

Chemical Analysis Report

WAS-SECT-2020-07-20-01

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

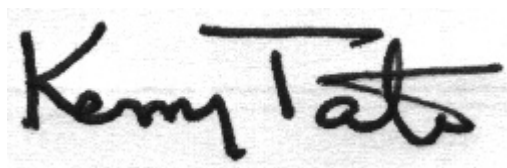
Event Description: **Wakulla BMAP**
Request ID: **RQ-2020-04-20-03**
Customer: **WAS-SECT**
Project ID: **BMAP**

Send Reports to:
FL Dept. of Environmental Protection
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Tallahassee, FL 32399
Attn: Curtis Musson

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 12-AUG-2020 11:29

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: 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: WAKULLA RIVER AT BOAT TRAM

Collection Date/Time: 07/20/2020 11:50

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184203	EPA 180.1 Rev. 2.0	Turbidity	0.45		NTU	P384970	
	EPA 300.0 Rev. 2.1	Chloride	8.9		mg Cl/L	P385200	
		Sulfate	10		mg SO4/L	P385204	
	SM 2120 B-2011	Color (true)	13		PCU	P384961	
	SM 2320 B-2011	Total Alkalinity	140		mg CaCO3/L	P385064	
	SM 2540 C-2011	TDS	178	A	mg/L	P385459	
	SM 2540 D-2011	TSS	2	IA	mg/L	P385465	
	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P385065	
2184204	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P384954	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.11	I	mg N/L	P384941	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.35		mg N/L	P384987	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P385038	
	SM 5310 B-2011	Organic Carbon	1.4		mg C/L	P385191	
2184205	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P384957	
2184209	EPA 8321B	2,4-D	0.0020	U	ug/L	P384835	
		Acesulfame K**	0.10	U	ug/L	P384932	
		AMPA**	0.10	U	ug/L	P384932	
		Sucralose**	0.051		ug/L	P384932	
		Acetaminophen**	0.0080	U	ug/L	P384835	
		Acetamiprid**	0.0020	U	ug/L	P384835	
		Endothall**	0.25	U	ug/L	P384932	
		Glufosinate**	0.10	U	ug/L	P384932	
		Glyphosate**	0.10	U	ug/L	P384932	
		Afidopyropen**	0.0020	U	ug/L	P384835	
		Bentazon	8.0E-04	U	ug/L	P384835	
		Benzovindiflupyr**	0.0020	U	ug/L	P384835	
		Carbamazepine**	8.0E-04	U	ug/L	P384835	
		Clothianidin**	0.0020	U	ug/L	P384835	
		Dinotefuran**	0.0020	U	ug/L	P384835	
		Diuron	0.0020	U	ug/L	P384835	
		Fenuron	0.016	U	ug/L	P384835	
		Fluridone**	8.0E-04	U	ug/L	P384835	
		Imazapyr**	0.0040	U	ug/L	P384835	
		Hydrocodone**	0.0020	U	ug/L	P384835	
		Ibuprofen**	0.020	U	ug/L	P384835	
		Imidacloprid	0.0020	U	ug/L	P384835	
		Linuron	0.0040	U	ug/L	P384835	
		Mandestrobin**	0.0020	U	ug/L	P384835	
		MCP	0.0020	U	ug/L	P384835	
		Naproxen**	0.0080	U	ug/L	P384835	
		Primidone**	0.0040	U	ug/L	P384835	
		Pyraclostrobin**	0.0020	U	ug/L	P384835	
		Thiamethoxam**	0.0020	U	ug/L	P384835	

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184209	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P384835	
		Triclopyr**	0.0040	U	ug/L	P384835	
2184210	EPA 200.7 Rev. 4.4	Barium	11.3		ug/L	P384950	
		Calcium	49.1		mg/L	P384950	
		Iron	30	U	ug/L	P384950	
		Magnesium	10.1		mg/L	P384950	
		Potassium	0.63	I	mg/L	P384950	
		Sodium	5.9		mg/L	P384950	
		Zinc	5.0	U	ug/L	P384950	
	EPA 200.8 Rev. 5.4	Aluminum	20	I	ug/L	P384950	
		Antimony	0.050	U	ug/L	P384950	
		Arsenic	0.63		ug/L	P384950	
		Boron**	16.9		ug/L	P384950	
		Cadmium	0.020	U	ug/L	P384950	
		Chromium	0.78	I	ug/L	P384950	
		Copper	0.40	U	ug/L	P384950	
		Lead	0.20	U	ug/L	P384950	
		Nickel	0.50	U	ug/L	P384950	
		Selenium	0.58	I	ug/L	P384950	
		Silver	0.010	U	ug/L	P384950	
		Thallium	0.10	U	ug/L	P384950	
	SM 2340B	Hardness	164		mg/L	P384950	
2184211	EPA 8270E	Acetochlor	0.24	U	ng/L	P384951	
		Alachlor	0.24	U	ng/L	P384951	
		Ametryn	0.58	U	ng/L	P384951	
		Atrazine	1.9		ng/L	P384951	
		Atrazine Desethyl	1.8	I	ng/L	P384951	
		Azinphos Methyl	1.9	U	ng/L	P384951	RPD
		Bromacil	0.48	U	ng/L	P384951	
		Butylate	0.39	U	ng/L	P384951	
		Carbophenothion	0.48	U	ng/L	P384951	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P384951	
		Chlorpyrifos Methyl	0.048	U	ng/L	P384951	
		Cyanazine	3.2	U	ng/L	P384951	
		Demeton	1.5	U	ng/L	P384951	
		Diazinon	0.12	U	ng/L	P384951	
		Dimethenamid**	0.097	U	ng/L	P384951	
		Disulfoton	0.48	U	ng/L	P384951	
		Dithiopyr**	0.097	U	ng/L	P384951	
		EPTC	1.2	U	ng/L	P384951	
		Ethion	0.15	U	ng/L	P384951	
		Ethoprop	0.097	U	ng/L	P384951	
		Fenamiphos	0.48	U	ng/L	P384951	
		Fipronil	0.24	U	ng/L	P384951	
		Fipronil Desulfinyl**	0.12	U	ng/L	P384951	

Field ID: 44059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2184211	EPA 8270E	Fipronil Sulfide	0.15	U	ng/L	P384951	LCS, MS
		Fipronil Sulfone	0.15	U	ng/L	P384951	
		Flumioxazin**	1.7	UJ	ng/L	P384951	
		Fonofos	0.19	U	ng/L	P384951	
		Hexazinone	1.1	I	ng/L	P384951	
		Imazalil**	0.73	U	ng/L	P384951	
		Malathion	0.34	U	ng/L	P384951	
		Metaxyl	0.73	U	ng/L	P384951	
		Metolachlor	0.48	U	ng/L	P384951	
		Metribuzin	3.2	U	ng/L	P384951	
		Mevinphos	0.48	U	ng/L	P384951	
		Molinate	0.29	U	ng/L	P384951	
		Naled**	1.5	U	ng/L	P384951	
		Norflurazon	0.48	U	ng/L	P384951	
		Oxadiazon	0.097	U	ng/L	P384951	
		Parathion Ethyl	0.24	U	ng/L	P384951	
		Parathion Methyl	0.53	U	ng/L	P384951	
		Pendimethalin	0.97	UJ	ng/L	P384951	LCS
		Phorate	0.24	U	ng/L	P384951	
		Prodiamine**	0.17	U	ng/L	P384951	
		Prometon	0.87	U	ng/L	P384951	
		Prometryn	0.19	U	ng/L	P384951	
		Pronamide**	0.15	U	ng/L	P384951	
		Propiconazole**	0.48	U	ng/L	P384951	
		Simazine	9.8		ng/L	P384951	
		Sulfentrazone**	0.48	U	ng/L	P384951	
		Tebuconazole**	0.48	U	ng/L	P384951	
		Terbufos	0.097	U	ng/L	P384951	
		Terbuthylazine	0.41	U	ng/L	P384951	

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 some analytes could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8270E: MS accuracy for metolachlor not assessed due to high content of this parameter in the sample spiked. 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: P384970

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P384950

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
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P384950

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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: P385200

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385204

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384954

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: P384941

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384987

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385038

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384957

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

Reference Method: EPA 8270E
Batch ID: P384951

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Flumioxazin	1.8	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P384951

Component	Result	Code	Units
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8321B

Batch ID: P384835

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P384835

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

Reference Method: EPA 8321B
Batch ID: P384932

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: P384961

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P385064

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

Reference Method: SM 2540 C-2011
Batch ID: P385459

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P385465

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P385065

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P385191

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: P384950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	103		P	85 - 115
Calcium	106		P	85 - 115
Iron	106		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	103		P	85 - 115
Sodium	104		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P384950

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.0		P	85 - 115
Antimony	96.5		P	85 - 115
Arsenic	98.5		P	85 - 115
Boron	104		P	85 - 115
Cadmium	95.9		P	85 - 115
Chromium	97.5		P	85 - 115
Copper	94.7		P	85 - 115
Lead	94.7		P	85 - 115
Nickel	93.7		P	85 - 115
Selenium	94.2		P	85 - 115
Silver	98.8		P	85 - 115
Thallium	96.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P385200

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P385204

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P384954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P384941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	107		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P384987

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: P385038

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P384957

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

Reference Method: EPA 8270E

Batch ID: P384951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	94.7	96.0	P/P	71 - 122
Alachlor	91.5	95.0	P/P	70 - 121
Ametryn	104	103	P/P	49 - 137
Atrazine	102	101	P/P	76 - 125
Atrazine Desethyl	93.8	94.6	P/P	31 - 144
Azinphos Methyl	122	119	P/P	67 - 150
Bromacil	93.4	94.4	P/P	36 - 121
Butylate	68.4	69.3	P/P	33 - 88.0
Carbophenothion	85.0	88.1	P/P	50 - 150
Chlorpyrifos Ethyl	86.5	89.2	P/P	73 - 117
Chlorpyrifos Methyl	88.7	92.0	P/P	68 - 121
Cyanazine	114	113	P/P	20 - 250
Demeton	80.4	84.6	P/P	30 - 123
Diazinon	101	102	P/P	70 - 128
Dimethenamid	94.2	96.4	P/P	66 - 122
Disulfoton	82.3	85.4	P/P	46 - 124
Dithiopyr	91.2	94.8	P/P	69 - 122
EPTC	67.0	68.8	P/P	31 - 90.0
Ethion	50.9	51.0	P/P	45 - 135
Ethoprop	94.8	97.9	P/P	59 - 118
Fenamiphos	85.5	88.8	P/P	30 - 136
Fipronil	98.7	100	P/P	57 - 127
Fipronil Desulfinyl	100	101	P/P	51 - 122
Fipronil Sulfide	82.2	86.2	P/P	57 - 119
Fipronil Sulfone	72.2	75.7	P/P	51 - 119
Flumioxazin	230	229	F/F	70 - 200
Fonofos	88.3	91.6	P/P	60 - 120
Hexazinone	89.3	94.0	P/P	57 - 142
Imazalil	68.2	67.9	P/P	50 - 150
Malathion	99.8	102	P/P	67 - 128
Metaxyl	93.4	94.3	P/P	21 - 148
Metolachlor	86.8	87.3	P/P	70 - 120
Metribuzin	129	130	P/P	20 - 253
Mevinphos	86.7	85.2	P/P	47 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P384951

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	78.3	79.0	P/P	41 - 99.0
Naled	61.4	63.1	P/P	40 - 130
Norflurazon	88.6	87.7	P/P	54 - 127
Oxadiazon	88.4	89.0	P/P	65 - 122
Parathion Ethyl	93.6	93.3	P/P	71 - 113
Parathion Methyl	116	116	P/P	73 - 129
Pendimethalin	56.9	56.6	F/F	63 - 130
Phorate	86.9	88.1	P/P	48 - 118
Prodiamine	58.3	53.3	P/P	20 - 144
Prometon	92.9	96.7	P/P	53 - 120
Prometryn	101	103	P/P	63 - 119
Pronamide	105	105	P/P	50 - 150
Propiconazole	87.6	87.7	P/P	50 - 150
Simazine	99.2	102	P/P	77 - 129
Sulfentrazone	82.6	79.5	P/P	50 - 150
Tebuconazole	24.0	21.0	P/P	20 - 118
Terbufos	97.3	101	P/P	61 - 119
Terbutylazine	93.3	94.2	P/P	75 - 119

Reference Method: EPA 8321B

Batch ID: P384835

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P384932

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	76.1		P	40 - 150
AMPA	83.8		P	40 - 150
Endothall	101		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	92.3		P	40 - 140
Sucralose	93.6		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P384961

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-2011

Batch ID: P385064

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

Reference Method: SM 4500 F-C-2011

Batch ID: P385065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	90 - 106

Reference Method: SM 5310 B-2011

Batch ID: P385191

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P384950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184210	Barium	101	104	P/P	80 - 120
2184210	Calcium	99.1		P	80 - 120
2184210	Iron	108	107	P/P	80 - 120
2184210	Magnesium	99.7		P	80 - 120
2184210	Potassium	105	106	P/P	80 - 120
2184210	Sodium	101		P	80 - 120
2184210	Zinc	100	103	P/P	80 - 120
2184243	Barium	106		P	80 - 120
2184243	Calcium	104		P	80 - 120
2184243	Iron	113		P	80 - 120
2184243	Magnesium	102		P	80 - 120
2184243	Potassium	111		P	80 - 120
2184243	Sodium	113		P	80 - 120
2184243	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P384950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184210	Aluminum	95.6	96.8	P/P	80 - 120
2184210	Antimony	99.4	101	P/P	80 - 120
2184210	Arsenic	99.6	101	P/P	80 - 120
2184210	Boron	101	102	P/P	80 - 120
2184210	Cadmium	102	104	P/P	80 - 120
2184210	Chromium	99.7	100	P/P	80 - 120
2184210	Copper	93.8	95.4	P/P	80 - 120
2184210	Lead	96.4	96.1	P/P	80 - 120
2184210	Nickel	93.4	95.2	P/P	80 - 120
2184210	Selenium	93.7	98.4	P/P	80 - 120
2184210	Silver	99.7	101	P/P	80 - 120
2184210	Thallium	101	101	P/P	80 - 120
2184243	Aluminum	97.8		P	80 - 120
2184243	Antimony	102		P	80 - 120
2184243	Arsenic	103		P	80 - 120
2184243	Boron	105		P	80 - 120
2184243	Cadmium	102		P	80 - 120
2184243	Chromium	101		P	80 - 120
2184243	Copper	95.2		P	80 - 120
2184243	Lead	98.2		P	80 - 120
2184243	Nickel	94.9		P	80 - 120
2184243	Selenium	98.5		P	80 - 120
2184243	Silver	101		P	80 - 120
2184243	Thallium	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P385200

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184164	Chloride	102		P	90 - 110
2184223	Chloride	102		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184164	Sulfate	99.7		P	90 - 110
2184223	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184159	Ammonia-N	94.2	94.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184204	Kjeldahl Nitrogen	101	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384987

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184177	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P385038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184165	Total-P	108	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384957

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184166	O-Phosphate-P	98.4	98.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P384951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184193	Acetochlor	98.8	90.7	P/P	68 - 126
2184193	Alachlor	88.5	78.4	P/P	66 - 125
2184193	Ametryn	107	124	P/P	31 - 182
2184193	Atrazine	110	99.9	P/P	68 - 137
2184193	Atrazine Desethyl	102	79.5	P/P	13 - 161
2184193	Azinphos Methyl	73.0	123	P/P	54 - 162
2184193	Bromacil	94.4	84.2	P/P	34 - 144
2184193	Butylate	64.7	58.7	P/P	16 - 92.0
2184193	Carbophenothion	82.9	72.8	P/P	50 - 150
2184193	Chlorpyrifos Ethyl	82.8	79.1	P/P	63 - 124
2184193	Chlorpyrifos Methyl	89.3	77.9	P/P	64 - 125
2184193	Cyanazine	88.4	84.2	P/P	13 - 245
2184193	Demeton	93.1	87.0	P/P	20 - 154
2184193	Diazinon	108	98.9	P/P	66 - 141
2184193	Dimethenamid	77.1	71.9	P/P	50 - 130

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P384951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184193	Disulfoton	89.6	81.0	P/P	55 - 130
2184193	Dithiopyr	87.6	81.2	P/P	66 - 122
2184193	EPTC	59.3	53.7	P/P	15 - 93.0
2184193	Ethion	17.2	15.6	P/P	15 - 148
2184193	Ethoprop	113	107	P/P	59 - 126
2184193	Fenamiphos	65.6	59.2	P/P	39 - 137
2184193	Fipronil	94.0	86.6	P/P	47 - 131
2184193	Fipronil Desulfinyl	94.6	84.5	P/P	43 - 121
2184193	Fipronil Sulfide	81.0	73.0	P/P	29 - 134
2184193	Fipronil Sulfone	73.6	65.1	P/P	19 - 131
2184193	Flumioxazin	210	196	F/P	70 - 200
2184193	Fonofos	101	91.7	P/P	62 - 128
2184193	Hexazinone	104	100	P/P	58 - 154
2184193	Imazalil	81.3	73.1	P/P	50 - 150
2184193	Malathion	101	91.9	P/P	54 - 135
2184193	Metalaxyl	95.8	84.9	P/P	46 - 136
2184193	Metribuzin	136	124	P/P	44 - 277
2184193	Mevinphos	105	102	P/P	44 - 135
2184193	Molinate	81.8	74.0	P/P	31 - 104
2184193	Naled	65.5	60.3	P/P	40 - 130
2184193	Norflurazon	82.8	75.6	P/P	32 - 134
2184193	Oxadiazon	80.8	74.0	P/P	55 - 123
2184193	Parathion Ethyl	99.4	92.8	P/P	67 - 120
2184193	Parathion Methyl	128	118	P/P	70 - 140
2184193	Pendimethalin	73.1	65.7	P/P	59 - 145
2184193	Phorate	111	102	P/P	52 - 127
2184193	Prodiamine	96.4	87.3	P/P	11 - 157
2184193	Prometon	93.7	85.0	P/P	55 - 130
2184193	Prometryn	106	95.2	P/P	55 - 127
2184193	Pronamide	108	103	P/P	50 - 150
2184193	Propiconazole	84.5	72.2	P/P	50 - 150
2184193	Simazine	103	103	P/P	58 - 159
2184193	Sulfentrazone	72.2	64.4	P/P	50 - 150
2184193	Tebuconazole	10.7	10.1	P/P	10 - 122
2184193	Terbufos	115	108	P/P	65 - 131
2184193	Terbutylazine	98.9	90.7	P/P	63 - 131

Reference Method: EPA 8321B

Batch ID: P384835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183089	Acetaminophen	93.3	85.9	P/P	30 - 160
2183089	Acetamiprid	73.3	69.5	P/P	30 - 160
2183089	Afidopyropen	63.4	57.7	P/P	30 - 160
2183089	Benzovindiflupyr	58.9	56.6	P/P	30 - 160
2183089	Carbamazepine	50.1	50.3	P/P	30 - 160
2183089	Clothianidin	76.7	74.8	P/P	30 - 160
2183089	Dinotefuran	96.0	91.4	P/P	30 - 160
2183089	Diuron	38.5	36.6	P/P	30 - 160
2183089	Fenuron	82.7	80.5	P/P	30 - 160
2183089	Fluridone	88.1	80.1	P/P	30 - 160
2183089	Hydrocodone	71.3	66.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P384835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2183089	Ibuprofen	65.5	62.7	P/P	30 - 160
2183089	Imidacloprid	127	127	P/P	30 - 160
2183089	Linuron	50.4	52.2	P/P	30 - 160
2183089	Mandestrobin	70.9	66.5	P/P	30 - 160
2183089	MCPP	122	122	P/P	30 - 160
2183089	Naproxen	76.0	61.5	P/P	30 - 160
2183089	Primidone	88.2	79.7	P/P	30 - 160
2183089	Pyraclostrobin	70.6	70.4	P/P	30 - 160
2183089	Thiamethoxam	101	103	P/P	30 - 160
2183089	Tolfenpyrad	47.2	44.5	P/P	30 - 160
2183089	Triclopyr	97.1	97.1	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P384932

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184190	Acesulfame K	88.9	92.0	P/P	40 - 150
2184190	AMPA	81.0	84.2	P/P	40 - 150
2184190	Endothall	100	102	P/P	40 - 150
2184190	Glufosinate	93.4	95.4	P/P	40 - 150
2184190	Glyphosate	77.5	76.4	P/P	40 - 140
2184190	Sucralose	97.4	97.4	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P385065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184214	Fluoride	98.6	98.6	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P385191

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2184227	Organic Carbon	94.0	97.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184176	Turbidity	1.31	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P384950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184210	Barium	2.79	Spike	P	0 - 20
2184210	Calcium	0.534	Spike	P	0 - 20
2184210	Iron	1.17	Spike	P	0 - 20
2184210	Magnesium	1.05	Spike	P	0 - 20
2184210	Potassium	0.726	Spike	P	0 - 20
2184210	Sodium	3.01	Spike	P	0 - 20
2184210	Zinc	2.67	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P384950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184210	Aluminum	1.20	Spike	P	0 - 20
2184210	Antimony	1.65	Spike	P	0 - 20
2184210	Arsenic	1.70	Spike	P	0 - 20
2184210	Boron	0.790	Spike	P	0 - 20
2184210	Cadmium	2.00	Spike	P	0 - 20
2184210	Chromium	0.748	Spike	P	0 - 20
2184210	Copper	1.64	Spike	P	0 - 20
2184210	Lead	0.349	Spike	P	0 - 20
2184210	Nickel	1.91	Spike	P	0 - 20
2184210	Selenium	4.85	Spike	P	0 - 20
2184210	Silver	1.09	Spike	P	0 - 20
2184210	Thallium	0.508	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385200

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184223	Chloride	0.480	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P385204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184223	Sulfate	0.422	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P384954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184159	Ammonia-N	0.386	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P384941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184204	Kjeldahl Nitrogen	5.08	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P384987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184177	NO2NO3-N	0.297	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P385038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184165	Total-P	0.0672	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P384957

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184166	O-Phosphate-P	0.388	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P384951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184193	Acetochlor	8.52	Spike	P	0 - 30
2184193	Alachlor	9.42	Spike	P	0 - 30
2184193	Ametryn	14.3	Spike	P	0 - 30
2184193	Atrazine	9.19	Spike	P	0 - 30
2184193	Atrazine Desethyl	24.6	Spike	P	0 - 30
2184193	Azinphos Methyl	51.2	Spike	F	0 - 30
2184193	Bromacil	11.4	Spike	P	0 - 30
2184193	Butylate	9.63	Spike	P	0 - 30
2184193	Carbophenothion	13.0	Spike	P	0 - 30
2184193	Chlorpyrifos Ethyl	4.63	Spike	P	0 - 30
2184193	Chlorpyrifos Methyl	13.6	Spike	P	0 - 30
2184193	Cyanazine	4.90	Spike	P	0 - 30
2184193	Demeton	6.69	Spike	P	0 - 30
2184193	Diazinon	9.14	Spike	P	0 - 30
2184193	Dimethenamid	7.01	Spike	P	0 - 30
2184193	Disulfoton	10.0	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P384951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184193	Dithiopyr	7.56	Spike	P	0 - 30
2184193	EPTC	9.91	Spike	P	0 - 30
2184193	Ethion	10.2	Spike	P	0 - 30
2184193	Ethoprop	5.40	Spike	P	0 - 30
2184193	Fenamiphos	10.2	Spike	P	0 - 30
2184193	Fipronil	8.23	Spike	P	0 - 30
2184193	Fipronil Desulfinyl	11.4	Spike	P	0 - 30
2184193	Fipronil Sulfide	10.3	Spike	P	0 - 30
2184193	Fipronil Sulfone	12.3	Spike	P	0 - 30
2184193	Flumioxazin	7.09	Spike	P	0 - 30
2184193	Fonofos	9.17	Spike	P	0 - 30
2184193	Hexazinone	3.51	Spike	P	0 - 30
2184193	Imazalil	10.6	Spike	P	0 - 30
2184193	Malathion	9.71	Spike	P	0 - 30
2184193	Metalaxyl	12.0	Spike	P	0 - 30
2184193	Metolachlor	7.56	Spike	P	0 - 30
2184193	Metribuzin	8.91	Spike	P	0 - 30
2184193	Mevinphos	3.51	Spike	P	0 - 30
2184193	Molinate	9.97	Spike	P	0 - 30
2184193	Naled	8.28	Spike	P	0 - 30
2184193	Norflurazon	9.12	Spike	P	0 - 30
2184193	Oxadiazon	8.86	Spike	P	0 - 30
2184193	Parathion Ethyl	6.83	Spike	P	0 - 30
2184193	Parathion Methyl	7.83	Spike	P	0 - 30
2184193	Pendimethalin	10.5	Spike	P	0 - 30
2184193	Phorate	7.98	Spike	P	0 - 30
2184193	Prodiamine	9.97	Spike	P	0 - 30
2184193	Prometon	9.65	Spike	P	0 - 30
2184193	Prometryn	10.5	Spike	P	0 - 30
2184193	Pronamide	4.29	Spike	P	0 - 30
2184193	Propiconazole	12.8	Spike	P	0 - 30
2184193	Simazine	0.553	Spike	P	0 - 30
2184193	Sulfentrazone	11.4	Spike	P	0 - 30
2184193	Tebuconazole	6.23	Spike	P	0 - 30
2184193	Terbufos	6.66	Spike	P	0 - 30
2184193	Terbuthylazine	8.63	Spike	P	0 - 30
LFB	Acetochlor	1.43	LCS	P	0 - 30
LFB	Alachlor	3.77	LCS	P	0 - 30
LFB	Ametryn	0.327	LCS	P	0 - 30
LFB	Atrazine	0.624	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.898	LCS	P	0 - 30
LFB	Azinphos Methyl	2.70	LCS	P	0 - 30
LFB	Bromacil	1.11	LCS	P	0 - 30
LFB	Butylate	1.39	LCS	P	0 - 30
LFB	Carbophenothion	3.67	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.08	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	3.71	LCS	P	0 - 30
LFB	Cyanazine	0.277	LCS	P	0 - 30
LFB	Demeton	5.08	LCS	P	0 - 30
LFB	Diazinon	0.970	LCS	P	0 - 30
LFB	Dimethenamid	2.31	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P384951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Disulfoton	3.76	LCS	P	0 - 30
LFB	Dithiopyr	3.85	LCS	P	0 - 30
LFB	EPTC	2.62	LCS	P	0 - 30
LFB	Ethion	0.231	LCS	P	0 - 30
LFB	Ethoprop	3.18	LCS	P	0 - 30
LFB	Fenamiphos	3.87	LCS	P	0 - 30
LFB	Fipronil	1.76	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	0.476	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.81	LCS	P	0 - 30
LFB	Fipronil Sulfone	4.67	LCS	P	0 - 30
LFB	Flumioxazin	0.0955	LCS	P	0 - 30
LFB	Fonofos	3.62	LCS	P	0 - 30
LFB	Hexazinone	5.14	LCS	P	0 - 30
LFB	Imazalil	0.460	LCS	P	0 - 30
LFB	Malathion	2.20	LCS	P	0 - 30
LFB	Metalaxyl	1.02	LCS	P	0 - 30
LFB	Metolachlor	0.548	LCS	P	0 - 30
LFB	Metribuzin	0.446	LCS	P	0 - 30
LFB	Mevinphos	1.82	LCS	P	0 - 30
LFB	Molinate	0.795	LCS	P	0 - 30
LFB	Naled	2.71	LCS	P	0 - 30
LFB	Norflurazon	0.943	LCS	P	0 - 30
LFB	Oxadiazon	0.646	LCS	P	0 - 30
LFB	Parathion Ethyl	0.277	LCS	P	0 - 30
LFB	Parathion Methyl	0.263	LCS	P	0 - 30
LFB	Pendimethalin	0.489	LCS	P	0 - 30
LFB	Phorate	1.43	LCS	P	0 - 30
LFB	Prodiamine	8.88	LCS	P	0 - 30
LFB	Prometon	4.00	LCS	P	0 - 30
LFB	Prometryn	1.91	LCS	P	0 - 30
LFB	Pronamide	0.0334	LCS	P	0 - 30
LFB	Propiconazole	0.0877	LCS	P	0 - 30
LFB	Simazine	2.83	LCS	P	0 - 30
LFB	Sulfentrazone	3.76	LCS	P	0 - 30
LFB	Tebuconazole	13.1	LCS	P	0 - 30
LFB	Terbufos	3.45	LCS	P	0 - 30
LFB	Terbutylazine	1.02	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P384835

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

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P384835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2183089	Dinotefuran	4.88	Spike	P	0 - 30
2183089	Diuron	4.00	Spike	P	0 - 30
2183089	Fenuron	2.69	Spike	P	0 - 30
2183089	Fluridone	7.74	Spike	P	0 - 30
2183089	Hydrocodone	7.24	Spike	P	0 - 30
2183089	Ibuprofen	4.32	Spike	P	0 - 30
2183089	Imazapyr	5.38	Spike	P	0 - 30
2183089	Imidacloprid	0.128	Spike	P	0 - 30
2183089	Linuron	3.57	Spike	P	0 - 30
2183089	Mandestrobin	6.38	Spike	P	0 - 30
2183089	MCP	0.692	Spike	P	0 - 30
2183089	Naproxen	21.1	Spike	P	0 - 30
2183089	Primidone	10.1	Spike	P	0 - 30
2183089	Pyraclostrobin	0.318	Spike	P	0 - 30
2183089	Thiamethoxam	1.10	Spike	P	0 - 30
2183089	Tolfenpyrad	5.84	Spike	P	0 - 30
2183089	Triclopyr	0.00865	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P384932

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184190	Acesulfame K	3.50	Spike	P	0 - 30
2184190	AMPA	3.95	Spike	P	0 - 30
2184190	Endothall	1.38	Spike	P	0 - 30
2184190	Glufosinate	2.11	Spike	P	0 - 30
2184190	Glyphosate	1.44	Spike	P	0 - 30
2184190	Sucralose	0.0632	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P384961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184164	Color (true)	1.55	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P385064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184214	Total Alkalinity	0.244	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011

Batch ID: P385459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184203	TDS	3.94	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P385065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184214	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P385191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2184227	Organic Carbon	2.11	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2184209

Field Sample ID: 44059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	127	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.1	P	30 - 160
EPA 8321B	Diuron-d6	65.5	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	106	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.9	P	30 - 160
EPA 8321B	Primidone-d5	79.0	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2184211

Field Sample ID: 44059

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	109	P	72 - 135
EPA 8270E	Terbufos-d10	100	P	57 - 134

Quality Assurance Report

Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A100010

Included Lab Sample IDs: 2184204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A100012

Included Lab Sample IDs: 2184209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	83.9	90.0	P/P	60 - 160
Glufosinate	101	109	P/P	60 - 160
Glyphosate	93.1	97.0	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A100025

Included Lab Sample IDs: 2184209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	80.3	79.0	P/P	60 - 160
Endothall	102	106	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A100028

Included Lab Sample IDs: 2184210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.6	97.9	P/P	90 - 110
Antimony	97.5	96.3	P/P	90 - 110
Arsenic	97.9	98.9	P/P	90 - 110
Boron	101	101	P/P	90 - 110
Cadmium	99.1	98.5	P/P	90 - 110
Chromium	96.1	94.9	P/P	90 - 110
Copper	94.0	93.4	P/P	90 - 110
Lead	95.7	95.0	P/P	90 - 110
Nickel	94.4	92.6	P/P	90 - 110
Selenium	98.7	101	P/P	90 - 110
Silver	96.4	96.2	P/P	90 - 110
Thallium	94.1	95.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A100030

Included Lab Sample IDs: 2184210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	100	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Iron	104	105	P/P	90 - 110
Magnesium	104	103	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Zinc	104	99.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A100041

Included Lab Sample IDs: 2184203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	98.1	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A100041

Included Lab Sample IDs: 2184203

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A100044

Included Lab Sample IDs: 2184204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A100083

Included Lab Sample IDs: 2184204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	98.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A100098

Included Lab Sample IDs: 2184204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.6	95.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A100104

Included Lab Sample IDs: 2184203

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

Reference Method: EPA 8321B

Run ID: A100141

Included Lab Sample IDs: 2184209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	91.8	89.1	P/P	60 - 160

Reference Method: EPA 8270E

Run ID: A100317

Included Lab Sample IDs: 2184211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.5		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A100317

Included Lab Sample IDs: 2184211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alachlor	98.4		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	97.8		P	80 - 120
Atrazine Desethyl	98.4		P	80 - 120
Azinphos Methyl	96.6		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	100		P	80 - 120
Carbophenothion	99.3		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	98.6		P	80 - 120
Cyanazine	94.4		P	80 - 120
Demeton	100		P	80 - 120
Diazinon	92.6		P	80 - 120
Dimethenamid	98.4		P	80 - 120
Disulfoton	93.4		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	99.1		P	80 - 120
Ethion	101		P	80 - 120
Ethoprop	97.9		P	80 - 120
Fenamiphos	101		P	80 - 120
Fipronil	98.2		P	80 - 120
Fipronil Desulfinyl	103		P	80 - 120
Fipronil Sulfide	104		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Flumioxazin	91.3		P	80 - 120
Fonofos	96.7		P	80 - 120
Hexazinone	98.6		P	80 - 120
Imazalil	120		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	97.2		P	80 - 120
Metribuzin	99.8		P	80 - 120
Mevinphos	97.2		P	80 - 120
Molinate	101		P	80 - 120
Naled	113		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	101		P	80 - 120
Parathion Ethyl	98.8		P	80 - 120
Parathion Methyl	93.2		P	80 - 120
Pendimethalin	106		P	80 - 120
Phorate	97.7		P	80 - 120
Prodiamine	95.1		P	80 - 120
Prometon	99.5		P	80 - 120
Prometryn	101		P	80 - 120
Pronamide	97.0		P	80 - 120
Propiconazole	103		P	80 - 120
Simazine	106		P	80 - 120
Sulfentrazone	98.0		P	80 - 120
Tebuconazole	98.9		P	80 - 120
Terbufos	94.6		P	80 - 120
Terbutylazine	99.6		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8321B

Run ID: A99981

Included Lab Sample IDs: 2184209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	112	112	P/P	50 - 150
Acetaminophen	117	101	P/P	60 - 160
Acetamiprid	117	115	P/P	50 - 150
Afidopyropen	120	116	P/P	50 - 150
Bentazon	125	127	P/P	50 - 160
Benzovindiflupyr	118	117	P/P	50 - 150
Carbamazepine	112	109	P/P	60 - 150
Clothianidin	97.2	101	P/P	60 - 150
Dinotefuran	89.9	94.9	P/P	50 - 150
Diuron	114	115	P/P	60 - 160
Fenuron	111	110	P/P	60 - 150
Fluridone	126	125	P/P	60 - 160
Hydrocodone	105	111	P/P	60 - 150
Ibuprofen	115	80.1	P/P	50 - 160
Imazapyr	126	108	P/P	50 - 150
Imidacloprid	89.6	87.2	P/P	60 - 150
Linuron	121	133	P/P	60 - 150
Mandestrobin	123	118	P/P	50 - 150
MCPP	110	112	P/P	50 - 150
Naproxen	111	96.5	P/P	50 - 160
Primidone	93.9	94.6	P/P	60 - 150
Pyraclostrobin	123	124	P/P	60 - 150
Thiamethoxam	89.0	74.7	P/P	50 - 150
Tolfenpyrad	116	118	P/P	60 - 150
Triclopyr	103	102	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99993

Included Lab Sample IDs: 2184204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	98.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99994

Included Lab Sample IDs: 2184205

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	98.6	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A99995

Included Lab Sample IDs: 2184203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	90 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99997

Included Lab Sample IDs: 2184203

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

* 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							1.31	
EPA 200.7 Rev. 4.4	Barium	103		101	104	106			2.79
	Calcium	106		99.1	104				0.534
	Iron	106		108	107	113			1.17
	Magnesium	104		99.7	102				1.05
	Potassium	103		105	106	111			0.726
	Sodium	104		101	113				3.01
	Zinc	103		100	103	105			2.67
EPA 200.8 Rev. 5.4	Aluminum	95.0		95.6	96.8	97.8			1.20
	Antimony	96.5		99.4	101	102			1.65
	Arsenic	98.5		99.6	101	103			1.70
	Boron	104		101	102	105			0.790
	Cadmium	95.9		102	104	102			2.00
	Chromium	97.5		99.7	100	101			0.748
	Copper	94.7		93.8	95.4	95.2			1.64
	Lead	94.7		96.4	96.1	98.2			0.349
	Nickel	93.7		93.4	95.2	94.9			1.91
	Selenium	94.2		93.7	98.4	98.5			4.85
	Silver	98.8		99.7	101	101			1.09
	Thallium	96.2		101	101	103			0.508
EPA 300.0 Rev. 2.1	Chloride	98.7		102	102			0.480	
	Sulfate	97.9		101	99.7			0.422	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8		94.2	94.6				0.386
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		101	95.8				5.08
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		99.5	99.0				0.297
EPA 365.1 Rev. 2.0	Total-P	104		108	108				0.0672
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.2		98.4	98.8				0.388
EPA 8270E	Acetochlor	94.7	96.0	98.8	90.7		1.43		8.52
	Alachlor	91.5	95.0	78.4	88.5		3.77		9.42
	Ametryn	104	103	124	107		0.327		14.3
	Atrazine	102	101	99.9	110		0.624		9.19
	Atrazine Desethyl	93.8	94.6	79.5	102		0.898		24.6
	Azinphos Methyl	122	119	123	73.0		2.70		51.2
	Bromacil	93.4	94.4	84.2	94.4		1.11		11.4
	Butylate	68.4	69.3	58.7	64.7		1.39		9.63
	Carbophenothion	85.0	88.1	72.8	82.9		3.67		13.0
	Chlorpyrifos Ethyl	86.5	89.2	82.8	79.1		3.08		4.63
	Chlorpyrifos Methyl	88.7	92.0	89.3	77.9		3.71		13.6
	Cyanazine	114	113	84.2	88.4		0.277		4.90
	Demeton	80.4	84.6	87.0	93.1		5.08		6.69
	Diazinon	101	102	98.9	108		0.970		9.14
	Dimethenamid	94.2	96.4	71.9	77.1		2.31		7.01
	Disulfoton	82.3	85.4	81.0	89.6		3.76		10.0
	Dithiopyr	91.2	94.8	81.2	87.6		3.85		7.56
	EPTC	67.0	68.8	53.7	59.3		2.62		9.91
	Ethion	50.9	51.0	15.6	17.2		0.231		10.2
	Ethoprop	94.8	97.9	107	113		3.18		5.40
	Fenamiphos	85.5	88.8	59.2	65.6		3.87		10.2
	Fipronil	98.7	100	86.6	94.0		1.76		8.23
	Fipronil Desulfanyl	100	101	84.5	94.6		0.476		11.4
	Fipronil Sulfide	82.2	86.2	73.0	81.0		4.81		10.3
	Fipronil Sulfone	72.2	75.7	65.1	73.6		4.67		12.3
	Flumioxazin	230	229	196	210		0.0955		7.09
	Fonofos	88.3	91.6	91.7	101		3.62		9.17

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Hexazinone	89.3	94.0	100	104	5.14		3.51
	Imazalil	68.2	67.9	73.1	81.3	0.460		10.6
	Malathion	99.8	102	91.9	101	2.20		9.71
	Metalaxyl	93.4	94.3	95.8	84.9	1.02		12.0
	Metolachlor	86.8	87.3			0.548		7.56
	Metribuzin	129	130	124	136	0.446		8.91
	Mevinphos	86.7	85.2	102	105	1.82		3.51
	Molinate	78.3	79.0	74.0	81.8	0.795		9.97
	Naled	61.4	63.1	60.3	65.5	2.71		8.28
	Norflurazon	88.6	87.7	75.6	82.8	0.943		9.12
	Oxadiazon	88.4	89.0	74.0	80.8	0.646		8.86
	Parathion Ethyl	93.6	93.3	92.8	99.4	0.277		6.83
	Parathion Methyl	116	116	118	128	0.263		7.83
	Pendimethalin	56.9	56.6	65.7	73.1	0.489		10.5
	Phorate	86.9	88.1	102	111	1.43		7.98
	Prodiamine	58.3	53.3	87.3	96.4	8.88		9.97
	Prometon	92.9	96.7	85.0	93.7	4.00		9.65
	Prometryn	101	103	95.2	106	1.91		10.5
	Pronamide	105	105	103	108	0.0334		4.29
	Propiconazole	87.6	87.7	72.2	84.5	0.0877		12.8
	Simazine	99.2	102	103	103	2.83		0.553
	Sulfentrazone	82.6	79.5	64.4	72.2	3.76		11.4
	Tebuconazole	24.0	21.0	10.1	10.7	13.1		6.23
	Terbufos	97.3	101	108	115	3.45		6.66
	Terbutylazine	93.3	94.2	90.7	98.9	1.02		8.63
EPA 8321B	2,4-D	115						1.80
	Acesulfame K	76.1		88.9	92.0			3.50
	Acetaminophen	79.1		93.3	85.9			8.22
	Acetamiprid	78.6		73.3	69.5			5.27
	Afidopyropen	65.2		63.4	57.7			9.29
	AMPA	83.8		81.0	84.2			3.95
	Bentazon	62.6						0.870
	Benzovindiflupyr	69.9		58.9	56.6			4.00
	Carbamazepine	66.9		50.1	50.3			0.389
	Clothianidin	76.8		76.7	74.8			2.55
	Dinotefuran	86.6		96.0	91.4			4.88
	Diuron	58.2		38.5	36.6			4.00
	Endothall	101		100	102			1.38
	Fenuron	101		82.7	80.5			2.69
	Fluridone	90.5		88.1	80.1			7.74
	Glufosinate	105		93.4	95.4			2.11
	Glyphosate	92.3		77.5	76.4			1.44
	Hydrocodone	82.3		71.3	66.3			7.24
	Ibuprofen	79.6		65.5	62.7			4.32
	Imazapyr	100						5.38
	Imidacloprid	97.6		127	127			0.128
	Linuron	67.0		50.4	52.2			3.57
	Mandestrobin	75.5		70.9	66.5			6.38
	MCPP	129		122	122			0.692
	Naproxen	69.1		76.0	61.5			21.1
	Primidone	77.2		88.2	79.7			10.1
	Pyraclostrobin	74.1		70.6	70.4			0.318
	Sucralose	93.6		97.4	97.4			0.0632
	Thiamethoxam	93.7		101	103			1.10

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 8321B	Tolfenpyrad	54.2	47.2 44.5			5.84
	Triclopyr	95.7	97.1 97.1			0.0086
SM 2120 B-2011	Color (true)	102			1.55	
SM 2320 B-2011	Total Alkalinity	100			0.244	
SM 2540 C-2011	TDS				3.94	
SM 4500 F-C-2011	Fluoride	99.4	98.6 98.6			0.0
SM 5310 B-2011	Organic Carbon	93.8	94.0 97.2			2.11

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2184203
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2184210
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2184210
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2184203
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2184203
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2184204
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2184204
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2184204
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2184204
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2184205
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2184211
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2184209
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2184209
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2184203
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2184203
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2184210
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2184203
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2184203
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2184203
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2184204

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	07/20/2020			07/21/2020 16:20	Blanca Fach	2184203
EPA 200.7 Rev. 4.4	07/20/2020	07/21/2020 14:45	Elliott D. Healy	07/22/2020 15:52	Betina Topolski	2184210
EPA 200.8 Rev. 5.4	07/20/2020	07/21/2020 14:45	Elliott D. Healy	07/22/2020 17:48	Alexander Thompson	2184210
EPA 300.0 Rev. 2.1	07/20/2020			07/22/2020 11:06	Julia Storbeck	2184203
EPA 350.1 Rev. 2.0	07/20/2020			07/21/2020 13:14	Virginia P. Brown	2184204
EPA 351.2 Rev. 2.0	07/20/2020	07/21/2020 15:00	Sima Feizi	07/23/2020 13:07	Jhamieka S. Greenwood	2184204
EPA 353.2 Rev. 2.0	07/20/2020			07/22/2020 08:53	Beverly Y. Sanders	2184204
EPA 365.1 Rev. 2.0	07/20/2020	07/23/2020 10:00	Lipi Saha	07/27/2020 09:16	Lipi Saha	2184204
EPA 365.1 Rev. 2.0 dissolved	07/20/2020			07/21/2020 15:31	Samantha Davila	2184205
EPA 8270E	07/20/2020	07/23/2020 08:30	Rasheda Ghaffari	07/27/2020 17:01	Vandana T. Nagar	2184211
EPA 8321B	07/20/2020	07/21/2020 09:00	Hoor Shaik	07/22/2020 02:33	Juyoung Kim	2184209
	07/20/2020	07/21/2020 13:30	Rebecca Ware	07/21/2020 14:27	Rebecca Ware	2184209
	07/20/2020	07/21/2020 13:30	Rebecca Ware	07/22/2020 11:39	Rebecca Ware	2184209
	07/20/2020	07/21/2020 13:30	Rebecca Ware	07/29/2020 03:51	Mohammad Ghaffari	2184209
SM 2120 B-2011	07/20/2020			07/21/2020 16:56	Julia Storbeck	2184203
SM 2320 B-2011	07/20/2020			07/22/2020 20:39	Dale L. Simmons	2184203
SM 2340B	07/20/2020			07/22/2020 15:52	Betina Topolski	2184210
SM 2540 C-2011	07/20/2020			07/22/2020 14:56	Yijie Li	2184203
SM 2540 D-2011	07/20/2020			07/22/2020 14:56	Yijie Li	2184203
SM 4500 F-C-2011	07/20/2020			07/22/2020 20:39	Dale L. Simmons	2184203
SM 5310 B-2011	07/20/2020			07/24/2020 22:38	David Boose	2184204