

Chemical Analysis Report

SW-DIST-2020-11-05-01

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

Event Description: **Run 1**
Request ID: **RQ-2020-09-21-11**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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13051 N. Telecom Parkway
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Date Certified: 30-NOV-2020 15:51



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: Highland Lake

Collection Date/Time: 11/04/2020 12:30

Field ID: G5SW0153

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2206700	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P389828	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P390001	
		Sulfate	0.20	U	mg SO4/L	P390003	
	SM 2120 B-2011	Color (true)	67	A	PCU	P389824	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P389921	
	SM 2540 C-2011	TDS	71		mg/L	P390114	
	SM 2540 D-2011	TSS	2	U	mg/L	P389985	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P390099	
2206701	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P389899	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P389953	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P389917	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P389877	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P389908	
2206702	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P389841	

Ref. Method and Comment:

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

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Gulf Of Mexico Pasco

Collection Date/Time: 11/04/2020 11:20

Field ID: G5SW0159

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2206703	EPA 180.1 Rev. 2.0	Turbidity	0.95		NTU	P389828	
	EPA 300.0 Rev. 2.1	Bromide	33		mg Br/L	P390091	
	SM 2320 B-2011	Total Alkalinity	157		mg CaCO3/L	P389922	
	SM 2540 D-2011	TSS	3	U	mg/L	P390150	
	SM 4500 F-C-2011	Fluoride	0.55		mg F/L	P390100	
2206704	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P389891	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P389940	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P390326	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P389934	
	SM 5310 B-2011	Organic Carbon	5.0		mg C/L	P389909	
2206705	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P389840	
2206753	EPA 8321B	2,4-D	0.0020	U	ug/L	P389930	
		Acesulfame K**	0.10	UJ	ug/L	P389918	SUR
		2,4-DB	0.0080	U	ug/L	P389930	
		AMPA**	1.0	U	ug/L	P389918	
		2,4,5-T	0.0040	U	ug/L	P389930	
		Sucralose**	0.038	I	ug/L	P389918	
		Acetaminophen**	0.0080	U	ug/L	P389930	
		Acetamiprid**	0.0020	U	ug/L	P389930	
		Endothall**	0.25	UJ	ug/L	P389918	SUR
		Glufosinate**	1.0	U	ug/L	P389918	
		Acifluorfen	0.0080	U	ug/L	P389930	
		Glyphosate**	1.0	U	ug/L	P389918	
		Afidopyropen**	0.0020	U	ug/L	P389930	
		Bentazon	8.2E-04	I	ug/L	P389930	
		Benzovindiflupyr**	0.0020	U	ug/L	P389930	
		Carbamazepine**	8.0E-04	U	ug/L	P389930	
		Clothianidin**	0.0020	U	ug/L	P389930	
		Dicamba	0.080	U	ug/L	P389930	MS
		Dichlorprop	0.0040	U	ug/L	P389930	
		Dinoseb	0.0040	U	ug/L	P389930	
		Dinotefuran**	0.0020	U	ug/L	P389930	
		Diuron	0.0020	U	ug/L	P389930	MS
		Fenuron	0.016	U	ug/L	P389930	
		Fluridone**	8.0E-04	U	ug/L	P389930	
		Imazapyr**	0.0040	U	ug/L	P389930	
		Hydrocodone**	0.0020	U	ug/L	P389930	
		Ibuprofen**	0.020	U	ug/L	P389930	
		Imidacloprid	0.0020	U	ug/L	P389930	
		Linuron	0.0040	U	ug/L	P389930	
		Mandestrobin**	0.0020	U	ug/L	P389930	
		MCPA	0.0020	U	ug/L	P389930	
		MCPP	0.0020	U	ug/L	P389930	

Field ID: G5SW0159

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2206753	EPA 8321B	Naproxen**	0.0080	U	ug/L	P389930	MS
		Picloram	0.080	U	ug/L	P389930	MS
		Primidone**	0.0040	U	ug/L	P389930	
		Pyraclostrobin**	0.0020	U	ug/L	P389930	
		Silvex	0.0040	U	ug/L	P389930	
		Thiamethoxam**	0.0020	U	ug/L	P389930	
		Tolfenpyrad**	0.0020	U	ug/L	P389930	
		Triclopyr**	0.0040	U	ug/L	P389930	

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.

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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389828

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390001

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390003

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389891

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389899

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389940

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389953

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389917

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P390326

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P389877

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P389934

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P389840

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P389841

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

Reference Method: EPA 8321B
 Batch ID: P389918

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: P389930

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4-DB	0.0080	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Acifluorfen	0.0080	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P389930

Component	Result	Code	Units
Dicamba	0.080	U	ug/L
Dichlorprop	0.0040	U	ug/L
Dinoseb	0.0040	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
MCPA	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Picloram	0.080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P389824

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P389921

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

Reference Method: SM 2320 B-2011
Batch ID: P389922

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

Reference Method: SM 2540 C-2011
Batch ID: P390114

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P389985

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P389985

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P390150

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P390099

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P390100

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P389908

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

Reference Method: SM 5310 B-2011
Batch ID: P389909

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: P390001

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390003

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389891

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389899

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: P389940

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: P389953

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389917

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390326

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	100		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389877

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: P389934

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: P389840

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: P389841

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

Reference Method: EPA 8321B
Batch ID: P389918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	136		P	40 - 150
AMPA	100		P	40 - 150
Endothall	94.0		P	40 - 150
Glufosinate	100		P	40 - 150
Glyphosate	103		P	40 - 140
Sucralose	129		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P389930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	42.8		P	30 - 160
2,4-DB	35.8		P	30 - 160
2,4,5-T	54.0		P	30 - 160
Acetaminophen	45.3		P	30 - 160
Acetamiprid	58.7		P	30 - 160
Acifluorfen	60.9		P	30 - 160
Afidopyropen	35.8		P	30 - 160
Bentazon	41.9		P	30 - 160
Benzovindiflupyr	58.6		P	30 - 160
Carbamazepine	52.4		P	30 - 160
Clothianidin	67.0		P	30 - 160
Dicamba	68.4		P	30 - 160
Dichlorprop	54.6		P	30 - 160
Dinoseb	62.2		P	30 - 160
Dinotefuran	69.8		P	30 - 160
Diuron	61.0		P	30 - 160
Fenuron	84.4		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P389930

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluridone	53.1		P	30 - 160
Hydrocodone	66.8		P	30 - 160
Ibuprofen	57.8		P	30 - 160
Imazapyr	76.5		P	30 - 160
Imidacloprid	73.9		P	30 - 160
Linuron	85.4		P	30 - 160
Mandestrobin	66.5		P	30 - 160
MCPA	46.7		P	30 - 160
MCPP	52.0		P	30 - 160
Naproxen	43.8		P	30 - 160
Picloram	63.3		P	30 - 160
Primidone	78.2		P	30 - 160
Pyraclostrobin	47.0		P	30 - 160
Silvex	45.9		P	30 - 160
Thiamethoxam	70.1		P	30 - 160
Tolfenpyrad	30.1		P	30 - 160
Triclopyr	42.0		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P389824

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P389921

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.9		P	93 - 104

Reference Method: SM 2320 B-2011
Batch ID: P389922

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P390099

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.4		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P390100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.0		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P389908

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

Reference Method: SM 5310 B-2011
Batch ID: P389908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	103		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P389909

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390001

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206419	Chloride	97.9		P	90 - 110
2206641	Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206419	Sulfate	98.7		P	90 - 110
2206641	Sulfate	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206644	Bromide	102	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206178	Ammonia-N	106	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389899

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206701	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206704	Kjeldahl Nitrogen	104	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389917

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206701	NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206704	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206542	Total-P	100	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389934

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2205579	Total-P	96.2	93.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389840

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206474	O-Phosphate-P	98.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206643	O-Phosphate-P	101	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P389918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206526	Acesulfame K	51.2	45.8	P/P	40 - 150
2206526	AMPA	70.6	66.2	P/P	40 - 150
2206526	Endothall	115	121	P/P	40 - 150
2206526	Glufosinate	101	94.6	P/P	40 - 150
2206526	Glyphosate	100	91.2	P/P	40 - 140
2206526	Sucralose	57.0	55.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P389930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206563	2,4-D	45.3	42.1	P/P	30 - 160
2206563	2,4-DB	32.1	31.5	P/P	30 - 160
2206563	2,4,5-T	59.7	54.6	P/P	30 - 160
2206563	Acetaminophen	47.5	49.5	P/P	30 - 160
2206563	Acetamiprid	34.6	34.2	P/P	30 - 160
2206563	Acifluorfen	76.1	84.1	P/P	30 - 160
2206563	Afidopyropen	38.1	35.8	P/P	30 - 160
2206563	Benzovindiflupyr	51.8	56.5	P/P	30 - 160
2206563	Carbamazepine	45.4	44.3	P/P	30 - 160
2206563	Clothianidin	30.7	31.2	P/P	30 - 160
2206563	Dicamba	6.62	5.27	F/F	30 - 160
2206563	Dichlorprop	51.6	55.9	P/P	30 - 160
2206563	Dinoseb	78.4	74.4	P/P	30 - 160
2206563	Dinotefuran	61.5	61.4	P/P	30 - 160
2206563	Diuron	29.0	26.6	F/F	30 - 160
2206563	Fenuron	34.9	33.6	P/P	30 - 160
2206563	Fluridone	50.0	69.2	P/P	30 - 160
2206563	Hydrocodone	48.6	50.9	P/P	30 - 160
2206563	Ibuprofen	48.7	43.4	P/P	30 - 160
2206563	Imidacloprid	77.5	74.9	P/P	30 - 160
2206563	Linuron	60.3	57.6	P/P	30 - 160
2206563	Mandestrobin	60.2	57.3	P/P	30 - 160
2206563	MCPA	54.8	51.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P389930

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206563	MCPD	49.4	46.6	P/P	30 - 160
2206563	Naproxen	254	215	F/F	30 - 160
2206563	Picloram	167	124	F/P	30 - 160
2206563	Primidone	43.3	46.5	P/P	30 - 160
2206563	Pyraclostrobin	52.8	50.1	P/P	30 - 160
2206563	Silvex	64.5	56.4	P/P	30 - 160
2206563	Thiamethoxam	54.7	52.5	P/P	30 - 160
2206563	Tolfenpyrad	41.6	38.2	P/P	30 - 160
2206563	Triclopyr	56.0	48.8	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
 Batch ID: P390099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206538	Fluoride	97.6	98.8	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
 Batch ID: P390100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206177	Fluoride	104	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
 Batch ID: P389908

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206539	Organic Carbon	102	102	P/P	85 - 115

Reference Method: SM 5310 B-2011
 Batch ID: P389909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2206267	Organic Carbon	98.3	98.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P389828

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206795	Turbidity	2.53	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206419	Chloride	0.0652	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390091

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206644	Bromide	1.78	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206178	Ammonia-N	0.914	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P389899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206701	Ammonia-N	1.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206704	Kjeldahl Nitrogen	3.04	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P389953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206978	Kjeldahl Nitrogen	1.55	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P389917

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206701	NO2NO3-N	0.506	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206704	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206542	Total-P	1.71	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P389934

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2205579	Total-P	3.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389840

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206474	O-Phosphate-P	1.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P389841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206643	O-Phosphate-P	0.987	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P389918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206526	Acesulfame K	10.1	Spike	P	0 - 30
2206526	AMPA	4.46	Spike	P	0 - 30
2206526	Endothall	5.06	Spike	P	0 - 30
2206526	Glufosinate	6.41	Spike	P	0 - 30
2206526	Glyphosate	4.26	Spike	P	0 - 30
2206526	Sucralose	2.27	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P389930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206563	2,4-D	4.35	Spike	P	0 - 30
2206563	2,4-DB	1.32	Spike	P	0 - 30
2206563	2,4,5-T	8.81	Spike	P	0 - 30
2206563	Acetaminophen	4.07	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P389930

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206563	Acetamiprid	1.34	Spike	P	0 - 30
2206563	Acifluorfen	9.92	Spike	P	0 - 30
2206563	Afidopyropen	6.30	Spike	P	0 - 30
2206563	Bentazon	7.18	Spike	P	0 - 30
2206563	Benzovindiflupyr	8.72	Spike	P	0 - 30
2206563	Carbamazepine	2.34	Spike	P	0 - 30
2206563	Clothianidin	1.39	Spike	P	0 - 30
2206563	Dicamba	4.42	Spike	P	0 - 30
2206563	Dichlorprop	7.90	Spike	P	0 - 30
2206563	Dinoseb	5.27	Spike	P	0 - 30
2206563	Dinotefuran	0.161	Spike	P	0 - 30
2206563	Diuron	8.52	Spike	P	0 - 30
2206563	Fenuron	3.59	Spike	P	0 - 30
2206563	Fluridone	15.4	Spike	P	0 - 30
2206563	Hydrocodone	4.64	Spike	P	0 - 30
2206563	Ibuprofen	11.5	Spike	P	0 - 30
2206563	Imazapyr	1.31	Spike	P	0 - 30
2206563	Imidacloprid	2.76	Spike	P	0 - 30
2206563	Linuron	4.60	Spike	P	0 - 30
2206563	Mandestrobin	4.82	Spike	P	0 - 30
2206563	MCPA	6.54	Spike	P	0 - 30
2206563	MCPP	5.93	Spike	P	0 - 30
2206563	Naproxen	16.6	Spike	P	0 - 30
2206563	Picloram	29.7	Spike	P	0 - 30
2206563	Primidone	7.30	Spike	P	0 - 30
2206563	Pyraclostrobin	5.11	Spike	P	0 - 30
2206563	Silvex	13.4	Spike	P	0 - 30
2206563	Thiamethoxam	3.69	Spike	P	0 - 30
2206563	Tolfenpyrad	8.66	Spike	P	0 - 30
2206563	Triclopyr	13.7	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P389824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206700	Color (true)	0.286	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P389921

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206519	Total Alkalinity	0.478	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P389922

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206176	Total Alkalinity	2.70	Sample	P	0 - 8.1

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
 Batch ID: P390114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206538	TDS	0.669	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
 Batch ID: P390150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206496	TSS	4.17	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P390099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206538	Fluoride	0.984	Spike	P	0 - 2.8

Reference Method: SM 4500 F-C-2011
 Batch ID: P390100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206177	Fluoride	1.00	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P389908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206539	Organic Carbon	0.272	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P389909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2206267	Organic Carbon	0.332	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2206753

Field Sample ID: G5SW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	59.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	55.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	42.6	P	30 - 160
EPA 8321B	Diuron-d6	41.1	P	30 - 160
EPA 8321B	Endothall-d6	438	F	30 - 160
EPA 8321B	Endothall-d6	438	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.1	P	30 - 160
EPA 8321B	Primidone-d5	58.6	P	30 - 160
EPA 8321B	Sucralose-d6	33.5	P	30 - 160
EPA 8321B	Sucralose-d6	33.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A101998

Included Lab Sample IDs: 2206700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	105	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102000

Included Lab Sample IDs: 2206700, 2206703

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102001

Included Lab Sample IDs: 2206702, 2206705

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102027

Included Lab Sample IDs: 2206704

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102031

Included Lab Sample IDs: 2206701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	96.4	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A102035

Included Lab Sample IDs: 2206701, 2206704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	96.0	P/P	90 - 110
Organic Carbon	96.0	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102043

Included Lab Sample IDs: 2206701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A102049

Included Lab Sample IDs: 2206700, 2206703

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

Reference Method: SM 2320 B-2011

Run ID: A102049

Included Lab Sample IDs: 2206700, 2206703

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.0	98.6	P/P	90 - 110
Total Alkalinity	98.6	99.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102065

Included Lab Sample IDs: 2206700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.4	98.4	P/P	90 - 110
Sulfate	99.8	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102067

Included Lab Sample IDs: 2206703

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102073

Included Lab Sample IDs: 2206701, 2206704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	105	P/P	90 - 110
Kjeldahl Nitrogen	97.2	103	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102076

Included Lab Sample IDs: 2206753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	130	122	P/P	50 - 160
Endothall	100	93.0	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A102077

Included Lab Sample IDs: 2206753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	60.6	60.2	P/P	50 - 160
Glufosinate	95.6	90.4	P/P	50 - 160
Glyphosate	106	102	P/P	50 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102110

Included Lab Sample IDs: 2206701

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A102123
Included Lab Sample IDs: 2206753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	102	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A102132
Included Lab Sample IDs: 2206753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.1	77.0	P/P	50 - 150
2,4-DB	69.8	86.1	P/P	50 - 150
2,4,5-T	72.5	82.7	P/P	50 - 150
Acetaminophen	110	109	P/P	60 - 160
Acetamiprid	101	107	P/P	50 - 150
Acifluorfen	86.3	104	P/P	50 - 150
Afidopyropen	75.6	70.4	P/P	50 - 150
Bentazon	72.6	87.0	P/P	50 - 160
Benzovindiflupyr	112	113	P/P	50 - 150
Carbamazepine	76.9	92.1	P/P	60 - 150
Clothianidin	93.4	87.6	P/P	60 - 150
Dicamba	95.4	97.3	P/P	50 - 150
Dichlorprop	89.7	94.6	P/P	50 - 150
Dinoseb	99.2	105	P/P	50 - 150
Dinotefuran	98.2	104	P/P	50 - 150
Diuron	73.1	80.1	P/P	60 - 160
Fenuron	107	110	P/P	60 - 150
Fluridone	108	99.8	P/P	60 - 160
Hydrocodone	115	109	P/P	60 - 150
Ibuprofen	86.8	80.0	P/P	50 - 160
Imazapyr	94.6	112	P/P	50 - 160
Imidacloprid	93.1	99.1	P/P	60 - 150
Linuron	103	101	P/P	60 - 150
Mandestrobin	104	110	P/P	50 - 150
MCPA	78.9	87.8	P/P	50 - 150
MCPP	83.5	88.9	P/P	50 - 150
Naproxen	64.8	61.5	P/P	50 - 160
Picloram	80.9	85.6	P/P	50 - 150
Primidone	90.5	110	P/P	60 - 150
Pyraclostrobin	106	109	P/P	60 - 150
Silvex	72.9	89.0	P/P	50 - 150
Thiamethoxam	88.5	96.7	P/P	50 - 150
Tolfenpyrad	132	132	P/P	60 - 150
Triclopyr	73.8	70.4	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A102136
Included Lab Sample IDs: 2206704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A102147

Included Lab Sample IDs: 2206700, 2206703

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102236

Included Lab Sample IDs: 2206704

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	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				2.53	
EPA 300.0 Rev. 2.1	Bromide	102	102	100		1.78
	Chloride	99.3	97.9	99.3	0.0652	
	Sulfate	100	98.7	99.8		
EPA 350.1 Rev. 2.0	Ammonia-N	97.8	106	105		0.914
	Ammonia-N	101	101	102		1.08
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	104	108		3.04
	Kjeldahl Nitrogen	110				1.55
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	98.5	99.0		0.506
	NO2NO3-N	100	101	101		0.0
EPA 365.1 Rev. 2.0	Total-P	105	100	102		1.71
	Total-P	106	96.2	93.2		3.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	98.8	100		1.43
	O-Phosphate-P	100	101	102		0.987
EPA 8321B	2,4-D	42.8	45.3	42.1		4.35
	2,4-DB	35.8	32.1	31.5		1.32
	2,4,5-T	54.0	59.7	54.6		8.81
	Acesulfame K	136	51.2	45.8		10.1
	Acetaminophen	45.3	47.5	49.5		4.07
	Acetamiprid	58.7	34.6	34.2		1.34
	Acifluorfen	60.9	76.1	84.1		9.92
	Afidopyropen	35.8	38.1	35.8		6.30
	AMPA	100	70.6	66.2		4.46
	Bentazon	41.9				7.18
	Benzovindiflupyr	58.6	51.8	56.5		8.72
	Carbamazepine	52.4	45.4	44.3		2.34
	Clothianidin	67.0	30.7	31.2		1.39
	Dicamba	68.4	6.62	5.27		4.42
	Dichlorprop	54.6	51.6	55.9		7.90
	Dinoseb	62.2	78.4	74.4		5.27
	Dinotefuran	69.8	61.5	61.4		0.161
	Diuron	61.0	29.0	26.6		8.52
	Endothall	94.0	115	121		5.06
	Fenuron	84.4	34.9	33.6		3.59
	Fluridone	53.1	50.0	69.2		15.4
	Glufosinate	100	101	94.6		6.41
	Glyphosate	103	100	91.2		4.26
	Hydrocodone	66.8	48.6	50.9		4.64
	Ibuprofen	57.8	48.7	43.4		11.5
	Imazapyr	76.5				1.31
	Imidacloprid	73.9	77.5	74.9		2.76
	Linuron	85.4	60.3	57.6		4.60
	Mandestrobin	66.5	60.2	57.3		4.82
	MCPA	46.7	54.8	51.3		6.54
	MCPP	52.0	49.4	46.6		5.93
	Naproxen	43.8	254	215		16.6
	Picloram	63.3	167	124		29.7
	Primidone	78.2	43.3	46.5		7.30
	Pyraclostrobin	47.0	52.8	50.1		5.11
	Silvex	45.9	64.5	56.4		13.4
	Sucralose	129	57.0	55.6		2.27
	Thiamethoxam	70.1	54.7	52.5		3.69
	Tolfenpyrad	30.1	41.6	38.2		8.66
	Triclopyr	42.0	56.0	48.8		13.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2120 B-2011	Color (true)	103				0.286	
SM 2320 B-2011	Total Alkalinity	99.9				0.478	
	Total Alkalinity	98.9				2.70	
SM 2540 C-2011	TDS					0.669	
SM 2540 D-2011	TSS					4.17	
SM 4500 F-C-2011	Fluoride	94.4	97.6	98.8			0.984
	Fluoride	94.0	104	102			1.00
SM 5310 B-2011	Organic Carbon	103	102	102			0.272
	Organic Carbon	104	98.3	98.7			0.332

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2206700, 2206703
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2206703
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2206700
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2206700
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2206701, 2206704
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2206701, 2206704
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2206701, 2206704
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2206701, 2206704
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2206702, 2206705
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2206753
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2206753
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2206700
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2206700, 2206703
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2206700
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2206700, 2206703
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2206700, 2206703
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2206701, 2206704

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	11/05/2020			11/05/2020 15:01	Yen Ta	2206700, 2206703
EPA 300.0 Rev. 2.1	11/05/2020			11/10/2020 18:02	Lipi Saha	2206700
	11/05/2020			11/13/2020 16:56	Lipi Saha	2206703
EPA 350.1 Rev. 2.0	11/05/2020			11/07/2020 11:02	Ping Hua	2206704
	11/05/2020			11/08/2020 10:50	Ping Hua	2206701
EPA 351.2 Rev. 2.0	11/05/2020	11/09/2020 13:30	David Boose	11/10/2020 11:46	Elliott Rodriguez	2206704
	11/05/2020	11/09/2020 13:30	David Boose	11/10/2020 12:09	Elliott Rodriguez	2206701
EPA 353.2 Rev. 2.0	11/05/2020			11/09/2020 09:28	Beverly Y. Sanders	2206701
	11/05/2020			11/20/2020 12:18	Beverly Y. Sanders	2206704
EPA 365.1 Rev. 2.0	11/05/2020	11/06/2020 13:18	Yen Ta	11/12/2020 11:29	Shengyu Wang	2206701
	11/05/2020	11/09/2020 12:24	Yen Ta	11/13/2020 14:05	Shengyu Wang	2206704
EPA 365.1 Rev. 2.0 dissolved	11/05/2020			11/05/2020 16:03	Blanca Fach	2206702
	11/05/2020			11/05/2020 16:20	Blanca Fach	2206705
EPA 8321B	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/09/2020 15:42	Rebecca Ware	2206753
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/10/2020 11:55	Rebecca Ware	2206753
	11/05/2020	11/09/2020 12:00	Rebecca Ware	11/12/2020 14:23	Rebecca Ware	2206753
	11/05/2020	11/10/2020 09:00	Hoor Shaik	11/11/2020 06:32	Juyoung Kim	2206753
SM 2120 B-2011	11/05/2020			11/05/2020 15:49	Benjamin T. Nordmann	2206700
SM 2320 B-2011	11/05/2020			11/07/2020 04:42	Dale L. Simmons	2206700
	11/05/2020			11/07/2020 07:51	Dale L. Simmons	2206703
SM 2540 C-2011	11/05/2020			11/06/2020 19:55	Madeline Gruver	2206700
SM 2540 D-2011	11/05/2020			11/06/2020 19:56	Madeline Gruver	2206700
	11/05/2020			11/10/2020 16:20	Yijie Li	2206703
SM 4500 F-C-2011	11/05/2020			11/13/2020 18:56	Dale L. Simmons	2206700
	11/05/2020			11/13/2020 19:50	Dale L. Simmons	2206703
SM 5310 B-2011	11/05/2020			11/07/2020 00:09	Touraj Touran	2206701
	11/05/2020			11/07/2020 03:36	Touraj Touran	2206704