

Chemical Analysis Report

SW-DIST-2020-07-30-01

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

Event Description: **Salt Springs, GOM, Anclote**
Request ID: **RQ-2020-06-01-10**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 21-AUG-2020 11:12

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Gulf of Mexico Pasco

Collection Date/Time: 07/29/2020 11:00

Field ID: G5SW0159

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2187201	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P385423	
	EPA 300.0 Rev. 2.1	Bromide	43		mg Br/L	P386265	
	SM 2320 B-2011	Total Alkalinity	116		mg CaCO3/L	P385565	
	SM 2540 D-2011	TSS	3	U	mg/L	P385704	
	SM 4500 F-C-2011	Fluoride	0.90		mg F/L	P385525	
2187203	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P385475	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P385421	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P385577	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P385518	
	SM 5310 B-2011	Organic Carbon	7.0		mg C/L	P385543	
2187205	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P385398	
2187217	EPA 8321B	2,4-D	0.0065	I	ug/L	P385308	
		Acesulfame K**	0.10	UJ	ug/L	P385502	SUR
		AMPA**	1.0	U	ug/L	P385502	
		Sucralose**	0.027	I	ug/L	P385502	
		Acetaminophen**	0.0080	U	ug/L	P385308	
		Acetamiprid**	0.0020	U	ug/L	P385308	
		Endothall**	0.25	UJ	ug/L	P385502	SUR
		Glufosinate**	1.0	U	ug/L	P385502	
		Glyphosate**	1.0	U	ug/L	P385502	
		Afidopyropen**	0.0020	U	ug/L	P385308	
		Bentazon	0.0046		ug/L	P385308	
		Benzovindiflupyr**	0.0020	U	ug/L	P385308	
		Carbamazepine**	8.0E-04	U	ug/L	P385308	
		Clothianidin**	0.0020	U	ug/L	P385308	
		Dinotefuran**	0.023		ug/L	P385308	
		Diuron	0.0032	I	ug/L	P385308	
		Fenuron	0.016	U	ug/L	P385308	
		Fluridone**	0.025		ug/L	P385308	
		Imazapyr**	0.0064	I	ug/L	P385308	
		Hydrocodone**	0.0020	U	ug/L	P385308	
		Ibuprofen**	0.020	U	ug/L	P385308	
		Imidacloprid	0.014		ug/L	P385308	
		Linuron	0.0040	U	ug/L	P385308	
		Mandestrobin**	0.0020	U	ug/L	P385308	
		MCP	0.0020	U	ug/L	P385308	
		Naproxen**	0.0080	U	ug/L	P385308	
		Primidone**	0.0040	U	ug/L	P385308	
		Pyraclostrobin**	0.0020	U	ug/L	P385308	
		Thiamethoxam**	0.0020	U	ug/L	P385308	
		Tolfenpyrad**	0.0020	U	ug/L	P385308	
		Triclopyr**	0.0040	U	ug/L	P385308	

Field ID: G5SW0159

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for 2,4-D and bentazon could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Field Blank

Collection Date/Time: 07/29/2020 08:10

Field ID: FB 07292020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2187202	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P385423	
	EPA 300.0 Rev. 2.1	Bromide	0.013	U	mg Br/L	P386265	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P385520	
	SM 2540 D-2011	TSS	2	U	mg/L	P385703	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P385524	
2187204	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P385482	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P385673	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P385530	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P385553	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P385542	
2187206	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P385400	
2187218	EPA 8321B	2,4-D	0.0020	U	ug/L	P385308	
		Acesulfame K**	0.10	U	ug/L	P385502	
		AMPA**	0.10	U	ug/L	P385502	
		Sucralose**	0.010	U	ug/L	P385502	
		Acetaminophen**	0.0080	U	ug/L	P385308	
		Acetamiprid**	0.0020	U	ug/L	P385308	
		Endothall**	0.25	U	ug/L	P385502	
		Glufosinate**	0.10	U	ug/L	P385502	
		Glyphosate**	0.10	U	ug/L	P385502	
		Afidopyropen**	0.0020	U	ug/L	P385308	
		Bentazon	8.0E-04	U	ug/L	P385308	
		Benzovindiflupyr**	0.0020	U	ug/L	P385308	
		Carbamazepine**	8.0E-04	U	ug/L	P385308	
		Clothianidin**	0.0020	U	ug/L	P385308	
		Dinotefuran**	0.0020	U	ug/L	P385308	
		Diuron	0.0020	U	ug/L	P385308	
		Fenuron	0.016	U	ug/L	P385308	
		Fluridone**	8.0E-04	U	ug/L	P385308	
		Imazapyr**	0.0040	U	ug/L	P385308	
		Hydrocodone**	0.0020	U	ug/L	P385308	
		Ibuprofen**	0.020	U	ug/L	P385308	
		Imidacloprid	0.0020	U	ug/L	P385308	
		Linuron	0.0040	U	ug/L	P385308	
		Mandestrobin**	0.0020	U	ug/L	P385308	
		MCPP	0.0020	U	ug/L	P385308	
		Naproxen**	0.0080	U	ug/L	P385308	
		Primidone**	0.0040	U	ug/L	P385308	
		Pyraclostrobin**	0.0020	U	ug/L	P385308	
		Thiamethoxam**	0.0020	U	ug/L	P385308	
		Tolfenpyrad**	0.0020	U	ug/L	P385308	
		Triclopyr**	0.0040	U	ug/L	P385308	

Field ID: FB 07292020

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for 2,4-D and bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Salt Springs near Park parking

Collection Date/Time: 07/29/2020 12:05

Field ID: G5SW0158

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2187207	EPA 180.1 Rev. 2.0	Turbidity	7.3	A	NTU	P385423	
	EPA 300.0 Rev. 2.1	Bromide	8.3		mg Br/L	P386265	
	SM 2320 B-2011	Total Alkalinity	129		mg CaCO3/L	P385520	
	SM 2540 D-2011	TSS	6	I	mg/L	P385703	
	SM 4500 F-C-2011	Fluoride	0.18		mg F/L	P385524	
2187208	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P385475	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	I	mg N/L	P385421	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P385577	
	EPA 365.1 Rev. 2.0	Total-P	0.060		mg P/L	P385518	
	SM 5310 B-2011	Organic Carbon	5.1		mg C/L	P385542	
2187209	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P385398	

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: P385423

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386265

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385475

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385482

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385421

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385530

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385577

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385518

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385553

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385398

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385400

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

Reference Method: EPA 8321B
Batch ID: P385308

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
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: EPA 8321B
Batch ID: P385502

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P385502

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P385520

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

Reference Method: SM 2320 B-2011
Batch ID: P385565

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

Reference Method: SM 2540 D-2011
Batch ID: P385703

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P385704

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385524

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385525

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385542

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

Reference Method: SM 5310 B-2011
Batch ID: P385543

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: P386265

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385475

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385482

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385421

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385673

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385530

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385518

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: P385553

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385398

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: P385400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.6		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P385308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	93.9		P	30 - 160
Acetaminophen	87.5		P	30 - 160
Acetamiprid	80.1		P	30 - 160
Afidopyropen	68.4		P	30 - 160
Bentazon	68.9		P	30 - 160
Benzovindiflupyr	59.6		P	30 - 160
Carbamazepine	73.9		P	30 - 160
Clothianidin	91.5		P	30 - 160
Dinotefuran	93.3		P	30 - 160
Diuron	67.5		P	30 - 160
Fenuron	92.9		P	30 - 160
Fluridone	97.5		P	30 - 160
Hydrocodone	83.9		P	30 - 160
Ibuprofen	79.0		P	30 - 160
Imazapyr	58.2		P	30 - 160
Imidacloprid	113		P	30 - 160
Linuron	69.3		P	30 - 160
Mandestrobin	78.5		P	30 - 160
MCPP	112		P	30 - 160
Naproxen	62.6		P	30 - 160
Primidone	92.3		P	30 - 160
Pyraclostrobin	56.9		P	30 - 160
Thiamethoxam	91.1		P	30 - 160
Tolfenpyrad	30.9		P	30 - 160
Triclopyr	70.2		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P385502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	104		P	40 - 150
AMPA	97.5		P	40 - 150
Endothall	93.4		P	40 - 150
Glufosinate	96.6		P	40 - 150
Glyphosate	96.4		P	40 - 140
Sucralose	96.0		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P385520

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

Reference Method: SM 2320 B-2011
Batch ID: P385565

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

Reference Method: SM 4500 F-C-2011
Batch ID: P385524

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P385525

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P385542

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

Reference Method: SM 5310 B-2011
Batch ID: P385543

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386265

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187681	Bromide	97.9	94.0	P/P	90 - 110
2187682	Bromide	95.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385475

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2186574	Ammonia-N	100	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187182	Ammonia-N	95.6	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2186974	Kjeldahl Nitrogen	105	111	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187392	Kjeldahl Nitrogen	109	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385530

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187168	NO2NO3-N	96.5	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2186972	NO2NO3-N	98.4	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2186971	Total-P	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187229	Total-P	105	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187321	O-Phosphate-P	99.6	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P385400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187185	O-Phosphate-P	96.8	97.9	P/P	90 - 110

Reference Method: EPA 8321B
 Batch ID: P385308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2186499	Acetaminophen	81.0	81.0	P/P	30 - 160
2186499	Acetamiprid	72.3	72.1	P/P	30 - 160
2186499	Afidopyropen	68.1	62.0	P/P	30 - 160
2186499	Benzovindiflupyr	54.4	51.4	P/P	30 - 160
2186499	Carbamazepine	60.4	59.5	P/P	30 - 160
2186499	Clothianidin	78.8	81.8	P/P	30 - 160
2186499	Dinotefuran	86.9	88.0	P/P	30 - 160
2186499	Diuron	50.1	50.6	P/P	30 - 160
2186499	Fenuron	74.3	72.3	P/P	30 - 160
2186499	Fluridone	92.2	91.9	P/P	30 - 160
2186499	Hydrocodone	71.4	67.6	P/P	30 - 160
2186499	Ibuprofen	60.6	64.1	P/P	30 - 160
2186499	Imazapyr	61.8	50.6	P/P	30 - 160
2186499	Imidacloprid	131	135	P/P	30 - 160
2186499	Linuron	55.8	58.1	P/P	30 - 160
2186499	Mandestrobin	71.8	68.2	P/P	30 - 160
2186499	MCP	101	97.8	P/P	30 - 160
2186499	Naproxen	48.7	48.5	P/P	30 - 160
2186499	Primidone	79.4	93.2	P/P	30 - 160
2186499	Pyraclostrobin	52.9	54.0	P/P	30 - 160
2186499	Thiamethoxam	90.0	78.2	P/P	30 - 160
2186499	Tolfenpyrad	36.3	39.4	P/P	30 - 160
2186499	Triclopyr	60.6	71.5	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P385502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187277	Acesulfame K	88.6	75.7	P/P	40 - 150
2187277	AMPA	102	108	P/P	40 - 150
2187277	Endothall	95.0	98.5	P/P	40 - 150
2187277	Glufosinate	91.8	86.6	P/P	40 - 150
2187277	Glyphosate	91.9	87.8	P/P	40 - 140
2187277	Sucralose	52.6	51.6	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
 Batch ID: P385524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187370	Fluoride	98.4	98.4	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P385525

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187319	Fluoride	101	101	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P385542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187182	Organic Carbon	105	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P385543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2187320	Organic Carbon	97.2	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P385423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187207	Turbidity	2.60	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P386265

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187681	Bromide	2.42	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2186574	Ammonia-N	0.370	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P385482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187182	Ammonia-N	0.367	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2186974	Kjeldahl Nitrogen	4.39	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P385673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187392	Kjeldahl Nitrogen	0.590	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187168	NO2NO3-N	1.54	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P385577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2186972	NO2NO3-N	0.908	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2186971	Total-P	1.24	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187229	Total-P	0.583	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187321	O-Phosphate-P	0.999	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P385400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187185	O-Phosphate-P	1.08	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P385308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2186499	2,4-D	1.18	Spike	P	0 - 30
2186499	Acetaminophen	0.0156	Spike	P	0 - 30
2186499	Acetamiprid	0.348	Spike	P	0 - 30
2186499	Afidopyropen	9.32	Spike	P	0 - 30
2186499	Bentazon	0.458	Spike	P	0 - 30
2186499	Benzovindiflupyr	5.54	Spike	P	0 - 30
2186499	Carbamazepine	1.52	Spike	P	0 - 30
2186499	Clothianidin	3.38	Spike	P	0 - 30
2186499	Dinotefuran	1.28	Spike	P	0 - 30
2186499	Diuron	0.833	Spike	P	0 - 30
2186499	Fenuron	2.75	Spike	P	0 - 30
2186499	Fluridone	0.266	Spike	P	0 - 30
2186499	Hydrocodone	5.39	Spike	P	0 - 30
2186499	Ibuprofen	5.60	Spike	P	0 - 30
2186499	Imazapyr	13.0	Spike	P	0 - 30
2186499	Imidacloprid	2.62	Spike	P	0 - 30
2186499	Linuron	4.10	Spike	P	0 - 30
2186499	Mandestrobin	5.15	Spike	P	0 - 30
2186499	MCPP	3.62	Spike	P	0 - 30
2186499	Naproxen	0.365	Spike	P	0 - 30
2186499	Primidone	15.9	Spike	P	0 - 30
2186499	Pyraclostrobin	2.18	Spike	P	0 - 30
2186499	Thiamethoxam	13.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P385308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2186499	Tolfenpyrad	8.17	Spike	P	0 - 30
2186499	Triclopyr	16.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P385502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187277	Acesulfame K	15.7	Spike	P	0 - 30
2187277	AMPA	5.76	Spike	P	0 - 30
2187277	Endothall	3.58	Spike	P	0 - 30
2187277	Glufosinate	5.78	Spike	P	0 - 30
2187277	Glyphosate	4.62	Spike	P	0 - 30
2187277	Sucralose	1.75	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P385520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187370	Total Alkalinity	0.643	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P385565

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187682	Total Alkalinity	2.80	Sample	P	0 - 8.1

Reference Method: SM 4500 F-C-2011
Batch ID: P385524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187370	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
Batch ID: P385525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187319	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187182	Organic Carbon	2.05	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P385543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2187320	Organic Carbon	2.93	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2187217
Field Sample ID: G5SW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	74.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.5	P	30 - 160
EPA 8321B	Diuron-d6	62.2	P	30 - 160
EPA 8321B	Endothall-d6	367	F	30 - 160
EPA 8321B	Endothall-d6	367	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	56.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	56.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	65.3	P	30 - 160
EPA 8321B	Primidone-d5	78.4	P	30 - 160
EPA 8321B	Sucralose-d6	31.2	P	30 - 160
EPA 8321B	Sucralose-d6	31.2	P	30 - 160

Lab Sample ID: 2187218
Field Sample ID: FB 07292020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.0	P	30 - 160
EPA 8321B	Diuron-d6	78.1	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.8	P	30 - 160
EPA 8321B	Primidone-d5	84.7	P	30 - 160
EPA 8321B	Sucralose-d6	91.4	P	30 - 160
EPA 8321B	Sucralose-d6	91.4	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A100188

Included Lab Sample IDs: 2187205, 2187206, 2187209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.2	97.6	P/P	90 - 110
O-Phosphate-P	98.4	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A100196

Included Lab Sample IDs: 2187201, 2187202, 2187207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100212

Included Lab Sample IDs: 2187203, 2187208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	98.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A100213

Included Lab Sample IDs: 2187204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A100227

Included Lab Sample IDs: 2187202, 2187207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.9	99.3	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100227

Included Lab Sample IDs: 2187201, 2187202, 2187207

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100229

Included Lab Sample IDs: 2187204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100232

Included Lab Sample IDs: 2187203, 2187204, 2187208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A100232

Included Lab Sample IDs: 2187203, 2187204, 2187208

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100234

Included Lab Sample IDs: 2187203, 2187208

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

Reference Method: SM 2320 B-2011

Run ID: A100241

Included Lab Sample IDs: 2187201

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100247

Included Lab Sample IDs: 2187203, 2187208

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

Reference Method: EPA 8321B

Run ID: A100248

Included Lab Sample IDs: 2187217, 2187218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	92.2	89.6	P/P	60 - 160
AMPA	94.6	92.2	P/P	60 - 160
Glufosinate	94.7	89.8	P/P	60 - 160
Glufosinate	97.2	94.7	P/P	60 - 160
Glyphosate	92.0	95.7	P/P	60 - 160
Glyphosate	95.7	93.6	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100276

Included Lab Sample IDs: 2187217, 2187218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	82.9	82.1	P/P	50 - 150
Acetaminophen	116	110	P/P	60 - 160
Acetamiprid	108	113	P/P	50 - 150
Afidopyropen	103	104	P/P	50 - 150
Bentazon	97.0	111	P/P	50 - 160
Benzovindiflupyr	101	90.7	P/P	50 - 150
Carbamazepine	119	120	P/P	60 - 150
Clothianidin	112	116	P/P	60 - 150
Dinotefuran	99.8	94.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100276

Included Lab Sample IDs: 2187217, 2187218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Diuron	107	111	P/P	60 - 160
Fenuron	114	108	P/P	60 - 150
Fluridone	128	127	P/P	60 - 160
Hydrocodone	105	107	P/P	60 - 150
Ibuprofen	89.5	83.1	P/P	50 - 160
Imazapyr	73.0	67.2	P/P	50 - 150
Imidacloprid	112	114	P/P	60 - 150
Linuron	101	104	P/P	60 - 150
Mandestrobin	123	115	P/P	50 - 150
MCPP	90.3	95.1	P/P	50 - 150
Naproxen	94.0	92.5	P/P	50 - 160
Primidone	111	102	P/P	60 - 150
Pyraclostrobin	101	96.1	P/P	60 - 150
Thiamethoxam	113	112	P/P	50 - 150
Tolfenpyrad	81.1	82.4	P/P	60 - 150
Triclopyr	86.8	77.2	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A100280

Included Lab Sample IDs: 2187217, 2187218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.3	89.8	P/P	60 - 160
Endothall	93.5	99.2	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100320

Included Lab Sample IDs: 2187204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	98.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100327

Included Lab Sample IDs: 2187204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.5	93.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100360

Included Lab Sample IDs: 2187203, 2187208

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.2	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100390

Included Lab Sample IDs: 2187217, 2187218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A100390

Included Lab Sample IDs: 2187217, 2187218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	95.2	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100541

Included Lab Sample IDs: 2187201, 2187202, 2187207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	102	98.0	P/P	90 - 110
Bromide	98.0	99.4	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						2.60	
EPA 300.0 Rev. 2.1	Bromide	102	97.9	94.0	95.9			2.42
EPA 350.1 Rev. 2.0	Ammonia-N	104	100	99.6				0.370
	Ammonia-N	101	95.6	96.0				0.367
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	105	111				4.39
	Kjeldahl Nitrogen	109	109	108				0.590
EPA 353.2 Rev. 2.0	NO2NO3-N	100	96.5	98.0				1.54
	NO2NO3-N	99.0	98.4	97.4				0.908
EPA 365.1 Rev. 2.0	Total-P	102	105	103				1.24
	Total-P	104	105	106				0.583
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3	99.6	101				0.999
	O-Phosphate-P	98.6	96.8	97.9				1.08
EPA 8321B	2,4-D	93.9						1.18
	Acesulfame K	104	88.6	75.7				15.7
	Acetaminophen	87.5	81.0	81.0				0.0156
	Acetamiprid	80.1	72.3	72.1				0.348
	Afidopyropen	68.4	68.1	62.0				9.32
	AMPA	97.5	102	108				5.76
	Bentazon	68.9						0.458
	Benzovindiflupyr	59.6	51.4	54.4				5.54
	Carbamazepine	73.9	60.4	59.5				1.52
	Clothianidin	91.5	78.8	81.8				3.38
	Dinotefuran	93.3	86.9	88.0				1.28
	Diuron	67.5	50.1	50.6				0.833
	Endothall	93.4	95.0	98.5				3.58
	Fenuron	92.9	74.3	72.3				2.75
	Fluridone	97.5	92.2	91.9				0.266
	Glufosinate	96.6	91.8	86.6				5.78
	Glyphosate	96.4	91.9	87.8				4.62
	Hydrocodone	83.9	71.4	67.6				5.39
	Ibuprofen	79.0	64.1	60.6				5.60
	Imazapyr	58.2	50.6	61.8				13.0
	Imidacloprid	113	131	135				2.62
	Linuron	69.3	55.8	58.1				4.10
	Mandestrobin	78.5	71.8	68.2				5.15
	MCPP	112	97.8	101				3.62
	Naproxen	62.6	48.5	48.7				0.365
	Primidone	92.3	79.4	93.2				15.9
	Pyraclostrobin	56.9	54.0	52.9				2.18
	Sucralose	96.0	52.6	51.6				1.75
	Thiamethoxam	91.1	90.0	78.2				13.9
	Tolfenpyrad	30.9	39.4	36.3				8.17
	Triclopyr	70.2	71.5	60.6				16.5
SM 2320 B-2011	Total Alkalinity	101					0.643	
	Total Alkalinity	104					2.80	
SM 4500 F-C-2011	Fluoride	96.9	98.4	98.4				0.0
	Fluoride	99.8	101	101				0.0
SM 5310 B-2011	Organic Carbon	100	105	102				2.05
	Organic Carbon	102	97.2	100				2.93

Reference Method Descriptions

Method	Description	Associated Samples
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Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2187201, 2187202, 2187207
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2187201, 2187202, 2187207
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2187203, 2187204, 2187208
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2187203, 2187204, 2187208
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2187203, 2187204, 2187208
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2187203, 2187204, 2187208
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2187205, 2187206, 2187209
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2187217, 2187218
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2187217, 2187218
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2187201, 2187202, 2187207
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2187201, 2187202, 2187207
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2187201, 2187202, 2187207
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2187203, 2187204, 2187208

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	07/30/2020			07/30/2020 15:42	Blanca Fach	2187201, 2187202, 2187207
EPA 300.0 Rev. 2.1	07/30/2020			08/15/2020 03:50	Julia Storbeck	2187201
	07/30/2020			08/15/2020 04:07	Julia Storbeck	2187202
	07/30/2020			08/15/2020 04:58	Julia Storbeck	2187207
EPA 350.1 Rev. 2.0	07/30/2020			08/01/2020 17:57	Ping Hua	2187203
	07/30/2020			08/01/2020 17:59	Ping Hua	2187208
	07/30/2020			08/02/2020 12:35	Ping Hua	2187204
EPA 351.2 Rev. 2.0	07/30/2020	07/31/2020 10:40	Jhamieka S. Greenwood	08/03/2020 16:17	Julia Storbeck	2187203
	07/30/2020	07/31/2020 10:40	Jhamieka S. Greenwood	08/03/2020 16:19	Julia Storbeck	2187208
	07/30/2020	08/05/2020 09:31	Sima Feizi	08/06/2020 14:46	Jhamieka S. Greenwood	2187204
EPA 353.2 Rev. 2.0	07/30/2020			08/03/2020 09:53	Beverly Y. Sanders	2187204
	07/30/2020			08/04/2020 08:23	Beverly Y. Sanders	2187203
	07/30/2020			08/04/2020 08:24	Beverly Y. Sanders	2187208
EPA 365.1 Rev. 2.0	07/30/2020	08/03/2020 10:00	Lipi Saha	08/06/2020 15:36	Benjamin T. Nordmann	2187203
	07/30/2020	08/03/2020 10:00	Lipi Saha	08/06/2020 15:37	Benjamin T. Nordmann	2187208
	07/30/2020	08/04/2020 10:15	Lipi Saha	08/07/2020 07:54	Lipi Saha	2187204
EPA 365.1 Rev. 2.0 dissolved	07/30/2020			07/30/2020 14:57	Jhamieka S. Greenwood	2187205
	07/30/2020			07/30/2020 14:58	Jhamieka S. Greenwood	2187209
	07/30/2020			07/30/2020 15:31	Jhamieka S. Greenwood	2187206
EPA 8321B	07/30/2020	07/30/2020 14:00	Hoor Shaik	08/02/2020 01:38	Juyoung Kim	2187217
	07/30/2020	07/30/2020 14:00	Hoor Shaik	08/02/2020 02:13	Juyoung Kim	2187218
	07/30/2020	08/03/2020 11:30	Rebecca Ware	08/03/2020 14:37	Rebecca Ware	2187218
	07/30/2020	08/03/2020 11:30	Rebecca Ware	08/03/2020 15:52	Rebecca Ware	2187217
	07/30/2020	08/03/2020 11:30	Rebecca Ware	08/04/2020 12:57	Rebecca Ware	2187217
	07/30/2020	08/03/2020 11:30	Rebecca Ware	08/04/2020 13:10	Rebecca Ware	2187218
	07/30/2020	08/03/2020 11:30	Rebecca Ware	08/10/2020 22:21	Rebecca Ware	2187217
	07/30/2020	08/03/2020 11:30	Rebecca Ware	08/10/2020 22:33	Rebecca Ware	2187218
SM 2320 B-2011	07/30/2020			07/31/2020 19:05	Dale L. Simmons	2187202
	07/30/2020			07/31/2020 20:52	Dale L. Simmons	2187207
	07/30/2020			08/04/2020 05:04	Dale L. Simmons	2187201
SM 2540 D-2011	07/30/2020			07/31/2020 17:30	Madeline Gruver	2187201, 2187202, 2187207
SM 4500 F-C-2011	07/30/2020			07/31/2020 19:05	Dale L. Simmons	2187202
	07/30/2020			07/31/2020 20:52	Dale L. Simmons	2187207
	07/30/2020			07/31/2020 22:19	Dale L. Simmons	2187201
SM 5310 B-2011	07/30/2020			07/31/2020 23:07	David Boose	2187204
	07/30/2020			08/01/2020 01:50	David Boose	2187208
	07/30/2020			08/01/2020 04:42	David Boose	2187203