

Chemical Analysis Report

SW-DIST-2020-07-17-01

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-2020-06-15-12**
Customer: **SW-DIST**
Project ID: **SMP**

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Date Certified: 07-AUG-2020 12:37



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: Clark Lake Drainage @ Brookside

Collection Date/Time: 07/16/2020 10:40

Field ID: G3SW0066

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184025	EPA 8321B	2,4-D	0.012		ug/L	P384835	
		Acesulfame K**	0.29	I	ug/L	P384836	
		AMPA**	0.75		ug/L	P384836	
		Sucralose**	2.5		ug/L	P384836	
		Acetaminophen**	0.0080	U	ug/L	P384835	
		Acetamiprid**	0.0020	U	ug/L	P384835	
		Endothall**	0.25	U	ug/L	P384836	
		Glufosinate**	0.10	U	ug/L	P384836	
		Glyphosate**	1.1		ug/L	P384836	
		Afidopyropen**	0.0020	U	ug/L	P384835	
		Bentazon	0.011		ug/L	P384835	
		Benzovindiflupyr**	0.0020	U	ug/L	P384835	
		Carbamazepine**	0.010		ug/L	P384835	
		Clothianidin**	0.0042	I	ug/L	P384835	
		Dinotefuran**	0.0038	I	ug/L	P384835	
		Diuron	0.0097		ug/L	P384835	
		Fenuron	0.016	U	ug/L	P384835	
		Fluridone**	0.016		ug/L	P384835	
		Imazapyr**	0.10		ug/L	P384835	
		Hydrocodone**	0.0020	U	ug/L	P384835	
		Ibuprofen**	0.020	U	ug/L	P384835	
		Imidacloprid	0.038		ug/L	P384835	
		Linuron	0.0040	U	ug/L	P384835	
		Mandestrobin**	0.0020	U	ug/L	P384835	
		MCPP	0.0020	U	ug/L	P384835	
		Naproxen**	0.0080	U	ug/L	P384835	
		Primidone**	0.0047	I	ug/L	P384835	
		Pyraclostrobin**	0.0020	U	ug/L	P384835	
		Thiamethoxam**	0.0020	U	ug/L	P384835	
		Tolfenpyrad**	0.0020	U	ug/L	P384835	
		Triclopyr**	0.0040	U	ug/L	P384835	

Ref. Method and Comment:

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

Sample Location: Phillippe Tributary @ Cattleman Rd

Collection Date/Time: 07/16/2020 12:10

Field ID: G3SW0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184007	EPA 180.1 Rev. 2.0	Turbidity	17		NTU	P384797	
	EPA 300.0 Rev. 2.1	Chloride	49		mg Cl/L	P385316	
		Sulfate	85		mg SO4/L	P385320	
	SM 2120 B-2011	Color (true)	37	A	PCU	P384812	
	SM 2320 B-2011	Total Alkalinity	190		mg CaCO3/L	P385002	
	SM 2540 C-2011	TDS	397		mg/L	P385457	
	SM 2540 D-2011	TSS	8	I	mg/L	P385463	
	SM 4500 F-C-2011	Fluoride	0.49		mg F/L	P385005	
2184008	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P384828	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.99		mg N/L	P384936	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.38		mg N/L	P384916	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P385035	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P385190	
2184009	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.041		mg P/L	P384832	

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: Phillippe Tributary @ Cattleman Rd

Collection Date/Time: 07/16/2020 12:10

Field ID: G3SW0065

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184026	EPA 8321B	2,4-D	0.021		ug/L	P384835	
		Acesulfame K**	0.13	I	ug/L	P384836	
		AMPA**	1.0		ug/L	P384836	
		Sucralose**	1.5		ug/L	P384836	
		Acetaminophen**	0.0080	U	ug/L	P384835	
		Acetamiprid**	0.0020	U	ug/L	P384835	
		Endothall**	0.25	U	ug/L	P384836	
		Glufosinate**	0.10	U	ug/L	P384836	
		Glyphosate**	1.9		ug/L	P384836	
		Afidopyropen**	0.0020	U	ug/L	P384835	
		Bentazon	0.025		ug/L	P384835	
		Benzovindiflupyr**	0.0020	U	ug/L	P384835	
		Carbamazepine**	0.0024	I	ug/L	P384835	
		Clothianidin**	0.0049	I	ug/L	P384835	
		Dinotefuran**	0.0020	U	ug/L	P384835	
		Diuron	0.0025	I	ug/L	P384835	
		Fenuron	0.016	U	ug/L	P384835	
		Fluridone**	0.015		ug/L	P384835	
		Imazapyr**	54		ug/L	P384835	
		Hydrocodone**	0.0020	U	ug/L	P384835	
		Ibuprofen**	0.020	U	ug/L	P384835	
		Imidacloprid	0.0085		ug/L	P384835	
		Linuron	0.0040	U	ug/L	P384835	
		Mandestrobin**	0.0020	U	ug/L	P384835	
		MCP	0.0050	I	ug/L	P384835	
		Naproxen**	0.0080	U	ug/L	P384835	
		Primidone**	0.015	I	ug/L	P384835	
		Pyraclostrobin**	0.0020	U	ug/L	P384835	
		Thiamethoxam**	0.0020	U	ug/L	P384835	
		Tolfenpyrad**	0.0020	U	ug/L	P384835	
		Triclopyr**	0.0040	U	ug/L	P384835	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes 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: 07/16/2020 12:45

Field ID: G3SW0061

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184010	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P384797	
	EPA 300.0 Rev. 2.1	Bromide	65		mg Br/L	P385583	MS
	SM 2320 B-2011	Total Alkalinity	118		mg CaCO3/L	P385003	
	SM 2540 D-2011	TSS	4	IA	mg/L	P385468	
	SM 4500 F-C-2011	Fluoride	1.4		mg F/L	P385006	
2184011	EPA 350.1 Rev. 2.0	Ammonia-N	0.082		mg N/L	P384825	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P384937	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P384862	
	EPA 365.1 Rev. 2.0	Total-P	0.073		mg P/L	P385036	
	SM 5310 B-2011	Organic Carbon	3.3		mg C/L	P385192	
2184012	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P384833	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384797

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385316

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385320

Component	Result	Code	Units
Sulfate	0.20	U	mg SO ₄ /L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384828

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384936

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384937

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384862

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384916

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385035

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385036

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384832

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384833

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

Reference Method: EPA 8321B
Batch ID: P384835

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P384835

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

Reference Method: EPA 8321B
Batch ID: P384836

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P384812

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385002

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

Reference Method: SM 2320 B-2011
Batch ID: P385003

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

Reference Method: SM 2540 C-2011
Batch ID: P385457

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P385463

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P385468

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P385005

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385190

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

Reference Method: SM 5310 B-2011
Batch ID: P385192

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: P385316

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385320

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	95.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384828

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384936

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: P384937

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384862

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384916

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: P385035

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385036

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: P384832

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384833

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

Reference Method: EPA 8321B
Batch ID: P384835

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	115		P	30 - 160
Acetaminophen	79.1		P	30 - 160
Acetamiprid	78.6		P	30 - 160
Afidopyropen	65.2		P	30 - 160
Bentazon	62.6		P	30 - 160
Benzovindiflupyr	69.9		P	30 - 160
Carbamazepine	66.9		P	30 - 160
Clothianidin	76.8		P	30 - 160
Dinotefuran	86.6		P	30 - 160
Diuron	58.2		P	30 - 160
Fenuron	101		P	30 - 160
Fluridone	90.5		P	30 - 160
Hydrocodone	82.3		P	30 - 160
Ibuprofen	79.6		P	30 - 160
Imazapyr	100		P	30 - 160
Imidacloprid	97.6		P	30 - 160
Linuron	67.0		P	30 - 160
Mandestrobin	75.5		P	30 - 160
MCPP	129		P	30 - 160
Naproxen	69.1		P	30 - 160
Primidone	77.2		P	30 - 160
Pyraclostrobin	74.1		P	30 - 160
Thiamethoxam	93.7		P	30 - 160
Tolfenpyrad	54.2		P	30 - 160
Triclopyr	95.7		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P384836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	72.1		P	40 - 150
AMPA	86.1		P	40 - 150
Endothall	96.4		P	40 - 150
Glufosinate	94.9		P	40 - 150
Glyphosate	84.9		P	40 - 140
Sucralose	92.1		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P384812

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.4		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P385002

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

Reference Method: SM 2320 B-2011
Batch ID: P385003

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P385005

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

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

Reference Method: SM 5310 B-2011
Batch ID: P385190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.4		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P385192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385316

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184037	Chloride	95.3		P	90 - 110
2184057	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184037	Sulfate	92.5		P	90 - 110
2184057	Sulfate	96.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183463	Bromide	90.8		P	90 - 110
2184296	Bromide	90.0	90.6	F/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183412	Ammonia-N	98.5	99.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384828

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184039	Ammonia-N	99.8	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384936

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184039	Kjeldahl Nitrogen	101	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184011	Kjeldahl Nitrogen	99.8	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384862

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183997	NO2NO3-N	102	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183874	NO2NO3-N	98.2		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183925	Total-P	107	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385036

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183998	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P384832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184009	O-Phosphate-P	97.9	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P384833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184012	O-Phosphate-P	98.4	99.0	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P384835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183089	Acetaminophen	93.3	85.9	P/P	30 - 160
2183089	Acetamiprid	73.3	69.5	P/P	30 - 160
2183089	Afidopyropen	63.4	57.7	P/P	30 - 160
2183089	Benzovindiflupyr	58.9	56.6	P/P	30 - 160
2183089	Carbamazepine	50.1	50.3	P/P	30 - 160
2183089	Clothianidin	76.7	74.8	P/P	30 - 160
2183089	Dinotefuran	96.0	91.4	P/P	30 - 160
2183089	Diuron	38.5	36.6	P/P	30 - 160
2183089	Fenuron	82.7	80.5	P/P	30 - 160
2183089	Fluridone	88.1	80.1	P/P	30 - 160
2183089	Hydrocodone	71.3	66.3	P/P	30 - 160
2183089	Ibuprofen	65.5	62.7	P/P	30 - 160
2183089	Imidacloprid	127	127	P/P	30 - 160
2183089	Linuron	50.4	52.2	P/P	30 - 160
2183089	Mandestrobin	70.9	66.5	P/P	30 - 160
2183089	MCP	122	122	P/P	30 - 160
2183089	Naproxen	76.0	61.5	P/P	30 - 160
2183089	Primidone	88.2	79.7	P/P	30 - 160
2183089	Pyraclostrobin	70.6	70.4	P/P	30 - 160
2183089	Thiamethoxam	101	103	P/P	30 - 160
2183089	Tolfenpyrad	47.2	44.5	P/P	30 - 160
2183089	Triclopyr	97.1	97.1	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P384836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183365	Acesulfame K	60.0	61.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P384836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183365	AMPA	60.8	51.5	P/P	40 - 150
2183365	Endothall	87.8	86.4	P/P	40 - 150
2183365	Glufosinate	69.8	71.1	P/P	40 - 150
2183365	Glyphosate	42.5	47.5	P/P	40 - 140
2183365	Sucralose	107	112	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P385005

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183933	Fluoride	98.1	100	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P385006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183405	Fluoride	100	99.2	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184059	Organic Carbon	96.0	97.4	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P385192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184275	Organic Carbon	93.1	92.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184047	Turbidity	6.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385316

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184037	Chloride	0.472	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184037	Sulfate	0.0571	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184296	Bromide	0.600	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183412	Ammonia-N	0.548	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184039	Ammonia-N	0.233	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184039	Kjeldahl Nitrogen	3.01	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184011	Kjeldahl Nitrogen	7.21	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384862

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183997	NO2NO3-N	0.828	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183874	NO2NO3-N	0.237	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183925	Total-P	1.78	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385036

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183998	Total-P	1.15	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184009	O-Phosphate-P	0.144	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184012	O-Phosphate-P	0.440	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P384835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183089	2,4-D	1.80	Spike	P	0 - 30
2183089	Acetaminophen	8.22	Spike	P	0 - 30
2183089	Acetamiprid	5.27	Spike	P	0 - 30
2183089	Afidopyropen	9.29	Spike	P	0 - 30
2183089	Bentazon	0.870	Spike	P	0 - 30
2183089	Benzovindiflupyr	4.00	Spike	P	0 - 30
2183089	Carbamazepine	0.389	Spike	P	0 - 30
2183089	Clothianidin	2.55	Spike	P	0 - 30
2183089	Dinotefuran	4.88	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P384835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183089	Diuron	4.00	Spike	P	0 - 30
2183089	Fenuron	2.69	Spike	P	0 - 30
2183089	Fluridone	7.74	Spike	P	0 - 30
2183089	Hydrocodone	7.24	Spike	P	0 - 30
2183089	Ibuprofen	4.32	Spike	P	0 - 30
2183089	Imazapyr	5.38	Spike	P	0 - 30
2183089	Imidacloprid	0.128	Spike	P	0 - 30
2183089	Linuron	3.57	Spike	P	0 - 30
2183089	Mandestrobin	6.38	Spike	P	0 - 30
2183089	MCP	0.692	Spike	P	0 - 30
2183089	Naproxen	21.1	Spike	P	0 - 30
2183089	Primidone	10.1	Spike	P	0 - 30
2183089	Pyraclostrobin	0.318	Spike	P	0 - 30
2183089	Thiamethoxam	1.10	Spike	P	0 - 30
2183089	Tolfenpyrad	5.84	Spike	P	0 - 30
2183089	Triclopyr	0.00865	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P384836

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183365	Acesulfame K	1.80	Spike	P	0 - 30
2183365	AMPA	4.59	Spike	P	0 - 30
2183365	Endothall	1.57	Spike	P	0 - 30
2183365	Glufosinate	1.88	Spike	P	0 - 30
2183365	Glyphosate	1.59	Spike	P	0 - 30
2183365	Sucralose	4.01	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P384812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184007	Color (true)	0.629	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P385002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183933	Total Alkalinity	1.47	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P385003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183405	Total Alkalinity	1.99	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
 Batch ID: P385457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183929	TDS	6.29	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P385005

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183933	Fluoride	1.38	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
 Batch ID: P385006

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183405	Fluoride	0.460	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P385190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184059	Organic Carbon	1.45	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P385192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184275	Organic Carbon	0.202	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2184025
Field Sample ID: G3SW0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.8	P	30 - 160
EPA 8321B	Diuron-d6	49.9	P	30 - 160
EPA 8321B	Endothall-d6	92.0	P	30 - 160
EPA 8321B	Endothall-d6	92.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	75.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.2	P	30 - 160
EPA 8321B	Primidone-d5	75.7	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2184026
Field Sample ID: G3SW0065

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	71.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.2	P	30 - 160
EPA 8321B	Diuron-d6	51.1	P	30 - 160
EPA 8321B	Endothall-d6	86.1	P	30 - 160
EPA 8321B	Endothall-d6	86.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	73.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	73.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.3	P	30 - 160
EPA 8321B	Primidone-d5	72.0	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	30 - 160
EPA 8321B	Sucralose-d6	111	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100012

Included Lab Sample IDs: 2184025, 2184026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	84.5	83.9	P/P	60 - 160
Glufosinate	97.0	101	P/P	60 - 160
Glyphosate	91.5	93.1	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A100019

Included Lab Sample IDs: 2184007, 2184010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	101	P/P	90 - 110
Total Alkalinity	98.8	99.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100019

Included Lab Sample IDs: 2184007, 2184010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	102	P/P	90 - 110
Fluoride	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100056

Included Lab Sample IDs: 2184008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100083

Included Lab Sample IDs: 2184011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.0	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100098

Included Lab Sample IDs: 2184008, 2184011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.8	93.8	P/P	90 - 110
Organic Carbon	95.1	93.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100109

Included Lab Sample IDs: 2184008, 2184011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	103	P/P	90 - 110
Kjeldahl Nitrogen	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100141

Included Lab Sample IDs: 2184025, 2184026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	90.4	91.8	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100152

Included Lab Sample IDs: 2184007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	99.7	P/P	90 - 110
Sulfate	99.4	98.9	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100250

Included Lab Sample IDs: 2184010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	97.6	97.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99945

Included Lab Sample IDs: 2184007, 2184010

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

Reference Method: SM 2120 B-2011

Run ID: A99950

Included Lab Sample IDs: 2184007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	105	105	P/P	90 - 115

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99955

Included Lab Sample IDs: 2184008, 2184011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	101	P/P	90 - 110
Ammonia-N	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99958

Included Lab Sample IDs: 2184009, 2184012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.1	96.7	P/P	90 - 110
O-Phosphate-P	96.9	96.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99968

Included Lab Sample IDs: 2184011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99981

Included Lab Sample IDs: 2184025, 2184026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	129	112	P/P	50 - 150
Acetaminophen	109	117	P/P	60 - 160
Acetamiprid	118	117	P/P	50 - 150
Afidopyropen	101	120	P/P	50 - 150
Bentazon	102	125	P/P	50 - 160
Benzovindiflupyr	120	118	P/P	50 - 150
Carbamazepine	110	112	P/P	60 - 150
Clothianidin	101	97.2	P/P	60 - 150
Dinotefuran	102	89.9	P/P	50 - 150
Diuron	111	114	P/P	60 - 160
Fenuron	114	111	P/P	60 - 150
Fluridone	120	126	P/P	60 - 160
Hydrocodone	107	105	P/P	60 - 150
Ibuprofen	103	115	P/P	50 - 160
Imazapyr	103	126	P/P	50 - 150
Imazapyr	130	120	P/P	50 - 150
Imidacloprid	92.4	89.6	P/P	60 - 150
Linuron	115	121	P/P	60 - 150
Mandestrobin	121	123	P/P	50 - 150
MCP	128	110	P/P	50 - 150
Naproxen	114	111	P/P	50 - 160
Primidone	88.5	93.9	P/P	60 - 150
Pyraclostrobin	117	123	P/P	60 - 150
Thiamethoxam	95.4	89.0	P/P	50 - 150
Tolfenpyrad	108	116	P/P	60 - 150
Triclopyr	103	103	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A99984

Included Lab Sample IDs: 2184025, 2184026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	81.7	76.2	P/P	60 - 160
Endothall	97.4	95.1	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99985

Included Lab Sample IDs: 2184008

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

Quality Assurance Report

Calibration Verification

* 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					6.15	
EPA 300.0 Rev. 2.1	Bromide	95.0	90.0	90.6	90.8		0.600
	Chloride	98.3	95.3	97.9		0.472	
	Sulfate	96.4	92.5	96.1		0.0571	
EPA 350.1 Rev. 2.0	Ammonia-N	101	98.5	99.2			0.548
	Ammonia-N	100	99.8	99.5			0.233
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	101	105			3.01
	Kjeldahl Nitrogen	105	99.8	109			7.21
EPA 353.2 Rev. 2.0	NO2NO3-N	101	102	100			0.828
	NO2NO3-N	102	98.2				0.237
EPA 365.1 Rev. 2.0	Total-P	105	107	105			1.78
	Total-P	106	102	103			1.15
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	97.9	98.1			0.144
	O-Phosphate-P	100	98.4	99.0			0.440
EPA 8321B	2,4-D	115					1.80
	Acesulfame K	72.1	60.0	61.1			1.80
	Acetaminophen	79.1	93.3	85.9			8.22
	Acetamiprid	78.6	73.3	69.5			5.27
	Afidopyropen	65.2	63.4	57.7			9.29
	AMPA	86.1	60.8	51.5			4.59
	Bentazon	62.6					0.870
	Benzovindiflupyr	69.9	58.9	56.6			4.00
	Carbamazepine	66.9	50.1	50.3			0.389
	Clothianidin	76.8	76.7	74.8			2.55
	Dinotefuran	86.6	96.0	91.4			4.88
	Diuron	58.2	38.5	36.6			4.00
	Endothall	96.4	87.8	86.4			1.57
	Fenuron	101	82.7	80.5			2.69
	Fluridone	90.5	88.1	80.1			7.74
	Glufosinate	94.9	69.8	71.1			1.88
	Glyphosate	84.9	42.5	47.5			1.59
	Hydrocodone	82.3	71.3	66.3			7.24
	Ibuprofen	79.6	65.5	62.7			4.32
	Imazapyr	100					5.38
	Imidacloprid	97.6	127	127			0.128
	Linuron	67.0	50.4	52.2			3.57
	Mandestrobin	75.5	70.9	66.5			6.38
	MCPP	129	122	122			0.692
	Naproxen	69.1	76.0	61.5			21.1
	Primidone	77.2	88.2	79.7			10.1
	Pyraclostrobin	74.1	70.6	70.4			0.318
	Sucralose	92.1	107	112			4.01
	Thiamethoxam	93.7	101	103			1.10
	Tolfenpyrad	54.2	47.2	44.5			5.84
	Triclopyr	95.7	97.1	97.1			0.0086
SM 2120 B-2011	Color (true)	97.4				0.629	
SM 2320 B-2011	Total Alkalinity	103				1.47	
	Total Alkalinity	100				1.99	
SM 2540 C-2011	TDS					6.29	
SM 4500 F-C-2011	Fluoride	103	98.1	100			1.38
	Fluoride	102	100	99.2			0.460
SM 5310 B-2011	Organic Carbon	97.4	96.0	97.4			1.45
	Organic Carbon	94.0	93.1	92.9			0.202

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2184007, 2184010
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2184010
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2184007
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2184007
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2184008, 2184011
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2184008, 2184011
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2184008, 2184011
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2184008, 2184011
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2184009, 2184012
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2184025, 2184026
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2184025, 2184026
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2184007
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2184007, 2184010
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2184007
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2184007, 2184010
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2184007, 2184010
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2184008, 2184011

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	07/17/2020			07/17/2020 15:49	Yen Ta	2184007, 2184010
EPA 300.0 Rev. 2.1	07/17/2020			07/28/2020 16:02	Julia Storbeck	2184007
	07/17/2020			07/29/2020 03:41	Julia Storbeck	2184010
EPA 350.1 Rev. 2.0	07/17/2020			07/19/2020 10:44	Ping Hua	2184011
	07/17/2020			07/19/2020 12:35	Ping Hua	2184008
EPA 351.2 Rev. 2.0	07/17/2020	07/21/2020 15:30	Sima Feizi	07/22/2020 14:17	Julia Storbeck	2184008
	07/17/2020	07/21/2020 15:30	Sima Feizi	07/22/2020 14:31	Julia Storbeck	2184011
EPA 353.2 Rev. 2.0	07/17/2020			07/20/2020 10:33	Beverly Y. Sanders	2184011
	07/17/2020			07/21/2020 09:45	Beverly Y. Sanders	2184008
EPA 365.1 Rev. 2.0	07/17/2020	07/23/2020 10:00	Lipi Saha	07/24/2020 08:40	Lipi Saha	2184008
	07/17/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 08:43	Lipi Saha	2184011
EPA 365.1 Rev. 2.0 dissolved	07/17/2020			07/17/2020 18:30	Virginia P. Brown	2184009
	07/17/2020			07/17/2020 18:50	Virginia P. Brown	2184012
EPA 8321B	07/17/2020	07/20/2020 09:30	Rebecca Ware	07/20/2020 20:05	Rebecca Ware	2184025
	07/17/2020	07/20/2020 09:30	Rebecca Ware	07/20/2020 20:19	Rebecca Ware	2184026
	07/17/2020	07/20/2020 09:30	Rebecca Ware	07/21/2020 11:48	Rebecca Ware	2184025
	07/17/2020	07/20/2020 09:30	Rebecca Ware	07/21/2020 11:59	Rebecca Ware	2184026
	07/17/2020	07/20/2020 09:30	Rebecca Ware	07/29/2020 02:05	Mohammad Ghaffari	2184025
	07/17/2020	07/20/2020 09:30	Rebecca Ware	07/29/2020 02:17	Mohammad Ghaffari	2184026
	07/17/2020	07/21/2020 09:00	Hoor Shaik	07/21/2020 23:39	Juyoung Kim	2184025
	07/17/2020	07/21/2020 09:00	Hoor Shaik	07/22/2020 00:14	Juyoung Kim	2184026
	07/17/2020	07/21/2020 09:00	Hoor Shaik	07/22/2020 10:20	Juyoung Kim	2184026
SM 2120 B-2011	07/17/2020			07/17/2020 17:20	Benjamin T. Nordmann	2184007
SM 2320 B-2011	07/17/2020			07/22/2020 04:19	Dale L. Simmons	2184007
	07/17/2020			07/22/2020 10:38	Dale L. Simmons	2184010
SM 2540 C-2011	07/17/2020			07/22/2020 14:56	Yijie Li	2184007
SM 2540 D-2011	07/17/2020			07/22/2020 14:56	Yijie Li	2184007, 2184010
SM 4500 F-C-2011	07/17/2020			07/22/2020 04:19	Dale L. Simmons	2184007
	07/17/2020			07/22/2020 08:46	Dale L. Simmons	2184010
SM 5310 B-2011	07/17/2020			07/24/2020 17:28	David Boose	2184008
	07/17/2020			07/25/2020 04:00	David Boose	2184011