

Chemical Analysis Report

SO-DIST-2020-11-24-01

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

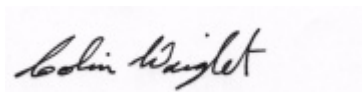
Event Description: **Orange, Owl, Drain**
Request ID: **RQ-2020-11-23-25**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: Nicole Reistad

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 14-DEC-2020 09:34

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, 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: Owl Creek

Collection Date/Time: 11/23/2020 09:15

Field ID: G3SD0166

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2209107	EPA 8321B	2,4-D	0.012		ug/L	P390314	
		Acesulfame K**	0.10	U	ug/L	P390403	
		AMPA**	0.33	I	ug/L	P390403	
		Sucralose**	0.037	I	ug/L	P390403	
		Acetaminophen**	0.0080	U	ug/L	P390314	
		Acetamiprid**	0.0020	U	ug/L	P390314	
		Endothall**	0.25	U	ug/L	P390403	
		Glufosinate**	0.10	U	ug/L	P390403	
		Glyphosate**	0.27	I	ug/L	P390403	
		Afidopyropen**	0.0020	U	ug/L	P390314	RPD
		Bentazon	8.0E-04	U	ug/L	P390314	
		Benzovindiflupyr**	0.0020	U	ug/L	P390314	
		Carbamazepine**	8.0E-04	U	ug/L	P390314	
		Clothianidin**	0.0020	U	ug/L	P390314	
		Dinotefuran**	0.0020	U	ug/L	P390314	
		Diuron	0.0020	U	ug/L	P390314	
		Fenuron	0.016	U	ug/L	P390314	
		Fluridone**	8.0E-04	U	ug/L	P390314	
		Imazapyr**	0.095		ug/L	P390314	
		Hydrocodone**	0.0020	U	ug/L	P390314	
		Ibuprofen**	0.020	U	ug/L	P390314	RPD
		Imidacloprid	0.0020	U	ug/L	P390314	
		Linuron	0.0040	U	ug/L	P390314	
		Mandestrobin**	0.0020	U	ug/L	P390314	
		MCPP	0.0020	U	ug/L	P390314	
		Naproxen**	0.0080	U	ug/L	P390314	RPD
		Primidone**	0.0040	UJ	ug/L	P390314	SUR
		Pyraclostrobin**	0.0020	U	ug/L	P390314	
		Thiamethoxam**	0.0020	U	ug/L	P390314	
		Tolfenpyrad**	0.0020	U	ug/L	P390314	
		Triclopyr**	0.0040	U	ug/L	P390314	

Ref. Method and Comment:

EPA 8321B: "J" - estimation due to primidone-d5 surrogate spike recovery exceeding the control limits. Results confirmed in re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Orange River At Boat Ramp

Collection Date/Time: 11/23/2020 09:40

Field ID: G3SD0128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2209108	EPA 8321B	2,4-D	0.0020	U	ug/L	P390314	
		Acesulfame K**	0.10	U	ug/L	P390403	
		AMPA**	0.36	I	ug/L	P390403	
		Sucralose**	1.4		ug/L	P390403	
		Acetaminophen**	0.0080	U	ug/L	P390314	
		Acetamiprid**	0.0020	U	ug/L	P390314	
		Endothall**	0.25	U	ug/L	P390403	
		Glufosinate**	0.10	U	ug/L	P390403	
		Glyphosate**	0.42		ug/L	P390403	
		Afidopyropen**	0.0020	U	ug/L	P390314	RPD
		Bentazon	0.049		ug/L	P390314	
		Benzovindiflupyr**	0.0020	U	ug/L	P390314	
		Carbamazepine**	0.0062		ug/L	P390314	
		Clothianidin**	0.0020	U	ug/L	P390314	
		Dinotefuran**	0.0020	U	ug/L	P390314	
		Diuron	0.0020	U	ug/L	P390314	
		Fenuron	0.016	U	ug/L	P390314	
		Fluridone**	0.0092		ug/L	P390314	
		Imazapyr**	0.26		ug/L	P390314	
		Hydrocodone**	0.0020	U	ug/L	P390314	
		Ibuprofen**	0.020	U	ug/L	P390314	RPD
		Imidacloprid	0.0057	I	ug/L	P390314	
		Linuron	0.0040	U	ug/L	P390314	
		Mandestrobin**	0.0020	U	ug/L	P390314	
		MCPP	0.0020	U	ug/L	P390314	
		Naproxen**	0.0080	U	ug/L	P390314	RPD
		Primidone**	0.0040	U	ug/L	P390314	
		Pyraclostrobin**	0.0020	U	ug/L	P390314	
		Thiamethoxam**	0.0059	I	ug/L	P390314	
		Tolfenpyrad**	0.0020	U	ug/L	P390314	
		Triclopyr**	0.0040	U	ug/L	P390314	

Sample Location: Drainage Ditch @ Cr 850

Collection Date/Time: 11/23/2020 10:40

Field ID: G1SD0061

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2209082	EPA 180.1 Rev. 2.0	Turbidity	9.9		NTU	P390435	
	EPA 300.0 Rev. 2.1	Chloride	18		mg Cl/L	P390527	
		Sulfate	15		mg SO4/L	P390528	
		Color (true)	160		PCU	P390429	
	SM 2320 B-2011	Total Alkalinity	165		mg CaCO3/L	P390500	
	SM 2540 C-2011	TDS	245		mg/L	P390772	
	SM 2540 D-2011	TSS	12		mg/L	P390767	
	SM 4500 F-C-2011	Fluoride	0.078	I	mg F/L	P390503	
2209083	EPA 350.1 Rev. 2.0	Ammonia-N	0.23		mg N/L	P390492	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P390613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.052		mg N/L	P390557	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P390621	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P390551	
2209084	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P390430	
2209109	EPA 200.7 Rev. 4.4	Barium	19.7		ug/L	P390518	
		Calcium	71.5		mg/L	P390518	
		Iron	1.74E+03		ug/L	P390518	
		Magnesium	4.30		mg/L	P390518	
		Potassium	4.7		mg/L	P390518	
		Sodium	9.0		mg/L	P390518	
	EPA 200.8 Rev. 5.4	Aluminum	205		ug/L	P390518	
		Antimony	0.070	I	ug/L	P390518	
		Arsenic	1.05		ug/L	P390518	
		Beryllium	0.028	I	ug/L	P390518	
		Boron**	38.0		ug/L	P390518	
		Cadmium	0.020	U	ug/L	P390518	
		Chromium	1.4	I	ug/L	P390518	
		Copper	0.67	I	ug/L	P390518	
		Lead	0.20	U	ug/L	P390518	
		Nickel	0.93	I	ug/L	P390518	
		Selenium	0.20	U	ug/L	P390518	
		Silver	0.010	U	ug/L	P390518	
		Thallium	0.10	U	ug/L	P390518	
	SM 2340B	Hardness	196		mg/L	P390518	

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 2120 B-2011: Batch relative percent difference is unavailable because of high 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390435

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390518

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390518

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390527

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390528

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P390492

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P390613

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390557

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390621

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390430

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

Reference Method: EPA 8321B
Batch ID: P390314

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P390403

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: P390429

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P390500

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

Reference Method: SM 2540 C-2011
Batch ID: P390772

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P390767

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P390503

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P390551

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	85 - 115
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	102		P	85 - 115
Sodium	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	94.0		P	85 - 115
Boron	96.4		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	97.7		P	85 - 115
Copper	98.6		P	85 - 115
Lead	98.1		P	85 - 115
Nickel	98.1		P	85 - 115
Selenium	101		P	85 - 115
Silver	103		P	85 - 115
Thallium	99.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390527

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390528

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P390492

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P390613

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390557

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390621

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390430

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

Reference Method: EPA 8321B
Batch ID: P390314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	69.8		P	30 - 160
Acetaminophen	73.4		P	30 - 150
Acetamiprid	84.3		P	30 - 160
Afidopyropen	40.1		P	30 - 160
Bentazon	33.1		P	30 - 150
Benzovindiflupyr	90.7		P	30 - 160
Carbamazepine	71.7		P	30 - 160
Clothianidin	89.2		P	30 - 160
Dinotefuran	84.1		P	30 - 160
Diuron	77.2		P	30 - 160
Fenuron	92.3		P	30 - 160
Fluridone	74.6		P	30 - 160
Hydrocodone	99.9		P	30 - 160
Ibuprofen	44.0		P	30 - 160
Imazapyr	85.2		P	30 - 160
Imidacloprid	70.9		P	30 - 160
Linuron	69.1		P	30 - 160
Mandestrobin	83.2		P	30 - 160
MCPP	68.2		P	30 - 160
Naproxen	45.1		P	30 - 160
Primidone	104		P	30 - 160
Pyraclostrobin	72.3		P	30 - 160
Thiamethoxam	97.0		P	30 - 160
Tolfenpyrad	46.6		P	30 - 160
Triclopyr	54.0		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P390403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	82.4		P	40 - 150
AMPA	104		P	40 - 150
Endothall	112		P	40 - 150
Glufosinate	107		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P390403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	118		P	40 - 140
Sucralose	107		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P390429

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	105		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P390500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.5		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P390503

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

Reference Method: SM 5310 B-2011
Batch ID: P390551

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209005	Barium	101		P	80 - 120
2209005	Calcium	103		P	80 - 120
2209005	Iron	104		P	80 - 120
2209005	Magnesium	104		P	80 - 120
2209005	Potassium	101		P	80 - 120
2209005	Sodium	101		P	80 - 120
2209362	Barium	102	101	P/P	80 - 120
2209362	Calcium	104	102	P/P	80 - 120
2209362	Iron	107	104	P/P	80 - 120
2209362	Magnesium	105	103	P/P	80 - 120
2209362	Potassium	104	101	P/P	80 - 120
2209362	Sodium	106	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209005	Aluminum	100		P	80 - 120
2209005	Antimony	99.9		P	80 - 120
2209005	Arsenic	98.6		P	80 - 120
2209005	Beryllium	93.2		P	80 - 120
2209005	Boron	105		P	80 - 120
2209005	Cadmium	98.5		P	80 - 120
2209005	Chromium	101		P	80 - 120
2209005	Copper	100		P	80 - 120
2209005	Lead	99.3		P	80 - 120
2209005	Nickel	102		P	80 - 120
2209005	Selenium	94.3		P	80 - 120
2209005	Silver	101		P	80 - 120
2209005	Thallium	101		P	80 - 120
2209362	Aluminum	100	95.5	P/P	80 - 120
2209362	Antimony	99.9	100	P/P	80 - 120
2209362	Arsenic	101	100	P/P	80 - 120
2209362	Beryllium	96.2	104	P/P	80 - 120
2209362	Boron	101	96.2	P/P	80 - 120
2209362	Cadmium	99.1	99.7	P/P	80 - 120
2209362	Chromium	98.9	96.7	P/P	80 - 120
2209362	Copper	101	107	P/P	80 - 120
2209362	Lead	98.9	97.6	P/P	80 - 120
2209362	Nickel	101	99.0	P/P	80 - 120
2209362	Selenium	101	101	P/P	80 - 120
2209362	Silver	101	101	P/P	80 - 120
2209362	Thallium	101	99.5	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390527

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2208998	Chloride	98.5		P	90 - 110
2209077	Chloride	101		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2208998	Sulfate	97.4		P	90 - 110
2209077	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P390492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209072	Ammonia-N	97.2	91.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P390613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209051	Kjeldahl Nitrogen	95.0	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390557

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209031	NO2NO3-N	98.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209286	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209290	O-Phosphate-P	100	102	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P390314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2208625	2,4-D	53.4	63.4	P/P	30 - 160
2208625	Acetaminophen	108	108	P/P	30 - 150
2208625	Acetamiprid	82.1	73.8	P/P	30 - 160
2208625	Afidopyropen	56.7	39.7	P/P	30 - 160
2208625	Bentazon	40.4	40.9	P/P	30 - 150
2208625	Benzovindiflupyr	99.4	85.3	P/P	30 - 160
2208625	Carbamazepine	82.2	75.9	P/P	30 - 160
2208625	Clothianidin	78.6	80.3	P/P	30 - 160
2208625	Dinotefuran	102	103	P/P	30 - 160
2208625	Diuron	77.5	80.0	P/P	30 - 160
2208625	Fenuron	94.1	97.3	P/P	30 - 160
2208625	Fluridone	79.6	75.2	P/P	30 - 160
2208625	Hydrocodone	92.0	107	P/P	30 - 160
2208625	Ibuprofen	40.7	60.7	P/P	30 - 160
2208625	Imazapyr	68.6	76.6	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P390314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2208625	Imidacloprid	81.0	77.2	P/P	30 - 160
2208625	Linuron	74.2	74.1	P/P	30 - 160
2208625	Mandestrobin	101	96.2	P/P	30 - 160
2208625	MCPP	61.3	67.9	P/P	30 - 160
2208625	Naproxen	91.1	58.0	P/P	30 - 160
2208625	Primidone	67.0	71.4	P/P	30 - 160
2208625	Pyraclostrobin	79.9	77.8	P/P	30 - 160
2208625	Thiamethoxam	106	102	P/P	30 - 160
2208625	Tolfenpyrad	53.8	62.0	P/P	30 - 160
2208625	Triclopyr	49.4	51.4	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P390403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2208941	Acesulfame K	68.2	70.9	P/P	40 - 150
2208941	AMPA	63.2	59.0	P/P	40 - 150
2208941	Endothall	129	131	P/P	40 - 150
2208941	Glufosinate	88.5	93.7	P/P	40 - 150
2208941	Glyphosate	80.0	89.6	P/P	40 - 140
2208941	Sucralose	111	113	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P390503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209071	Fluoride	102	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P390551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2209050	Organic Carbon	104	106	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P390435

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209077	Turbidity	3.33	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P390518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209362	Barium	0.200	Spike	P	0 - 20
2209362	Calcium	2.19	Spike	P	0 - 20
2209362	Iron	2.35	Spike	P	0 - 20
2209362	Magnesium	1.49	Spike	P	0 - 20
2209362	Potassium	2.27	Spike	P	0 - 20
2209362	Sodium	0.381	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P390518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209362	Aluminum	4.52	Spike	P	0 - 20
2209362	Antimony	0.120	Spike	P	0 - 20
2209362	Arsenic	1.36	Spike	P	0 - 20
2209362	Beryllium	7.85	Spike	P	0 - 20
2209362	Boron	4.10	Spike	P	0 - 20
2209362	Cadmium	0.532	Spike	P	0 - 20
2209362	Chromium	2.26	Spike	P	0 - 20
2209362	Copper	5.09	Spike	P	0 - 20
2209362	Lead	1.27	Spike	P	0 - 20
2209362	Nickel	2.30	Spike	P	0 - 20
2209362	Selenium	0.0746	Spike	P	0 - 20
2209362	Silver	0.326	Spike	P	0 - 20
2209362	Thallium	1.27	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P390527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2208998	Chloride	0.402	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P390492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209072	Ammonia-N	4.28	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P390613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209051	Kjeldahl Nitrogen	4.76	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P390557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209031	NO2NO3-N	0.386	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P390621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209286	Total-P	1.25	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P390430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209290	O-Phosphate-P	1.49	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P390314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2208625	2,4-D	17.1	Spike	P	0 - 30
2208625	Acetaminophen	0.547	Spike	P	0 - 30
2208625	Acetamiprid	10.5	Spike	P	0 - 30
2208625	Afidopyropen	35.3	Spike	F	0 - 30
2208625	Bentazon	0.814	Spike	P	0 - 30
2208625	Benzovindiflupyr	15.3	Spike	P	0 - 30
2208625	Carbamazepine	7.32	Spike	P	0 - 30
2208625	Clothianidin	2.24	Spike	P	0 - 30
2208625	Dinotefuran	0.555	Spike	P	0 - 30
2208625	Diuron	3.00	Spike	P	0 - 30
2208625	Fenuron	3.38	Spike	P	0 - 30
2208625	Fluridone	4.94	Spike	P	0 - 30
2208625	Hydrocodone	14.9	Spike	P	0 - 30
2208625	Ibuprofen	39.3	Spike	F	0 - 30
2208625	Imazapyr	9.94	Spike	P	0 - 30
2208625	Imidacloprid	4.25	Spike	P	0 - 30
2208625	Linuron	0.121	Spike	P	0 - 30
2208625	Mandestrobin	5.03	Spike	P	0 - 30
2208625	MCPP	10.1	Spike	P	0 - 30
2208625	Naproxen	44.5	Spike	F	0 - 30
2208625	Primidone	6.46	Spike	P	0 - 30
2208625	Pyraclostrobin	2.70	Spike	P	0 - 30
2208625	Thiamethoxam	3.29	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P390314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2208625	Tolfenpyrad	14.3	Spike	P	0 - 30
2208625	Triclopyr	3.89	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P390403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2208941	Acesulfame K	3.92	Spike	P	0 - 30
2208941	AMPA	2.63	Spike	P	0 - 30
2208941	Endothall	1.34	Spike	P	0 - 30
2208941	Glufosinate	5.78	Spike	P	0 - 30
2208941	Glyphosate	5.45	Spike	P	0 - 30
2208941	Sucralose	1.33	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
 Batch ID: P390500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209071	Total Alkalinity	0.683	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P390772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209030	TDS	2.97	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P390503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209071	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P390551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2209050	Organic Carbon	1.63	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2209107
Field Sample ID: G3SD0166

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	46.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.6	P	30 - 160
EPA 8321B	Diuron-d6	74.2	P	30 - 160
EPA 8321B	Endothall-d6	141	P	40 - 160
EPA 8321B	Endothall-d6	141	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	89.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	89.2	P	40 - 160
EPA 8321B	Ibuprofen-d3	54.8	P	30 - 160
EPA 8321B	Primidone-d5	20.2	F	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Lab Sample ID: 2209108
Field Sample ID: G3SD0128

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	49.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.2	P	30 - 160
EPA 8321B	Diuron-d6	71.5	P	30 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Endothall-d6	125	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	40 - 160
EPA 8321B	Ibuprofen-d3	34.5	P	30 - 160
EPA 8321B	Primidone-d5	35.8	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160
EPA 8321B	Sucralose-d6	112	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102288

Included Lab Sample IDs: 2209084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	101	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A102289

Included Lab Sample IDs: 2209082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	104	106	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102290

Included Lab Sample IDs: 2209082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.0	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102298

Included Lab Sample IDs: 2209082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.7	99.3	P/P	90 - 110
Sulfate	99.1	99.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102299

Included Lab Sample IDs: 2209107, 2209108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.2	94.8	P/P	60 - 160
Glufosinate	109	105	P/P	60 - 160
Glyphosate	111	106	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A102300

Included Lab Sample IDs: 2209107, 2209108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	86.5	78.8	P/P	60 - 160
Endothall	111	106	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A102314

Included Lab Sample IDs: 2209107, 2209108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	87.5	P/P	50 - 150
Acetaminophen	112	99.7	P/P	60 - 160
Acetamiprid	126	130	P/P	50 - 150
Afidopyropen	109	114	P/P	50 - 150
Bentazon	92.4	88.0	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A102314

Included Lab Sample IDs: 2209107, 2209108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Benzovindiflupyr	119	140	P/P	50 - 160
Carbamazepine	114	120	P/P	60 - 150
Clothianidin	111	108	P/P	60 - 150
Dinotefuran	112	103	P/P	50 - 150
Diuron	125	129	P/P	60 - 160
Fenuron	108	110	P/P	60 - 150
Fluridone	109	104	P/P	60 - 160
Hydrocodone	100	103	P/P	60 - 150
Ibuprofen	70.4	74.8	P/P	50 - 160
Imazapyr	112	102	P/P	50 - 150
Imidacloprid	100	103	P/P	60 - 150
Linuron	112	99.9	P/P	60 - 150
Mandestrobin	117	112	P/P	50 - 150
MCP	100	92.4	P/P	50 - 150
Naproxen	87.8	102	P/P	50 - 160
Primidone	143	144	P/P	60 - 150
Pyraclostrobin	121	125	P/P	60 - 150
Thiamethoxam	130	125	P/P	50 - 150
Tolfenpyrad	141	143	P/P	60 - 150
Triclopyr	107	80.7	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102320

Included Lab Sample IDs: 2209083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	98.9	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A102325

Included Lab Sample IDs: 2209082

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	98.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A102325

Included Lab Sample IDs: 2209082

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

Reference Method: SM 5310 B-2011

Run ID: A102346

Included Lab Sample IDs: 2209083

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102349

Included Lab Sample IDs: 2209083

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A102357

Included Lab Sample IDs: 2209109

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	99.0	P/P	90 - 110
Calcium	100	102	P/P	90 - 110
Iron	101	104	P/P	90 - 110
Magnesium	100	102	P/P	90 - 110
Potassium	98.7	101	P/P	90 - 110
Sodium	100	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102377

Included Lab Sample IDs: 2209109

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.9	99.0	P/P	90 - 110
Antimony	96.4	96.3	P/P	90 - 110
Arsenic	98.9	97.5	P/P	90 - 110
Beryllium	105	91.2	P/P	90 - 110
Boron	99.5	104	P/P	90 - 110
Cadmium	99.1	98.6	P/P	90 - 110
Chromium	97.0	96.4	P/P	90 - 110
Copper	96.8	95.7	P/P	90 - 110
Lead	98.2	98.8	P/P	90 - 110
Nickel	97.7	97.2	P/P	90 - 110
Selenium	98.0	97.5	P/P	90 - 110
Silver	99.4	98.8	P/P	90 - 110
Thallium	99.1	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102387

Included Lab Sample IDs: 2209107, 2209108

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	97.9	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102391

Included Lab Sample IDs: 2209083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.3	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102393

Included Lab Sample IDs: 2209083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	103	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						3.33	
EPA 200.7 Rev. 4.4	Barium	104	101	102	101			0.200
	Calcium	106	103	104	102			2.19
	Iron	107	104	107	104			2.35
	Magnesium	107	104	105	103			1.49
	Potassium	102	101	104	101			2.27
	Sodium	107	101	106	105			0.381
EPA 200.8 Rev. 5.4	Aluminum	96.4	100	95.5	100			4.52
	Antimony	100	99.9	100	99.9			0.120
	Arsenic	101	101	100	98.6			1.36
	Beryllium	94.0	96.2	104	93.2			7.85
	Boron	96.4	101	96.2	105			4.10
	Cadmium	98.6	99.1	99.7	98.5			0.532
	Chromium	97.7	98.9	96.7	101			2.26
	Copper	98.6	101	107	100			5.09
	Lead	98.1	98.9	97.6	99.3			1.27
	Nickel	98.1	101	99.0	102			2.30
	Selenium	101	101	101	94.3			0.0746
	Silver	103	101	101	101			0.326
	Thallium	99.0	101	99.5	101			1.27
EPA 300.0 Rev. 2.1	Chloride	99.4	98.5	101			0.402	
	Sulfate	98.6	97.4	100				
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	97.2	91.6				4.28
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	95.0	102				4.76
EPA 353.2 Rev. 2.0	NO2NO3-N	100	98.5					0.386
EPA 365.1 Rev. 2.0	Total-P	105	104	106				1.25
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2	100	102				1.49
EPA 8321B	2,4-D	69.8	53.4	63.4				17.1
	Acesulfame K	82.4	68.2	70.9				3.92
	Acetaminophen	73.4	108	108				0.547
	Acetamiprid	84.3	82.1	73.8				10.5
	Afidopropen	40.1	56.7	39.7				35.3
	AMPA	104	63.2	59.0				2.63
	Bentazon	33.1	40.4	40.9				0.814
	Benzovindiflupyr	90.7	99.4	85.3				15.3
	Carbamazepine	71.7	82.2	75.9				7.32
	Clothianidin	89.2	78.6	80.3				2.24
	Dinotefuran	84.1	102	103				0.555
	Diuron	77.2	77.5	80.0				3.00
	Endothall	112	129	131				1.34
	Fenuron	92.3	94.1	97.3				3.38
	Fluridone	74.6	79.6	75.2				4.94
	Glufosinate	107	88.5	93.7				5.78
	Glyphosate	118	80.0	89.6				5.45
	Hydrocodone	99.9	92.0	107				14.9
	Ibuprofen	44.0	40.7	60.7				39.3
	Imazapyr	85.2	68.6	76.6				9.94
	Imidacloprid	70.9	81.0	77.2				4.25
	Linuron	69.1	74.2	74.1				0.121
	Mandestrobin	83.2	101	96.2				5.03
	MCPP	68.2	61.3	67.9				10.1
	Naproxen	45.1	91.1	58.0				44.5
	Primidone	104	67.0	71.4				6.46
	Pyraclostrobin	72.3	79.9	77.8				2.70

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	MS
					SMP	
EPA 8321B	Sucralose	107	111	113		1.33
	Thiamethoxam	97.0	106	102		3.29
	Tolfenpyrad	46.6	53.8	62.0		14.3
	Triclopyr	54.0	49.4	51.4		3.89
SM 2120 B-2011	Color (true)	105				
SM 2320 B-2011	Total Alkalinity	99.5			0.683	
SM 2540 C-2011	TDS				2.97	
SM 4500 F-C-2011	Fluoride	100	102	102		0.0
SM 5310 B-2011	Organic Carbon	101	104	106		1.63

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2209082
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2209109
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2209109
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2209082
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2209082
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2209083
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2209083
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2209083
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2209083
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2209084
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2209107, 2209108
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2209107, 2209108
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2209082
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2209082
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2209109
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2209082
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2209082
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2209082
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2209083

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	11/24/2020			11/24/2020 17:06	Yen Ta	2209082
EPA 200.7 Rev. 4.4	11/24/2020	11/30/2020 13:55	Elliott D. Healy	12/01/2020 16:16	Betina Topolski	2209109
EPA 200.8 Rev. 5.4	11/24/2020	11/30/2020 13:55	Elliott D. Healy	12/02/2020 17:37	Alexander Thompson	2209109
EPA 300.0 Rev. 2.1	11/24/2020			11/25/2020 18:35	Lipi Saha	2209082
EPA 350.1 Rev. 2.0	11/24/2020			11/28/2020 18:33	Ping Hua	2209083
EPA 351.2 Rev. 2.0	11/24/2020	12/02/2020 12:21	David Boose	12/03/2020 11:47	Elliott Rodriguez	2209083
EPA 353.2 Rev. 2.0	11/24/2020			12/01/2020 10:32	Beverly Y. Sanders	2209083
EPA 365.1 Rev. 2.0	11/24/2020	12/02/2020 16:51	Madeline Gruver	12/03/2020 11:46	Benjamin T. Nordmann	2209083
EPA 365.1 Rev. 2.0 dissolved	11/24/2020			11/24/2020 16:07	Blanca Fach	2209084
EPA 8321B	11/24/2020	11/24/2020 12:00	Rebecca Ware	11/24/2020 12:38	Rebecca Ware	2209107
	11/24/2020	11/24/2020 12:00	Rebecca Ware	11/24/2020 12:49	Rebecca Ware	2209108
	11/24/2020	11/24/2020 12:00	Rebecca Ware	11/24/2020 17:10	Rebecca Ware	2209107
	11/24/2020	11/24/2020 12:00	Rebecca Ware	11/24/2020 17:24	Rebecca Ware	2209108
	11/24/2020	11/24/2020 12:00	Rebecca Ware	12/01/2020 20:54	Rebecca Ware	2209107
	11/24/2020	11/24/2020 12:00	Rebecca Ware	12/01/2020 21:06	Rebecca Ware	2209108
	11/24/2020	11/24/2020 14:00	Hoor Shaik	11/26/2020 00:32	Mohammad Ghaffari	2209107
	11/24/2020	11/24/2020 14:00	Hoor Shaik	11/26/2020 01:07	Mohammad Ghaffari	2209108
SM 2120 B-2011	11/24/2020			11/24/2020 16:50	Benjamin T. Nordmann	2209082
SM 2320 B-2011	11/24/2020			11/25/2020 22:57	Dale L. Simmons	2209082
SM 2340B	11/24/2020			12/01/2020 16:16	Betina Topolski	2209109
SM 2540 C-2011	11/24/2020			11/25/2020 11:25	Yijie Li	2209082
SM 2540 D-2011	11/24/2020			11/25/2020 11:25	Yijie Li	2209082
SM 4500 F-C-2011	11/24/2020			11/25/2020 22:57	Dale L. Simmons	2209082
SM 5310 B-2011	11/24/2020			11/30/2020 17:07	Madeline Gruver	2209083