

Chemical Analysis Report

WAS-SECT-2020-03-09-01

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

Event Description: **WAS SCI Audit**
Request ID: **RQ-2020-02-24-17**
Customer: **WAS-SECT**
Project ID: **SCI-BNCHMK**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Curtis Musson

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: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 31-MAR-2020 09:38



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: Lloyd Creek At Old Lloyd Rd.

Collection Date/Time: 03/09/2020 09:20

Field ID: G1WA0099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163203	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P380403	
	EPA 300.0 Rev. 2.1	Chloride	7.5		mg Cl/L	P380495	
		Sulfate	1.3		mg SO4/L	P380497	
	SM 2120 B-2011	Color (true)	140		PCU	P380429	
	SM 2320 B-2011	Total Alkalinity	14		mg CaCO3/L	P380863	
	SM 2540 C-2011	TDS	67		mg/L	P380817	
	SM 2540 D-2011	TSS	3	I	mg/L	P380806	
	SM 4500 F-C-2011	Fluoride	0.087	I	mg F/L	P380714	
2163204	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P380880	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P380521	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P380601	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P380658	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P380561	
2163205	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P380376	
2163209	EPA 8321B	2,4-D	0.0020	U	ug/L	P380348	
		Acesulfame K**	0.10	U	ug/L	P380246	
		AMPA**	0.10	U	ug/L	P380246	
		Sucralose**	0.026	I	ug/L	P380246	
		Acetaminophen**	0.0080	U	ug/L	P380348	
		Acetamiprid**	0.0020	U	ug/L	P380348	
		Endothall**	0.25	U	ug/L	P380246	
		Glufosinate**	0.10	U	ug/L	P380246	
		Glyphosate**	0.10	U	ug/L	P380246	
		Afidopyropen**	0.0020	UJ	ug/L	P380348	
		Bentazon	8.0E-04	U	ug/L	P380348	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P380348	
		Carbamazepine**	8.0E-04	U	ug/L	P380348	
		Clothianidin**	0.0020	U	ug/L	P380348	
		Dinotefuran**	0.0020	U	ug/L	P380348	
		Diuron	0.0020	U	ug/L	P380348	
		Fenuron	0.016	U	ug/L	P380348	
		Fluridone**	8.0E-04	U	ug/L	P380348	
		Imazapyr**	0.0040	U	ug/L	P380348	
		Hydrocodone**	0.0020	U	ug/L	P380348	
		Ibuprofen**	0.020	U	ug/L	P380348	
		Imidacloprid	0.0020	UJ	ug/L	P380348	MS
		Linuron	0.0040	U	ug/L	P380348	
		Mandestrobin**	0.0020	UJ	ug/L	P380348	
		MCP	0.0020	U	ug/L	P380348	
		Naproxen**	0.0080	U	ug/L	P380348	
		Primidone**	0.0040	U	ug/L	P380348	
		Pyraclostrobin**	0.0020	U	ug/L	P380348	
		Thiamethoxam**	0.0020	UJ	ug/L	P380348	MS

Field ID: G1WA0099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163209	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P380348	
		Triclopyr**	0.0040	U	ug/L	P380348	
2163210	EPA 200.7 Rev. 4.4	Barium	9.9		ug/L	P380556	
		Calcium	5.68		mg/L	P380556	
		Iron	790		ug/L	P380556	
		Magnesium	2.48		mg/L	P380556	
		Potassium	0.84	I	mg/L	P380556	
		Sodium	3.9		mg/L	P380556	
		Zinc	5.0	U	ug/L	P380556	
	EPA 200.8 Rev. 5.4	Aluminum	289		ug/L	P380556	
		Antimony	0.050	U	ug/L	P380556	
		Arsenic	0.43		ug/L	P380556	
		Boron**	11.7		ug/L	P380556	
		Cadmium	0.020	U	ug/L	P380556	
		Chromium	0.81	I	ug/L	P380556	
		Copper	0.74	I	ug/L	P380875	
		Lead	0.23	I	ug/L	P380556	
		Nickel	0.50	U	ug/L	P380556	
		Selenium	0.20	U	ug/L	P380556	
		Silver	0.010	U	ug/L	P380556	
		Thallium	0.10	U	ug/L	P380556	
	SM 2340B	Hardness	24.4		mg/L	P380556	
2163211	EPA 8270E	Acetochlor	0.24	U	ng/L	P380360	
		Alachlor	0.24	U	ng/L	P380360	
		Ametryn	0.57	U	ng/L	P380360	
		Atrazine	0.63	I	ng/L	P380360	
		Atrazine Desethyl	1.4	U	ng/L	P380360	
		Azinphos Methyl	1.9	U	ng/L	P380360	
		Bromacil	0.48	U	ng/L	P380360	
		Butylate	0.38	U	ng/L	P380360	
		Carbophenothion	0.48	U	ng/L	P380360	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P380360	
		Chlorpyrifos Methyl	0.048	U	ng/L	P380360	
		Cyanazine	3.1	U	ng/L	P380360	
		Demeton	1.4	U	ng/L	P380360	
		Diazinon	0.12	U	ng/L	P380360	
		Dimethenamid**	0.096	U	ng/L	P380360	
		Disulfoton	0.48	U	ng/L	P380360	
		Dithiopyr**	0.096	U	ng/L	P380360	
		EPTC	1.2	UJ	ng/L	P380360	RPD
		Ethion	0.14	U	ng/L	P380360	RPD
		Ethoprop	0.096	U	ng/L	P380360	
		Fenamiphos	0.48	U	ng/L	P380360	
		Fipronil	0.24	U	ng/L	P380360	
		Fipronil Desulfinyl**	0.12	U	ng/L	P380360	

Field ID: G1WA0099

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163211	EPA 8270E	Fipronil Sulfide	0.14	U	ng/L	P380360	
		Fipronil Sulfone	0.14	U	ng/L	P380360	
		Flumioxazin**	1.7	U	ng/L	P380360	MS, RPD
		Fonofos	0.19	U	ng/L	P380360	
		Hexazinone	0.48	U	ng/L	P380360	
		Imazalil**	0.72	U	ng/L	P380360	
		Malathion	0.33	U	ng/L	P380360	
		Metaxyl	0.72	U	ng/L	P380360	
		Metolachlor	0.48	U	ng/L	P380360	
		Metribuzin	3.1	U	ng/L	P380360	
		Mevinphos	0.48	U	ng/L	P380360	
		Molinate	0.29	U	ng/L	P380360	
		Naled**	1.4	UJ	ng/L	P380360	RPD
		Norflurazon	0.48	U	ng/L	P380360	
		Oxadiazon**	0.096	U	ng/L	P380360	
		Parathion Ethyl	0.24	UJ	ng/L	P380360	LCS, RPD
		Parathion Methyl	0.53	UJ	ng/L	P380360	LCS, RPD
		Pendimethalin	0.96	UJ	ng/L	P380360	LCS, RPD
		Phorate	0.24	U	ng/L	P380360	
		Prodiamine**	0.17	UJ	ng/L	P380360	LCS, RPD
		Prometon	0.86	U	ng/L	P380360	
		Prometryn	0.19	U	ng/L	P380360	
		Pronamide**	0.14	U	ng/L	P380360	
		Propiconazole**	0.48	U	ng/L	P380360	
		Simazine	0.48	U	ng/L	P380360	
		Sulfentrazone**	0.48	UJ	ng/L	P380360	LCS, MS
		Tebuconazole**	0.48	U	ng/L	P380360	RPD
		Terbufos	0.096	U	ng/L	P380360	
		Terbuthylazine	0.41	U	ng/L	P380360	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameters 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: P380403

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P380556

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: P380556

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
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 200.8 Rev. 5.4

Batch ID: P380875

Component	Result	Code	Units
Copper	0.40	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P380495

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P380497

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P380880

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P380880

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P380521

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P380601

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380658

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380376

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

Reference Method: EPA 8270E
 Batch ID: P380360

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P380360

Component	Result	Code	Units
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
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	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: P380246

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

Reference Method: EPA 8321B

Batch ID: P380348

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyrophen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B**Batch ID: P380348**

Component	Result	Code	Units
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011**Batch ID: P380429**

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011**Batch ID: P380863**

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

Reference Method: SM 2540 C-2011**Batch ID: P380817**

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011**Batch ID: P380806**

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011**Batch ID: P380714**

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011

Batch ID: P380561

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: P380556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.9		P	85 - 115
Calcium	101		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	101		P	85 - 115
Sodium	99.0		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P380556

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.4		P	85 - 115
Antimony	90.6		P	85 - 115
Arsenic	97.4		P	85 - 115
Boron	98.1		P	85 - 115
Cadmium	102		P	80 - 120
Chromium	97.4		P	85 - 115
Lead	96.5		P	85 - 115
Nickel	96.6		P	85 - 115
Selenium	96.3		P	85 - 115
Silver	95.1		P	85 - 115
Thallium	99.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P380875

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	107		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P380495

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P380497

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P380880

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P380521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P380521

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P380601

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P380658

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P380376

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

Reference Method: EPA 8270E

Batch ID: P380360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.2	96.7	P/P	71 - 122
Alachlor	92.4	96.7	P/P	70 - 121
Ametryn	102	101	P/P	49 - 137
Atrazine	99.5	104	P/P	76 - 125
Atrazine Desethyl	85.8	89.4	P/P	31 - 144
Azinphos Methyl	123	118	P/P	67 - 150
Bromacil	53.3	58.1	P/P	36 - 121
Butylate	56.7	69.4	P/P	33 - 88.0
Carbophenothion	86.6	94.1	P/P	50 - 150
Chlorpyrifos Ethyl	93.0	97.6	P/P	73 - 117
Chlorpyrifos Methyl	99.4	105	P/P	68 - 121
Cyanazine	122	117	P/P	20 - 250
Demeton	74.1	98.2	P/P	30 - 123
Diazinon	98.4	101	P/P	70 - 128
Dimethenamid	92.9	97.3	P/P	66 - 122
Disulfoton	71.9	95.4	P/P	46 - 124
Dithiopyr	85.8	91.1	P/P	69 - 122
EPTC	47.4	70.9	P/P	31 - 90.0
Ethion	62.7	66.5	P/P	45 - 135
Ethoprop	111	110	P/P	59 - 118
Fenamiphos	80.4	97.1	P/P	30 - 136
Fipronil	93.4	98.3	P/P	57 - 127
Fipronil Desulfinyl	99.5	102	P/P	51 - 122
Fipronil Sulfide	86.5	93.9	P/P	57 - 119
Fipronil Sulfone	69.9	74.5	P/P	51 - 119
Flumioxazin	115	127	P/P	70 - 200
Fonofos	93.0	97.6	P/P	60 - 120
Hexazinone	96.5	104	P/P	57 - 142

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P380360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imazalil	90.5	88.4	P/P	50 - 150
Malathion	114	117	P/P	67 - 128
Metalaxyl	95.8	98.3	P/P	21 - 148
Metolachlor	85.5	87.8	P/P	70 - 120
Metribuzin	111	124	P/P	20 - 253
Mevinphos	111	101	P/P	47 - 116
Molinate	68.7	81.7	P/P	41 - 99.0
Naled	41.6	60.6	P/P	40 - 130
Norflurazon	90.9	97.6	P/P	54 - 127
Oxadiazon	86.5	91.0	P/P	65 - 122
Parathion Ethyl	37.4	101	F/P	71 - 113
Parathion Methyl	46.3	111	F/P	73 - 129
Pendimethalin	20.2	88.8	F/P	63 - 130
Phorate	90.6	99.5	P/P	48 - 118
Prodiamine	6.82	69.6	F/P	20 - 144
Prometon	97.9	96.4	P/P	53 - 120
Prometryn	99.0	99.8	P/P	63 - 119
Pronamide	101	105	P/P	50 - 150
Propiconazole	84.0	87.7	P/P	50 - 150
Simazine	113	114	P/P	77 - 129
Sulfentrazone	13.1	14.5	F/F	50 - 150
Tebuconazole	37.7	39.8	P/P	20 - 118
Terbufos	93.2	103	P/P	61 - 119
Terbutylazine	96.5	98.1	P/P	75 - 119

Reference Method: EPA 8321B

Batch ID: P380246

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	73.2		P	40 - 150
AMPA	91.6		P	40 - 150
Endothall	113		P	40 - 150
Glufosinate	107		P	40 - 150
Glyphosate	120		P	40 - 140
Sucralose	97.5		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P380348

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	30 - 160
Acetaminophen	85.2		P	30 - 160
Acetamiprid	93.8		P	30 - 160
Afidopyropen	88.2		P	30 - 160
Bentazon	81.6		P	30 - 160
Benzovindiflupyr	83.2		P	30 - 160
Carbamazepine	100		P	30 - 160
Clothianidin	88.5		P	30 - 160
Dinotefuran	82.0		P	30 - 160
Diuron	91.6		P	30 - 160
Fenuron	92.0		P	30 - 160
Fluridone	80.9		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B**Batch ID: P380348**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hydrocodone	90.5		P	30 - 160
Ibuprofen	84.1		P	30 - 160
Imazapyr	112		P	30 - 160
Imidacloprid	100		P	30 - 160
Linuron	78.3		P	30 - 160
Mandestrobin	77.6		P	30 - 160
MCPP	94.5		P	30 - 160
Naproxen	83.8		P	30 - 160
Primidone	98.0		P	30 - 160
Pyraclostrobin	77.6		P	30 - 160
Thiamethoxam	96.2		P	30 - 160
Tolfenpyrad	62.2		P	30 - 160
Triclopyr	116		P	30 - 160

Reference Method: SM 2120 B-2011**Batch ID: P380429**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-2011**Batch ID: P380863**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-2011**Batch ID: P380714**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.7		P	92 - 103

Reference Method: SM 5310 B-2011**Batch ID: P380561**

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P380556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163644	Barium	101	103	P/P	80 - 120
2163644	Calcium	103		P	80 - 120
2163644	Iron	104	104	P/P	80 - 120
2163644	Magnesium	102	102	P/P	80 - 120
2163644	Potassium	101	101	P/P	80 - 120
2163644	Sodium	100		P	80 - 120
2163644	Zinc	102	104	P/P	80 - 120
2164291	Barium	99.2		P	80 - 120
2164291	Calcium	102		P	80 - 120
2164291	Iron	105		P	80 - 120
2164291	Magnesium	103		P	80 - 120
2164291	Potassium	97.4		P	80 - 120
2164291	Sodium	99.7		P	80 - 120
2164291	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P380556

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163644	Aluminum	93.9	95.6	P/P	80 - 120
2163644	Antimony	97.8	100	P/P	80 - 120
2163644	Arsenic	97.4	99.4	P/P	80 - 120
2163644	Boron	98.2	100	P/P	80 - 120
2163644	Cadmium	96.5	101	P/P	80 - 120
2163644	Chromium	97.9	99.8	P/P	80 - 120
2163644	Lead	98.9	99.0	P/P	80 - 120
2163644	Nickel	95.5	97.4	P/P	80 - 120
2163644	Selenium	87.7	90.8	P/P	80 - 120
2163644	Silver	98.2	99.4	P/P	80 - 120
2163644	Thallium	102	103	P/P	80 - 120
2164291	Aluminum	95.8		P	80 - 120
2164291	Antimony	96.5		P	80 - 120
2164291	Arsenic	100		P	80 - 120
2164291	Boron	99.9		P	80 - 120
2164291	Cadmium	96.5		P	80 - 120
2164291	Chromium	101		P	80 - 120
2164291	Lead	99.8		P	80 - 120
2164291	Nickel	94.1		P	80 - 120
2164291	Selenium	91.5		P	80 - 120
2164291	Silver	98.5		P	80 - 120
2164291	Thallium	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P380875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163421	Copper	105	109	P/P	80 - 120
2163799	Copper	116		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162902	Chloride	96.5		P	90 - 110
2163042	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162902	Sulfate	98.2		P	90 - 110
2163042	Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163097	Ammonia-N	99.7	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163097	Kjeldahl Nitrogen	98.5	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P380601

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163012	NO2NO3-N	96.5	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163204	Total-P	103	106	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P380360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161918	Acetochlor	89.1	87.1	P/P	68 - 126
2161918	Alachlor	86.7	88.5	P/P	66 - 125
2161918	Ametryn	115	91.0	P/P	31 - 182
2161918	Azinphos Methyl	130	127	P/P	54 - 162
2161918	Bromacil	75.5	77.8	P/P	34 - 144
2161918	Butylate	70.9	79.6	P/P	16 - 92.0
2161918	Carbophenothion	76.0	73.2	P/P	50 - 150
2161918	Chlorpyrifos Ethyl	104	84.2	P/P	63 - 124
2161918	Chlorpyrifos Methyl	94.6	91.1	P/P	64 - 125
2161918	Cyanazine	103	81.8	P/P	13 - 245
2161918	Demeton	116	114	P/P	20 - 154
2161918	Diazinon	97.9	96.7	P/P	66 - 141
2161918	Dimethenamid	107	81.4	P/P	50 - 130
2161918	Disulfoton	78.3	64.1	P/P	55 - 130

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P380360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161918	Dithiopyr	77.0	71.6	P/P	66 - 122
2161918	EPTC	75.2	79.7	P/P	15 - 93.0
2161918	Ethion	87.0	25.5	P/P	15 - 148
2161918	Ethoprop	123	125	P/P	59 - 126
2161918	Fenamiphos	68.8	74.2	P/P	39 - 137
2161918	Fipronil	84.2	75.3	P/P	47 - 131
2161918	Fipronil Desulfinyl	84.8	79.2	P/P	43 - 121
2161918	Fipronil Sulfide	77.1	66.8	P/P	29 - 134
2161918	Fipronil Sulfone	60.9	52.9	P/P	19 - 131
2161918	Flumioxazin	206	144	F/P	70 - 200
2161918	Fonofos	102	97.7	P/P	62 - 128
2161918	Hexazinone	97.4	106	P/P	58 - 154
2161918	Imazalil	79.8	76.3	P/P	50 - 150
2161918	Malathion	116	112	P/P	54 - 135
2161918	Metalaxyl	87.7	89.7	P/P	46 - 136
2161918	Metolachlor	79.5	76.3	P/P	62 - 126
2161918	Metribuzin	113	98.2	P/P	44 - 277
2161918	Mevinphos	131	105	P/P	44 - 135
2161918	Molinate	86.7	85.4	P/P	31 - 104
2161918	Naled	106	102	P/P	40 - 130
2161918	Norflurazon	78.8	74.6	P/P	32 - 134
2161918	Oxadiazon	71.9	61.5	P/P	55 - 123
2161918	Parathion Ethyl	100	98.3	P/P	67 - 120
2161918	Parathion Methyl	132	133	P/P	70 - 140
2161918	Pendimethalin	90.6	87.0	P/P	59 - 145
2161918	Phorate	106	103	P/P	52 - 127
2161918	Prodiamine	51.5	36.9	P/P	11 - 157
2161918	Prometon	87.1	82.9	P/P	55 - 130
2161918	Prometryn	92.7	87.9	P/P	55 - 127
2161918	Pronamide	106	106	P/P	50 - 150
2161918	Propiconazole	73.2	64.4	P/P	50 - 150
2161918	Sulfentrazone	64.3	47.0	P/F	50 - 150
2161918	Tebuconazole	27.1	14.1	P/P	10 - 122
2161918	Terbufos	110	109	P/P	65 - 131
2161918	Terbutylazine	98.9	100	P/P	63 - 131

Reference Method: EPA 8321B

Batch ID: P380246

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163209	Acesulfame K	128	139	P/P	40 - 150
2163209	AMPA	104	112	P/P	40 - 150
2163209	Endothall	122	138	P/P	40 - 150
2163209	Glufosinate	109	108	P/P	40 - 150
2163209	Glyphosate	109	109	P/P	40 - 140
2163209	Sucralose	99.4	99.9	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P380348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163209	2,4-D	110	105	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P380348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163209	Acetaminophen	93.0	90.7	P/P	30 - 160
2163209	Acetamiprid	103	86.8	P/P	30 - 160
2163209	Afidopyropen	103	99.3	P/P	30 - 160
2163209	Bentazon	54.9	52.8	P/P	30 - 160
2163209	Benzovindiflupyr	82.2	79.7	P/P	30 - 160
2163209	Carbamazepine	94.2	96.7	P/P	30 - 160
2163209	Clothianidin	128	132	P/P	30 - 160
2163209	Dinotefuran	115	119	P/P	30 - 160
2163209	Diuron	86.6	83.0	P/P	30 - 160
2163209	Fenuron	75.0	76.4	P/P	30 - 160
2163209	Fluridone	81.3	74.4	P/P	30 - 160
2163209	Hydrocodone	103	79.3	P/P	30 - 160
2163209	Ibuprofen	80.4	75.6	P/P	30 - 160
2163209	Imazapyr	95.4	123	P/P	30 - 160
2163209	Imidacloprid	185	150	F/P	30 - 160
2163209	Linuron	83.1	80.4	P/P	30 - 160
2163209	Mandestrobin	76.1	75.5	P/P	30 - 160
2163209	MCP	103	97.5	P/P	30 - 160
2163209	Naproxen	90.9	84.2	P/P	30 - 160
2163209	Primidone	98.0	104	P/P	30 - 160
2163209	Pyraclostrobin	80.7	78.4	P/P	30 - 160
2163209	Thiamethoxam	169	156	F/P	30 - 160
2163209	Tolfenpyrad	59.8	64.0	P/P	30 - 160
2163209	Triclopyr	125	105	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P380714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2162882	Fluoride	101	102	P/P	89 - 106

Reference Method: SM 5310 B-2011

Batch ID: P380561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163096	Organic Carbon	89.6	98.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P380403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163566	Turbidity	1.93	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P380556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163644	Barium	2.16	Spike	P	0 - 20
2163644	Calcium	0.515	Spike	P	0 - 20
2163644	Iron	0.231	Spike	P	0 - 20
2163644	Magnesium	0.246	Spike	P	0 - 20
2163644	Potassium	0.291	Spike	P	0 - 20
2163644	Sodium	0.544	Spike	P	0 - 20
2163644	Zinc	2.47	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380556

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163644	Aluminum	1.74	Spike	P	0 - 20
2163644	Antimony	2.36	Spike	P	0 - 20
2163644	Arsenic	1.87	Spike	P	0 - 20
2163644	Boron	1.63	Spike	P	0 - 20
2163644	Cadmium	4.72	Spike	P	0 - 20
2163644	Chromium	1.91	Spike	P	0 - 20
2163644	Lead	0.110	Spike	P	0 - 20
2163644	Nickel	2.01	Spike	P	0 - 20
2163644	Selenium	3.46	Spike	P	0 - 20
2163644	Silver	1.27	Spike	P	0 - 20
2163644	Thallium	1.52	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P380875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163421	Copper	3.15	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162902	Chloride	0.397	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P380497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162902	Sulfate	0.0556	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P380880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163097	Ammonia-N	0.575	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P380521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163097	Kjeldahl Nitrogen	4.41	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P380601

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163012	NO2NO3-N	0.808	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163204	Total-P	1.95	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P380376

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163205	O-Phosphate-P	0.0462	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P380360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161918	Acetochlor	2.26	Spike	P	0 - 30
2161918	Alachlor	2.09	Spike	P	0 - 30
2161918	Ametryn	12.1	Spike	P	0 - 30
2161918	Atrazine	5.09	Spike	P	0 - 30
2161918	Atrazine Desethyl	1.75	Spike	P	0 - 30
2161918	Azinphos Methyl	1.62	Spike	P	0 - 30
2161918	Bromacil	2.08	Spike	P	0 - 30
2161918	Butylate	11.6	Spike	P	0 - 30
2161918	Carbophenothion	3.73	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P380360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161918	Chlorpyrifos Ethyl	21.4	Spike	P	0 - 30
2161918	Chlorpyrifos Methyl	3.79	Spike	P	0 - 30
2161918	Cyanazine	22.9	Spike	P	0 - 30
2161918	Demeton	1.91	Spike	P	0 - 30
2161918	Diazinon	1.13	Spike	P	0 - 30
2161918	Dimethenamid	27.0	Spike	P	0 - 30
2161918	Disulfoton	19.9	Spike	P	0 - 30
2161918	Dithiopyr	5.80	Spike	P	0 - 30
2161918	EPTC	5.83	Spike	P	0 - 30
2161918	Ethion	109	Spike	F	0 - 30
2161918	Ethoprop	1.75	Spike	P	0 - 30
2161918	Fenamiphos	7.64	Spike	P	0 - 30
2161918	Fipronil	8.76	Spike	P	0 - 30
2161918	Fipronil Desulfinyl	5.29	Spike	P	0 - 30
2161918	Fipronil Sulfide	6.68	Spike	P	0 - 30
2161918	Fipronil Sulfone	3.18	Spike	P	0 - 30
2161918	Flumioxazin	35.1	Spike	F	0 - 30
2161918	Fonofos	4.30	Spike	P	0 - 30
2161918	Hexazinone	8.73	Spike	P	0 - 30
2161918	Imazalil	4.50	Spike	P	0 - 30
2161918	Malathion	3.49	Spike	P	0 - 30
2161918	Metalaxyl	2.19	Spike	P	0 - 30
2161918	Metolachlor	4.15	Spike	P	0 - 30
2161918	Metribuzin	14.1	Spike	P	0 - 30
2161918	Mevinphos	21.6	Spike	P	0 - 30
2161918	Molinate	1.55	Spike	P	0 - 30
2161918	Naled	3.92	Spike	P	0 - 30
2161918	Norflurazon	5.45	Spike	P	0 - 30
2161918	Oxadiazon	8.07	Spike	P	0 - 30
2161918	Parathion Ethyl	1.98	Spike	P	0 - 30
2161918	Parathion Methyl	0.656	Spike	P	0 - 30
2161918	Pendimethalin	4.06	Spike	P	0 - 30
2161918	Phorate	2.41	Spike	P	0 - 30
2161918	Prodiamine	33.1	Spike	F	0 - 30
2161918	Prometon	4.06	Spike	P	0 - 30
2161918	Prometryn	5.31	Spike	P	0 - 30
2161918	Pronamide	0.338	Spike	P	0 - 30
2161918	Propiconazole	6.16	Spike	P	0 - 30
2161918	Simazine	1.97	Spike	P	0 - 30
2161918	Sulfentrazone	6.50	Spike	P	0 - 30
2161918	Tebuconazole	63.0	Spike	F	0 - 30
2161918	Terbufos	1.10	Spike	P	0 - 30
2161918	Terbutylazine	1.52	Spike	P	0 - 30
LFB	Acetochlor	1.54	LCS	P	0 - 30
LFB	Alachlor	4.60	LCS	P	0 - 30
LFB	Ametryn	1.64	LCS	P	0 - 30
LFB	Atrazine	4.77	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.16	LCS	P	0 - 30
LFB	Azinphos Methyl	4.13	LCS	P	0 - 30
LFB	Bromacil	8.68	LCS	P	0 - 30
LFB	Butylate	20.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P380360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	8.31	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	4.82	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.97	LCS	P	0 - 30
LFB	Cyanazine	4.57	LCS	P	0 - 30
LFB	Demeton	28.0	LCS	P	0 - 30
LFB	Diazinon	2.35	LCS	P	0 - 30
LFB	Dimethenamid	4.67	LCS	P	0 - 30
LFB	Disulfoton	28.1	LCS	P	0 - 30
LFB	Dithiopyr	6.01	LCS	P	0 - 30
LFB	EPTC	39.7	LCS	F	0 - 30
LFB	Ethion	5.78	LCS	P	0 - 30
LFB	Ethoprop	1.38	LCS	P	0 - 30
LFB	Fenamiphos	18.7	LCS	P	0 - 30
LFB	Fipronil	5.13	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	2.84	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.28	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.39	LCS	P	0 - 30
LFB	Flumioxazin	10.2	LCS	P	0 - 30
LFB	Fonofos	4.86	LCS	P	0 - 30
LFB	Hexazinone	7.62	LCS	P	0 - 30
LFB	Imazalil	2.43	LCS	P	0 - 30
LFB	Malathion	2.00	LCS	P	0 - 30
LFB	Metaxyl	2.53	LCS	P	0 - 30
LFB	Metolachlor	2.72	LCS	P	0 - 30
LFB	Metribuzin	11.5	LCS	P	0 - 30
LFB	Mevinphos	9.01	LCS	P	0 - 30
LFB	Molinate	17.4	LCS	P	0 - 30
LFB	Naled	37.3	LCS	F	0 - 30
LFB	Norflurazon	7.12	LCS	P	0 - 30
LFB	Oxadiazon	5.08	LCS	P	0 - 30
LFB	Parathion Ethyl	91.9	LCS	F	0 - 30
LFB	Parathion Methyl	82.3	LCS	F	0 - 30
LFB	Pendimethalin	126	LCS	F	0 - 30
LFB	Phorate	9.41	LCS	P	0 - 30
LFB	Prodiamine	164	LCS	F	0 - 30
LFB	Prometon	1.60	LCS	P	0 - 30
LFB	Prometryn	0.817	LCS	P	0 - 30
LFB	Pronamide	4.29	LCS	P	0 - 30
LFB	Propiconazole	4.30	LCS	P	0 - 30
LFB	Simazine	0.825	LCS	P	0 - 30
LFB	Sulfentrazone	9.68	LCS	P	0 - 30
LFB	Tebuconazole	5.31	LCS	P	0 - 30
LFB	Terbufos	9.55	LCS	P	0 - 30
LFB	Terbutylazine	1.63	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P380246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163209	Acesulfame K	8.05	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P380246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163209	AMPA	7.07	Spike	P	0 - 30
2163209	Endothall	12.2	Spike	P	0 - 30
2163209	Glufosinate	0.846	Spike	P	0 - 30
2163209	Glyphosate	0.138	Spike	P	0 - 30
2163209	Sucralose	0.478	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P380348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163209	2,4-D	4.35	Spike	P	0 - 30
2163209	Acetaminophen	2.42	Spike	P	0 - 30
2163209	Acetamiprid	16.8	Spike	P	0 - 30
2163209	Afidopyropen	3.95	Spike	P	0 - 30
2163209	Bentazon	3.92	Spike	P	0 - 30
2163209	Benzovindiflupyr	3.13	Spike	P	0 - 30
2163209	Carbamazepine	2.59	Spike	P	0 - 30
2163209	Clothianidin	3.43	Spike	P	0 - 30
2163209	Dinotefuran	3.36	Spike	P	0 - 30
2163209	Diuron	4.31	Spike	P	0 - 30
2163209	Fenuron	1.87	Spike	P	0 - 30
2163209	Fluridone	8.86	Spike	P	0 - 30
2163209	Hydrocodone	25.9	Spike	P	0 - 30
2163209	Ibuprofen	6.22	Spike	P	0 - 30
2163209	Imazapyr	25.4	Spike	P	0 - 30
2163209	Imidacloprid	20.6	Spike	P	0 - 30
2163209	Linuron	3.24	Spike	P	0 - 30
2163209	Mandestrobin	0.825	Spike	P	0 - 30
2163209	MCP	5.29	Spike	P	0 - 30
2163209	Naproxen	7.61	Spike	P	0 - 30
2163209	Primidone	5.48	Spike	P	0 - 30
2163209	Pyraclostrobin	2.82	Spike	P	0 - 30
2163209	Thiamethoxam	7.88	Spike	P	0 - 30
2163209	Tolfenpyrad	6.82	Spike	P	0 - 30
2163209	Triclopyr	18.0	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P380429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163251	Color (true)	0.327	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P380863

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163043	Total Alkalinity	0.128	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P380817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163095	TDS	0.910	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P380714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2162882	Fluoride	0.516	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P380561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163096	Organic Carbon	5.44	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2163209
Field Sample ID: G1WA0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	119	P	30 - 160
EPA 8321B	Diuron-d6	104	P	30 - 160
EPA 8321B	Endothall-d6	128	P	30 - 160
EPA 8321B	Endothall-d6	128	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	118	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	118	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.1	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	94.2	P	30 - 160
EPA 8321B	Sucralose-d6	94.2	P	30 - 160

Lab Sample ID: 2163211
Field Sample ID: G1WA0099

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	110	P	72 - 135
EPA 8270E	Terbufos-d10	100	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98096

Included Lab Sample IDs: 2163203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.5	99.5	P/P	90 - 110
Sulfate	100	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A98103

Included Lab Sample IDs: 2163205

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A98117

Included Lab Sample IDs: 2163203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A98122

Included Lab Sample IDs: 2163203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115

Reference Method: EPA 8321B

Run ID: A98129

Included Lab Sample IDs: 2163209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	76.6	80.6	P/P	60 - 160
Endothall	130	133	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A98160

Included Lab Sample IDs: 2163209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.1	99.2	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A98161

Included Lab Sample IDs: 2163209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	97.4	89.2	P/P	40 - 200
Glufosinate	104	108	P/P	40 - 200
Glyphosate	112	116	P/P	40 - 200

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A98163

Included Lab Sample IDs: 2163204

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98176

Included Lab Sample IDs: 2163204

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A98181

Included Lab Sample IDs: 2163204

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.2	95.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98192

Included Lab Sample IDs: 2163210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.3	99.8	P/P	90 - 110
Antimony	92.4	91.6	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Boron	100	101	P/P	90 - 110
Chromium	98.7	99.1	P/P	90 - 110
Lead	99.2	99.0	P/P	90 - 110
Nickel	100	99.8	P/P	90 - 110
Selenium	97.1	97.7	P/P	90 - 110
Silver	93.3	93.3	P/P	90 - 110
Thallium	96.5	97.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A98214

Included Lab Sample IDs: 2163209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.5	75.4	P/P	50 - 150
Acetaminophen	111	90.4	P/P	60 - 160
Acetamiprid	103	111	P/P	50 - 150
Afidopyropen	116	122	P/P	50 - 150
Bentazon	122	129	P/P	50 - 160
Benzovindiflupyr	112	106	P/P	50 - 150
Carbamazepine	107	113	P/P	60 - 150
Clothianidin	123	82.4	P/P	60 - 150
Dinotefuran	96.7	93.7	P/P	50 - 150
Diuron	99.2	111	P/P	60 - 150
Fenuron	107	107	P/P	60 - 150
Fluridone	99.0	102	P/P	60 - 160
Hydrocodone	106	92.5	P/P	60 - 150
Ibuprofen	81.4	97.6	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A98214

Included Lab Sample IDs: 2163209

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	119	104	P/P	50 - 150
Imidacloprid	106	102	P/P	60 - 150
Linuron	109	112	P/P	60 - 150
Mandestrobin	93.0	95.2	P/P	50 - 150
MCPP	74.0	80.6	P/P	50 - 150
Naproxen	101	99.3	P/P	50 - 160
Primidone	98.2	93.4	P/P	60 - 150
Pyraclostrobin	102	95.0	P/P	60 - 150
Thiamethoxam	110	111	P/P	50 - 150
Tolfenpyrad	116	114	P/P	60 - 150
Triclopyr	104	112	P/P	50 - 150

Reference Method: SM 4500 F-C-2011

Run ID: A98215

Included Lab Sample IDs: 2163203

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98232

Included Lab Sample IDs: 2163210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	108	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A98237

Included Lab Sample IDs: 2163204

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A98252

Included Lab Sample IDs: 2163210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.7	101	P/P	90 - 110
Calcium	101	103	P/P	90 - 110
Iron	103	104	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	98.7	100	P/P	90 - 110
Sodium	99.8	101	P/P	90 - 110
Zinc	98.1	99.7	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A98269

Included Lab Sample IDs: 2163203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
-----------	---------	---------	------------	----------------

Quality Assurance Report

Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A98269

Included Lab Sample IDs: 2163203

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A98276

Included Lab Sample IDs: 2163204

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

Reference Method: EPA 8270E

Run ID: A98288

Included Lab Sample IDs: 2163211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.5		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	99.5		P	80 - 120
Atrazine	100		P	80 - 120
Atrazine Desethyl	99.5		P	80 - 120
Azinphos Methyl	93.9		P	80 - 120
Bromacil	104		P	80 - 120
Butylate	95.8		P	80 - 120
Carbophenothion	98.1		P	80 - 120
Chlorpyrifos Ethyl	97.7		P	80 - 120
Chlorpyrifos Methyl	95.0		P	80 - 120
Cyanazine	94.9		P	80 - 120
Demeton	99.8		P	80 - 120
Diazinon	100		P	80 - 120
Dimethenamid	99.5		P	80 - 120
Disulfoton	96.9		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	98.7		P	80 - 120
Ethion	94.0		P	80 - 120
Ethoprop	102		P	80 - 120
Fenamiphos	96.4		P	80 - 120
Fipronil	99.9		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	98.1		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Flumioxazin	89.7		P	80 - 120
Fonofos	98.8		P	80 - 120
Hexazinone	101		P	80 - 120
Imazalil	98.4		P	80 - 120
Malathion	98.4		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	96.9		P	80 - 120
Metribuzin	96.9		P	80 - 120
Mevinphos	105		P	80 - 120
Molinate	100		P	80 - 120
Naled	102		P	80 - 120
Norflurazon	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A98288

Included Lab Sample IDs: 2163211

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxadiazon	106		P	80 - 120
Parathion Ethyl	95.8		P	80 - 120
Parathion Methyl	95.9		P	80 - 120
Pendimethalin	95.4		P	80 - 120
Phorate	98.2		P	80 - 120
Prodiamine	95.6		P	80 - 120
Prometon	97.8		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	96.9		P	80 - 120
Propiconazole	100		P	80 - 120
Simazine	96.5		P	80 - 120
Sulfentrazone	100		P	80 - 120
Tebuconazole	112		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	98.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98446

Included Lab Sample IDs: 2163210

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	98.5	99.8	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						1.93	
EPA 200.7 Rev. 4.4	Barium	99.9		101	103	99.2		2.16
	Calcium	101		103	102			0.515
	Iron	105		104	104	105		0.231
	Magnesium	105		102	102	103		0.246
	Potassium	101		101	101	97.4		0.291
	Sodium	99.0		100	99.7			0.544
	Zinc	100		102	104	102		2.47
EPA 200.8 Rev. 5.4	Aluminum	95.4		93.9	95.6	95.8		1.74
	Antimony	90.6		97.8	100	96.5		2.36
	Arsenic	97.4		97.4	99.4	100		1.87
	Boron	98.1		98.2	100	99.9		1.63
	Cadmium	102		96.5	101	96.5		4.72
	Chromium	97.4		97.9	99.8	101		1.91
	Copper	107		105	109	116		3.15
	Lead	96.5		98.9	99.0	99.8		0.110
	Nickel	96.6		95.5	97.4	94.1		2.01
	Selenium	96.3		87.7	90.8	91.5		3.46
	Silver	95.1		98.2	99.4	98.5		1.27
	Thallium	99.9		102	103	105		1.52
EPA 300.0 Rev. 2.1	Chloride	98.8		96.5	97.9		0.397	
	Sulfate	99.1		98.2	97.2		0.0556	
EPA 350.1 Rev. 2.0	Ammonia-N	97.9		99.7	98.7			0.575
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.0		98.5	106			4.41
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		96.5	98.0			0.808
EPA 365.1 Rev. 2.0	Total-P	106		103	106			1.95
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103						0.0462
EPA 8270E	Acetochlor	95.2	96.7	89.1	87.1	1.54		2.26
	Alachlor	92.4	96.7	86.7	88.5	4.60		2.09
	Ametryn	102	101	115	91.0	1.64		12.1
	Atrazine	99.5	104			4.77		5.09
	Atrazine Desethyl	85.8	89.4			4.16		1.75
	Azinphos Methyl	123	118	130	127	4.13		1.62
	Bromacil	53.3	58.1	75.5	77.8	8.68		2.08
	Butylate	56.7	69.4	70.9	79.6	20.2		11.6
	Carbophenothion	86.6	94.1	76.0	73.2	8.31		3.73
	Chlorpyrifos Ethyl	93.0	97.6	104	84.2	4.82		21.4
	Chlorpyrifos Methyl	99.4	105	94.6	91.1	4.97		3.79
	Cyanazine	122	117	103	81.8	4.57		22.9
	Demeton	74.1	98.2	116	114	28.0		1.91
	Diazinon	98.4	101	97.9	96.7	2.35		1.13
	Dimethenamid	92.9	97.3	107	81.4	4.67		27.0
	Disulfoton	71.9	95.4	78.3	64.1	28.1		19.9
	Dithiopyr	85.8	91.1	77.0	71.6	6.01		5.80
	EPTC	47.4	70.9	75.2	79.7	39.7		5.83
	Ethion	62.7	66.5	87.0	25.5	5.78		109
	Ethoprop	111	110	123	125	1.38		1.75
	Fenamiphos	80.4	97.1	68.8	74.2	18.7		7.64
	Fipronil	93.4	98.3	84.2	75.3	5.13		8.76
	Fipronil Desulfanyl	99.5	102	84.8	79.2	2.84		5.29
	Fipronil Sulfide	86.5	93.9	77.1	66.8	8.28		6.68
	Fipronil Sulfone	69.9	74.5	60.9	52.9	6.39		3.18
	Flumioxazin	115	127	206	144	10.2		35.1
	Fonofos	93.0	97.6	102	97.7	4.86		4.30

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Hexazinone	96.5	104	97.4	106	7.62		8.73
	Imazalil	90.5	88.4	79.8	76.3	2.43		4.50
	Malathion	114	117	116	112	2.00		3.49
	Metalaxyl	95.8	98.3	87.7	89.7	2.53		2.19
	Metolachlor	85.5	87.8	79.5	76.3	2.72		4.15
	Metribuzin	111	124	113	98.2	11.5		14.1
	Mevinphos	111	101	131	105	9.01		21.6
	Molinate	68.7	81.7	86.7	85.4	17.4		1.55
	Naled	41.6	60.6	106	102	37.3		3.92
	Norflurazon	90.9	97.6	78.8	74.6	7.12		5.45
	Oxadiazon	86.5	91.0	71.9	61.5	5.08		8.07
	Parathion Ethyl	37.4	101	100	98.3	91.9		1.98
	Parathion Methyl	46.3	111	132	133	82.3		0.656
	Pendimethalin	20.2	88.8	90.6	87.0	126		4.06
	Phorate	90.6	99.5	106	103	9.41		2.41
	Prodiamine	6.82	69.6	51.5	36.9	164		33.1
	Prometon	97.9	96.4	87.1	82.9	1.60		4.06
	Prometryn	99.0	99.8	92.7	87.9	0.817		5.31
	Pronamide	101	105	106	106	4.29		0.338
	Propiconazole	84.0	87.7	73.2	64.4	4.30		6.16
	Simazine	113	114			0.825		1.97
	Sulfentrazone	13.1	14.5	64.3	47.0	9.68		6.50
	Tebuconazole	37.7	39.8	27.1	14.1	5.31		63.0
	Terbufos	93.2	103	110	109	9.55		1.10
	Terbutylazine	96.5	98.1	98.9	100	1.63		1.52
EPA 8321B	2,4-D	104		110	105			4.35
	Acesulfame K	73.2		128	139			8.05
	Acetaminophen	85.2		93.0	90.7			2.42
	Acetamiprid	93.8		103	86.8			16.8
	Afidopyropen	88.2		103	99.3			3.95
	AMPA	91.6		104	112			7.07
	Bentazon	81.6		54.9	52.8			3.92
	Benzovindiflupyr	83.2		82.2	79.7			3.13
	Carbamazepine	100		94.2	96.7			2.59
	Clothianidin	88.5		128	132			3.43
	Dinotefuran	82.0		115	119			3.36
	Diuron	91.6		86.6	83.0			4.31
	Endothall	113		122	138			12.2
	Fenuron	92.0		75.0	76.4			1.87
	Fluridone	80.9		81.3	74.4			8.86
	Glufosinate	107		109	108			0.846
	Glyphosate	120		109	109			0.138
	Hydrocodone	90.5		103	79.3			25.9
	Ibuprofen	84.1		80.4	75.6			6.22
	Imazapyr	112		95.4	123			25.4
	Imidacloprid	100		185	150			20.6
	Linuron	78.3		83.1	80.4			3.24
	Mandestrobin	77.6		76.1	75.5			0.825
	MCPP	94.5		103	97.5			5.29
	Naproxen	83.8		90.9	84.2			7.61
	Primidone	98.0		98.0	104			5.48
	Pyraclostrobin	77.6		80.7	78.4			2.82
	Sucralose	97.5		99.4	99.9			0.478
	Thiamethoxam	96.2		169	156			7.88

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Tolfenpyrad	62.2	59.8	64.0			6.82
	Triclopyr	116	125	105			18.0
SM 2120 B-2011	Color (true)	100				0.327	
SM 2320 B-2011	Total Alkalinity	103				0.128	
SM 2540 C-2011	TDS					0.910	
SM 4500 F-C-2011	Fluoride	96.7	101	102			0.516
SM 5310 B-2011	Organic Carbon	98.6	89.6	98.2			5.44

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2163203
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2163210
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2163210
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2163203
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2163203
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2163204
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2163204
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2163204
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2163204
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2163205
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2163211
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2163209
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2163209
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2163203
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2163203
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2163210
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2163203
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2163203
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2163203
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2163204

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	03/09/2020			03/10/2020 16:49	Blanca Fach	2163203
EPA 200.7 Rev. 4.4	03/09/2020	03/12/2020 15:45	Elliott D. Healy	03/17/2020 14:16	Betina Topolski	2163210
EPA 200.8 Rev. 5.4	03/09/2020	03/12/2020 15:45	Elliott D. Healy	03/13/2020 20:56	Alexander Thompson	2163210
	03/09/2020	03/12/2020 15:45	Elliott D. Healy	03/16/2020 12:46	Justin Cutchin	2163210
	03/09/2020	03/18/2020 14:20	Elliott D. Healy	03/24/2020 16:57	Justin Cutchin	2163210
EPA 300.0 Rev. 2.1	03/09/2020			03/12/2020 00:00	Lipi Saha	2163203
EPA 350.1 Rev. 2.0	03/09/2020			03/18/2020 10:39	Ping Hua	2163204
EPA 351.2 Rev. 2.0	03/09/2020	03/12/2020 11:45	Sima Feizi	03/13/2020 08:42	Jhamieka S. Greenwood	2163204
EPA 353.2 Rev. 2.0	03/09/2020			03/11/2020 11:30	Beverly Y. Sanders	2163204
EPA 365.1 Rev. 2.0	03/09/2020	03/13/2020 14:30	Yen Ta	03/16/2020 11:49	Benjamin T. Nordmann	2163204
EPA 365.1 Rev. 2.0 dissolved	03/09/2020			03/10/2020 16:12	Carlos Miranda	2163205
EPA 8270E	03/09/2020	03/10/2020 09:00	Julie Wi	03/12/2020 20:21	Vandana T. Nagar	2163211
EPA 8321B	03/09/2020	03/10/2020 14:30	Rebecca Ware	03/10/2020 20:25	Rebecca Ware	2163209
	03/09/2020	03/10/2020 14:30	Rebecca Ware	03/11/2020 12:35	Rebecca Ware	2163209
	03/09/2020	03/10/2020 14:30	Rebecca Ware	03/12/2020 04:40	Rebecca Ware	2163209
	03/09/2020	03/11/2020 09:00	Hoor Shaik	03/14/2020 12:40	Juyoung Kim	2163209
SM 2120 B-2011	03/09/2020			03/10/2020 17:02	Madeline Gruver	2163203
SM 2320 B-2011	03/09/2020			03/18/2020 01:01	Dale L. Simmons	2163203
SM 2340B	03/09/2020			03/17/2020 14:16	Betina Topolski	2163210
SM 2540 C-2011	03/09/2020			03/10/2020 15:32	Yijie Li	2163203
SM 2540 D-2011	03/09/2020			03/10/2020 15:32	Yijie Li	2163203
SM 4500 F-C-2011	03/09/2020			03/13/2020 02:48	Dale L. Simmons	2163203
SM 5310 B-2011	03/09/2020			03/11/2020 15:09	Lauren Lees	2163204