014		ug/L	P385679	
		Imazapyr**	2.0		ug/L	P385679	
		Hydrocodone**	0.0020	U	ug/L	P385679	
		Ibuprofen**	0.020	U	ug/L	P385679	
		Imidacloprid	0.045		ug/L	P385679	
		Linuron	0.0040	U	ug/L	P385679	
		Mandestrobin**	0.0020	U	ug/L	P385679	
		MCPP	0.0024	I	ug/L	P385679	
		Naproxen**	0.0080	U	ug/L	P385679	
		Primidone**	0.0078	I	ug/L	P385679	
		Pyraclostrobin**	0.0020	U	ug/L	P385679	
		Thiamethoxam**	0.0020	U	ug/L	P385679	
		Tolfenpyrad**	0.0020	U	ug/L	P385679	
		Triclopyr**	0.0040	U	ug/L	P385679	

Ref. Method and Comment:

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

Sample Location: Island Park Boat Basin off Dock

Collection Date/Time: 08/04/2020 12:40

Field ID: G3SW0061

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188506	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P385689	
	EPA 300.0 Rev. 2.1	Bromide	59		mg Br/L	P386266	
	SM 2320 B-2011	Total Alkalinity	119		mg CaCO3/L	P385771	
	SM 2540 D-2011	TSS	3	U	mg/L	P386007	
	SM 4500 F-C-2011	Fluoride	1.3		mg F/L	P385774	
2188507	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P385801	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32	I	mg N/L	P385877	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P385864	
	EPA 365.1 Rev. 2.0	Total-P	0.037		mg P/L	P385781	
	SM 5310 B-2011	Organic Carbon	3.0		mg C/L	P385777	
2188508	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P385694	

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: Clark Lake Drainage @ Brookside

Collection Date/Time: 08/04/2020 12:15

Field ID: G3SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2188521	EPA 8321B	2,4-D	0.029		ug/L	P385679	
		Acesulfame K**	0.10	I	ug/L	P385636	
		AMPA**	1.2		ug/L	P385636	
		Sucralose**	1.5		ug/L	P385636	
		Acetaminophen**	0.023	I	ug/L	P385679	
		Acetamiprid**	0.0020	U	ug/L	P385679	
		Endothall**	0.25	U	ug/L	P385636	
		Glufosinate**	0.10	U	ug/L	P385636	
		Glyphosate**	3.7		ug/L	P385636	
		Afidopyropen**	0.0020	U	ug/L	P385679	
		Bentazon	0.015		ug/L	P385679	
		Benzovindiflupyr**	0.0020	U	ug/L	P385679	
		Carbamazepine**	0.0027	I	ug/L	P385679	
		Clothianidin**	0.0098		ug/L	P385679	
		Dinotefuran**	0.0048	I	ug/L	P385679	
		Diuron	0.0075	I	ug/L	P385679	
		Fenuron	0.016	U	ug/L	P385679	
		Fluridone**	0.0078		ug/L	P385679	
		Imazapyr**	0.41		ug/L	P385679	
		Hydrocodone**	0.0020	U	ug/L	P385679	
		Ibuprofen**	0.020	U	ug/L	P385679	
		Imidacloprid	0.021		ug/L	P385679	
		Linuron	0.0040	U	ug/L	P385679	
		Mandestrobin**	0.0020	U	ug/L	P385679	
		MCPP	0.0061	I	ug/L	P385679	
		Naproxen**	0.0080	U	ug/L	P385679	
		Primidone**	0.0040	U	ug/L	P385679	
		Pyraclostrobin**	0.0020	U	ug/L	P385679	
		Thiamethoxam**	0.0020	U	ug/L	P385679	
		Tolfenpyrad**	0.0020	U	ug/L	P385679	
		Triclopyr**	0.0040	U	ug/L	P385679	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385689

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385690

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385889

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385894

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386266

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385800

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385801

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385830

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385877

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: P385719

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385864

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385778

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385781

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385693

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385694

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

Reference Method: EPA 8321B
Batch ID: P385636

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: P385679

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385679

Component	Result	Code	Units
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P385687

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385770

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

Reference Method: SM 2320 B-2011
Batch ID: P385771

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

Reference Method: SM 2540 C-2011
Batch ID: P386159

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P386004

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P386007

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385773

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385774

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385775

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

Reference Method: SM 5310 B-2011
Batch ID: P385777

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: P385889

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385894

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386266

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385801

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385830

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385877

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385719

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385864

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	102		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385778

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385781

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385693

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385694

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

Reference Method: EPA 8321B
 Batch ID: P385636

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	106		P	40 - 150
AMPA	102		P	40 - 150
Endothall	101		P	40 - 150
Glufosinate	97.5		P	40 - 150
Glyphosate	95.0		P	40 - 140
Sucralose	95.1		P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P385679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	120		P	30 - 160
Acetaminophen	77.9		P	30 - 160
Acetamiprid	78.1		P	30 - 160
Afidopyropen	61.1		P	30 - 160
Bentazon	49.7		P	30 - 160
Benzovindiflupyr	73.2		P	30 - 160
Carbamazepine	58.5		P	30 - 160
Clothianidin	80.5		P	30 - 160
Dinotefuran	93.4		P	30 - 160
Diuron	51.1		P	30 - 160
Fenuron	96.7		P	30 - 160
Fluridone	82.1		P	30 - 160
Hydrocodone	85.4		P	30 - 160
Ibuprofen	76.5		P	30 - 160
Imazapyr	88.0		P	30 - 160
Imidacloprid	103		P	30 - 160
Linuron	70.4		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P385679

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mandestrobin	83.5		P	30 - 160
MCP	120		P	30 - 160
Naproxen	78.6		P	30 - 160
Primidone	73.2		P	30 - 160
Pyraclostrobin	76.6		P	30 - 160
Thiamethoxam	71.4		P	30 - 160
Tolfenpyrad	56.2		P	30 - 160
Triclopyr	86.6		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P385687

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

Reference Method: SM 2320 B-2011
Batch ID: P385770

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

Reference Method: SM 2320 B-2011
Batch ID: P385771

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P385774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P385775

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

Reference Method: SM 5310 B-2011
Batch ID: P385777

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187917	Chloride	101		P	90 - 110
2188545	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187917	Sulfate	102		P	90 - 110
2188545	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187687	Bromide	97.4	94.6	P/P	90 - 110
2188922	Bromide	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188384	Ammonia-N	96.0	96.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188507	Ammonia-N	102	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188398	Kjeldahl Nitrogen	111	111	F/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188652	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188504	NO2NO3-N	96.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385864

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188583	NO2NO3-N	100	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385778

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188504	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188437	Total-P	99.4	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188385	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188508	O-Phosphate-P	99.5	99.6	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P385636

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188150	Acesulfame K	48.4	49.2	P/P	40 - 150
2188150	AMPA	108	111	P/P	40 - 150
2188150	Endothall	106	108	P/P	40 - 150
2188150	Glufosinate	86.4	92.2	P/P	40 - 150
2188150	Glyphosate	77.2	82.2	P/P	40 - 140
2188150	Sucralose	41.0	46.0	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P385679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188520	2,4-D	105	116	P/P	30 - 160
2188520	Acetaminophen	64.0	65.2	P/P	30 - 160
2188520	Acetamiprid	56.6	64.0	P/P	30 - 160
2188520	Afidopyropen	53.5	55.6	P/P	30 - 160
2188520	Benzovindiflupyr	60.4	58.7	P/P	30 - 160
2188520	Carbamazepine	41.7	43.2	P/P	30 - 160
2188520	Clothianidin	53.7	51.9	P/P	30 - 160
2188520	Dinotefuran	69.7	70.9	P/P	30 - 160
2188520	Diuron	38.2	40.3	P/P	30 - 160
2188520	Fenuron	67.2	71.1	P/P	30 - 160
2188520	Fluridone	52.0	63.6	P/P	30 - 160
2188520	Hydrocodone	58.1	62.3	P/P	30 - 160
2188520	Ibuprofen	69.3	62.5	P/P	30 - 160
2188520	Imidacloprid	90.7	87.7	P/P	30 - 160
2188520	Linuron	51.3	58.5	P/P	30 - 160
2188520	Mandestrobin	72.6	75.3	P/P	30 - 160
2188520	MCP	101	98.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P385679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188520	Naproxen	61.3	71.5	P/P	30 - 160
2188520	Primidone	61.5	64.1	P/P	30 - 160
2188520	Pyraclostrobin	72.1	71.5	P/P	30 - 160
2188520	Thiamethoxam	56.7	59.5	P/P	30 - 160
2188520	Tolfenpyrad	52.7	55.5	P/P	30 - 160
2188520	Triclopyr	89.1	95.2	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P385773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188548	Fluoride	102	101	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P385774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188430	Fluoride	99.6	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385775

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188398	Organic Carbon	98.9	101	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P385777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2188647	Organic Carbon	100	102	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188415	Turbidity	7.38	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188646	Turbidity	3.81	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188545	Chloride	0.390	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188545	Sulfate	0.670	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187687	Bromide	2.43	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188384	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188507	Ammonia-N	0.544	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188398	Kjeldahl Nitrogen	0.589	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P385877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188652	Kjeldahl Nitrogen	0.438	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188504	NO2NO3-N	0.364	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P385864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188583	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385778

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188504	Total-P	0.907	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188437	Total-P	1.86	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188385	O-Phosphate-P	0.100	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188508	O-Phosphate-P	0.0868	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P385636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188150	Acesulfame K	1.70	Spike	P	0 - 30
2188150	AMPA	2.00	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P385636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188150	Endothall	2.37	Spike	P	0 - 30
2188150	Glufosinate	6.51	Spike	P	0 - 30
2188150	Glyphosate	6.21	Spike	P	0 - 30
2188150	Sucralose	8.78	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188520	2,4-D	7.57	Spike	P	0 - 30
2188520	Acetaminophen	1.84	Spike	P	0 - 30
2188520	Acetamiprid	12.2	Spike	P	0 - 30
2188520	Afidopyropen	3.60	Spike	P	0 - 30
2188520	Bentazon	2.70	Spike	P	0 - 30
2188520	Benzovindiflupyr	2.99	Spike	P	0 - 30
2188520	Carbamazepine	2.94	Spike	P	0 - 30
2188520	Clothianidin	3.03	Spike	P	0 - 30
2188520	Dinotefuran	1.71	Spike	P	0 - 30
2188520	Diuron	4.74	Spike	P	0 - 30
2188520	Fenuron	5.65	Spike	P	0 - 30
2188520	Fluridone	9.19	Spike	P	0 - 30
2188520	Hydrocodone	7.06	Spike	P	0 - 30
2188520	Ibuprofen	10.3	Spike	P	0 - 30
2188520	Imazapyr	9.25	Spike	P	0 - 30
2188520	Imidacloprid	2.07	Spike	P	0 - 30
2188520	Linuron	13.1	Spike	P	0 - 30
2188520	Mandestrobin	3.64	Spike	P	0 - 30
2188520	MCP	2.76	Spike	P	0 - 30
2188520	Naproxen	15.5	Spike	P	0 - 30
2188520	Primidone	3.65	Spike	P	0 - 30
2188520	Pyraclostrobin	0.835	Spike	P	0 - 30
2188520	Thiamethoxam	4.70	Spike	P	0 - 30
2188520	Tolfenpyrad	5.22	Spike	P	0 - 30
2188520	Triclopyr	6.55	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P385770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188548	Total Alkalinity	2.08	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P385771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188430	Total Alkalinity	0.500	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P386159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188404	TDS	2.74	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P385773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188548	Fluoride	0.902	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P385774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188430	Fluoride	1.35	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385775

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188398	Organic Carbon	1.90	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P385777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2188647	Organic Carbon	1.30	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2188520
Field Sample ID: G3SW0065

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	61.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	41.1	P	30 - 160
EPA 8321B	Diuron-d6	42.3	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	72.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	72.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.9	P	30 - 160
EPA 8321B	Primidone-d5	62.6	P	30 - 160
EPA 8321B	Sucralose-d6	53.1	P	30 - 160
EPA 8321B	Sucralose-d6	53.1	P	30 - 160

Lab Sample ID: 2188521
Field Sample ID: G3SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	65.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	47.1	P	30 - 160
EPA 8321B	Diuron-d6	47.8	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	80.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.2	P	30 - 160
EPA 8321B	Primidone-d5	70.4	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A100296

Included Lab Sample IDs: 2188503

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100297

Included Lab Sample IDs: 2188503, 2188506

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100298

Included Lab Sample IDs: 2188505, 2188508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.7	P/P	90 - 110
O-Phosphate-P	98.9	98.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100311

Included Lab Sample IDs: 2188504

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

Reference Method: EPA 8321B

Run ID: A100315

Included Lab Sample IDs: 2188520, 2188521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	96.0	P/P	60 - 160
Endothall	101	102	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A100341

Included Lab Sample IDs: 2188503, 2188506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	97.2	P/P	90 - 110
Total Alkalinity	99.5	98.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100341

Included Lab Sample IDs: 2188503, 2188506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110
Fluoride	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A100342

Included Lab Sample IDs: 2188504, 2188507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	102	P/P	90 - 110
Organic Carbon	99.5	99.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100352

Included Lab Sample IDs: 2188504, 2188507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	97.6	P/P	90 - 110
Ammonia-N	99.1	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100369

Included Lab Sample IDs: 2188504

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100380

Included Lab Sample IDs: 2188507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	95.8	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100382

Included Lab Sample IDs: 2188507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100386

Included Lab Sample IDs: 2188503

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

Reference Method: EPA 8321B

Run ID: A100390

Included Lab Sample IDs: 2188520, 2188521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	104	97.2	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100391

Included Lab Sample IDs: 2188520, 2188521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	99.7	P/P	60 - 160
Glufosinate	94.4	90.5	P/P	60 - 160
Glyphosate	90.0	99.4	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100392

Included Lab Sample IDs: 2188504

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	95.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100407

Included Lab Sample IDs: 2188520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	90.7	97.9	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A100410

Included Lab Sample IDs: 2188520, 2188521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	120	P/P	50 - 150
Acetaminophen	113	111	P/P	60 - 160
Acetamiprid	119	120	P/P	50 - 150
Afidopyropen	110	115	P/P	50 - 150
Bentazon	95.1	105	P/P	50 - 160
Benzovindiflupyr	114	106	P/P	50 - 150
Carbamazepine	129	125	P/P	60 - 150
Clothianidin	111	121	P/P	60 - 150
Dinotefuran	107	101	P/P	50 - 150
Diuron	120	117	P/P	60 - 160
Fenuron	114	118	P/P	60 - 150
Fluridone	118	124	P/P	60 - 160
Hydrocodone	111	113	P/P	60 - 150
Ibuprofen	100	104	P/P	50 - 160
Imazapyr	113	101	P/P	50 - 150
Imidacloprid	121	110	P/P	60 - 150
Linuron	124	133	P/P	60 - 150
Mandestrobin	118	118	P/P	50 - 150
MCPP	119	119	P/P	50 - 150
Naproxen	143	117	P/P	50 - 160
Primidone	108	107	P/P	60 - 150
Pyraclostrobin	134	139	P/P	60 - 150
Thiamethoxam	112	115	P/P	50 - 150
Tolfenpyrad	136	131	P/P	60 - 150
Triclopyr	120	111	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100416

Included Lab Sample IDs: 2188507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.9	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100541

Included Lab Sample IDs: 2188506

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	104	101	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			Precision SMP	MS
			LCS				
EPA 180.1 Rev. 2.0	Turbidity					7.38	
	Turbidity					3.81	
EPA 300.0 Rev. 2.1	Bromide	103	97.4	94.6	96.7		2.43
	Chloride	100	101	101		0.390	
	Sulfate	101	102	102		0.670	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	96.0	96.0			0.0
	Ammonia-N	95.8	102	102			0.544
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	111	111			0.589
	Kjeldahl Nitrogen	104	101	102			0.438
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	96.0				0.364
	NO2NO3-N	102	100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	102	106	104			0.907
	Total-P	103	99.4	96.9			1.86
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.3	100	100			0.100
	O-Phosphate-P	101	99.5	99.6			0.0868
EPA 8321B	2,4-D	120	105	116			7.57
	Acesulfame K	106	48.4	49.2			1.70
	Acetaminophen	77.9	64.0	65.2			1.84
	Acetamiprid	78.1	56.6	64.0			12.2
	Afidopyropen	61.1	53.5	55.6			3.60
	AMPA	102	108	111			2.00
	Bentazon	49.7					2.70
	Benzovindiflupyr	73.2	60.4	58.7			2.99
	Carbamazepine	58.5	41.7	43.2			2.94
	Clothianidin	80.5	53.7	51.9			3.03
	Dinotefuran	93.4	69.7	70.9			1.71
	Diuron	51.1	38.2	40.3			4.74
	Endothall	101	106	108			2.37
	Fenuron	96.7	67.2	71.1			5.65
	Fluridone	82.1	52.0	63.6			9.19
	Glufosinate	97.5	86.4	92.2			6.51
	Glyphosate	95.0	77.2	82.2			6.21
	Hydrocodone	85.4	58.1	62.3			7.06
	Ibuprofen	76.5	69.3	62.5			10.3
	Imazapyr	88.0					9.25
	Imidacloprid	103	90.7	87.7			2.07
	Linuron	70.4	51.3	58.5			13.1
	Mandestrobin	83.5	72.6	75.3			3.64
	MCPP	120	101	98.4			2.76
	Naproxen	78.6	61.3	71.5			15.5
	Primidone	73.2	61.5	64.1			3.65
	Pyraclostrobin	76.6	72.1	71.5			0.835
	Sucralose	95.1	41.0	46.0			8.78
	Thiamethoxam	71.4	56.7	59.5			4.70
	Tolfenpyrad	56.2	52.7	55.5			5.22
	Triclopyr	86.6	89.1	95.2			6.55
SM 2120 B-2011	Color (true)	101					
SM 2320 B-2011	Total Alkalinity	103				2.08	
	Total Alkalinity	99.1				0.500	
SM 2540 C-2011	TDS					2.74	
SM 4500 F-C-2011	Fluoride	102	102	101			0.902
	Fluoride	102	99.6	102			1.35
SM 5310 B-2011	Organic Carbon	98.6	98.9	101			1.90
	Organic Carbon	101	100	102			1.30

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2188503, 2188506
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2188506
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2188503
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2188503
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2188504, 2188507
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2188504, 2188507
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2188504, 2188507
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2188504, 2188507
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2188505, 2188508
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2188520, 2188521
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2188520, 2188521
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2188503
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2188503, 2188506
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2188503
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2188503, 2188506
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2188503, 2188506
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2188504, 2188507

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	08/05/2020			08/05/2020 15:58	Blanca Fach	2188503, 2188506
EPA 300.0 Rev. 2.1	08/05/2020			08/08/2020 09:06	Julia Storbeck	2188503
	08/05/2020			08/15/2020 14:40	Julia Storbeck	2188506
EPA 350.1 Rev. 2.0	08/05/2020			08/08/2020 13:05	Ping Hua	2188504
	08/05/2020			08/08/2020 13:20	Ping Hua	2188507
EPA 351.2 Rev. 2.0	08/05/2020	08/10/2020 11:45	Jhamieka S. Greenwood	08/10/2020 18:45	Jhamieka S. Greenwood	2188504
	08/05/2020	08/11/2020 09:50	Sima Feizi	08/12/2020 12:12	Jhamieka S. Greenwood	2188507
EPA 353.2 Rev. 2.0	08/05/2020			08/06/2020 10:14	Beverly Y. Sanders	2188504
	08/05/2020			08/11/2020 09:03	Beverly Y. Sanders	2188507
EPA 365.1 Rev. 2.0	08/05/2020	08/07/2020 13:00	Shengyu Wang	08/10/2020 10:10	Benjamin T. Nordmann	2188504
	08/05/2020	08/07/2020 13:00	Shengyu Wang	08/11/2020 09:22	Lipi Saha	2188507
EPA 365.1 Rev. 2.0 dissolved	08/05/2020			08/05/2020 15:24	Virginia P. Brown	2188508
	08/05/2020			08/05/2020 16:13	Virginia P. Brown	2188505
EPA 8321B	08/05/2020	08/05/2020 13:45	Rebecca Ware	08/05/2020 14:13	Rebecca Ware	2188520
	08/05/2020	08/05/2020 13:45	Rebecca Ware	08/05/2020 14:27	Rebecca Ware	2188521
	08/05/2020	08/05/2020 13:45	Rebecca Ware	08/06/2020 11:02	Rebecca Ware	2188520
	08/05/2020	08/05/2020 13:45	Rebecca Ware	08/06/2020 11:13	Rebecca Ware	2188521
	08/05/2020	08/05/2020 13:45	Rebecca Ware	08/11/2020 02:39	Rebecca Ware	2188520
	08/05/2020	08/05/2020 13:45	Rebecca Ware	08/11/2020 02:51	Rebecca Ware	2188521
	08/05/2020	08/06/2020 13:00	Hoor Shaik	08/09/2020 01:24	Juyoung Kim	2188520
	08/05/2020	08/06/2020 13:00	Hoor Shaik	08/09/2020 02:33	Juyoung Kim	2188521
	08/05/2020	08/06/2020 13:00	Hoor Shaik	08/12/2020 05:12	Juyoung Kim	2188520
SM 2120 B-2011	08/05/2020			08/05/2020 15:42	Benjamin T. Nordmann	2188503
SM 2320 B-2011	08/05/2020			08/06/2020 17:59	Dale L. Simmons	2188503
	08/05/2020			08/07/2020 00:55	Dale L. Simmons	2188506
SM 2540 C-2011	08/05/2020			08/10/2020 13:50	Yijie Li	2188503
SM 2540 D-2011	08/05/2020			08/10/2020 13:50	Yijie Li	2188503, 2188506
SM 4500 F-C-2011	08/05/2020			08/06/2020 17:59	Dale L. Simmons	2188503
	08/05/2020			08/06/2020 22:19	Dale L. Simmons	2188506
SM 5310 B-2011	08/05/2020			08/06/2020 21:16	David Boose	2188504
	08/05/2020			08/07/2020 04:53	David Boose	2188507