

Chemical Analysis Report

SW-DIST-2020-03-11-02

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

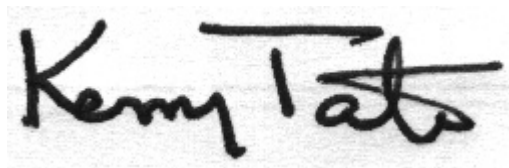
Event Description: **SCIs**
Request ID: **RQ-2020-02-24-38**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Ben Paswater

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: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 31-MAR-2020 11:35

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: Thompson Branch @ US17 North of Causey Rd Collection Date/Time: 03/10/2020 13:00

Field ID: G3SW0086

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163754	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P380531	
	EPA 300.0 Rev. 2.1	Chloride	33	A	mg Cl/L	P380615	
		Sulfate	66	A	mg SO4/L	P380619	
	SM 2120 B-2011	Color (true)	28	A	PCU	P380478	
	SM 2320 B-2011	Total Alkalinity	58		mg CaCO3/L	P380926	
	SM 2540 C-2011	TDS	258		mg/L	P381108	
	SM 2540 D-2011	TSS	5	I	mg/L	P380981	
	SM 4500 F-C-2011	Fluoride	0.37		mg F/L	P381258	
2163755	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P380967	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.78		mg N/L	P380629	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.1		mg N/L	P381094	
	EPA 365.1 Rev. 2.0	Total-P	0.65		mg P/L	P380737	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P380667	
2163756	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.51		mg P/L	P380502	
2163766	EPA 8321B	2,4-D	0.0020	U	ug/L	P380458	
		Acesulfame K**	0.13	I J	ug/L	P380603	MS
		AMPA**	0.18	I	ug/L	P380603	
		Sucralose**	1.4		ug/L	P380603	
		Acetaminophen**	0.086		ug/L	P380458	
		Acetamiprid**	0.0020	U	ug/L	P380458	
		Endothall**	0.25	U	ug/L	P380603	
		Glufosinate**	0.10	U	ug/L	P380603	
		Glyphosate**	0.19	I	ug/L	P380603	
		Afidopyropen**	0.0022	I J	ug/L	P380458	
		Bentazon	1.5		ug/L	P380458	MS
		Benzovindiflupyr**	0.0020	U J	ug/L	P380458	
		Carbamazepine**	0.0022	I	ug/L	P380458	
		Clothianidin**	0.067		ug/L	P380458	
		Dinotefuran**	0.0020	U	ug/L	P380458	
		Diuron	0.0029	I	ug/L	P380458	
		Fenuron	0.016	U	ug/L	P380458	
		Fluridone**	8.0E-04	U	ug/L	P380458	
		Imazapyr**	0.0078	I	ug/L	P380458	
		Hydrocodone**	0.0020	U	ug/L	P380458	
		Ibuprofen**	0.35		ug/L	P380458	
		Imidacloprid	0.039		ug/L	P380458	
		Linuron	0.0040	U	ug/L	P380458	
		Mandestrobin**	0.0020	U J	ug/L	P380458	
		MCP	0.0020	U	ug/L	P380458	
		Naproxen**	0.17		ug/L	P380458	
		Primidone**	0.018		ug/L	P380458	
		Pyraclostrobin**	0.0020	U	ug/L	P380458	
		Thiamethoxam**	0.020		ug/L	P380458	

Field ID: G3SW0086

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163766	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P380458	
		Triclopyr**	0.0040	U	ug/L	P380458	
2163767	EPA 200.7 Rev. 4.4	Barium	5.6		ug/L	P380556	
		Calcium	35.1		mg/L	P380556	
		Iron	270		ug/L	P380556	
		Magnesium	13.6		mg/L	P380556	
		Potassium	6.0		mg/L	P380556	
		Sodium	17.0		mg/L	P380556	
		Zinc	5.0	U	ug/L	P380556	
	EPA 200.8 Rev. 5.4	Aluminum	127		ug/L	P380556	
		Antimony	0.16	I	ug/L	P380556	
		Arsenic	0.67		ug/L	P380556	
		Boron**	46.5		ug/L	P380556	
		Cadmium	0.060	I	ug/L	P380556	
		Chromium	0.63	I	ug/L	P380556	
		Copper	1.27		ug/L	P380875	
		Lead	0.21	I	ug/L	P380556	
		Nickel	1.5	I	ug/L	P380556	
		Selenium	0.36	I	ug/L	P380556	
		Silver	0.010	U	ug/L	P380556	
		Thallium	0.10	U	ug/L	P380556	
	SM 2340B	Hardness	144		mg/L	P380556	
2163770	EPA 8270E	Acetochlor	0.26	U	ng/L	P380780	
		Alachlor	0.26	U	ng/L	P380780	
		Ametryn	0.62	U	ng/L	P380780	
		Atrazine	1.1		ng/L	P380780	
		Atrazine Desethyl	1.6	U	ng/L	P380780	
		Azinphos Methyl	2.1	U	ng/L	P380780	
		Bromacil	210		ng/L	P380780	
		Butylate	0.41	U	ng/L	P380780	
		Carbophenothion	0.52	U	ng/L	P380780	
		Chlorpyrifos Ethyl	0.32	I	ng/L	P380780	
		Chlorpyrifos Methyl	0.052	U	ng/L	P380780	
		Cyanazine	3.4	U	ng/L	P380780	RPD
		Demeton	1.6	U	ng/L	P380780	
		Diazinon	0.13	U	ng/L	P380780	
		Dimethenamid**	0.10	U	ng/L	P380780	MS, RPD
		Disulfoton	0.52	U	ng/L	P380780	
		Dithiopyr**	0.19	I	ng/L	P380780	MS
		EPTC	1.3	UJ	ng/L	P380780	RPD
		Ethion	0.16	UJ	ng/L	P380780	LCS, MS, RPD
		Ethoprop	0.10	U	ng/L	P380780	
		Fenamiphos	0.52	U	ng/L	P380780	
		Fipronil	0.26	U	ng/L	P380780	

Field ID: G3SW0086

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2163770	EPA 8270E	Fipronil Desulfinyl**	0.13	U	ng/L	P380780	
		Fipronil Sulfide	0.16	U	ng/L	P380780	
		Fipronil Sulfone	0.16	U	ng/L	P380780	
		Flumioxazin**	1.8	UJ	ng/L	P380780	RPD
		Fonofos	0.21	U	ng/L	P380780	
		Hexazinone	0.52	U	ng/L	P380780	
		Imazalil**	0.78	U	ng/L	P380780	
		Malathion	0.36	U	ng/L	P380780	
		Metalaxyl	24		ng/L	P380780	
		Metolachlor	0.56	I	ng/L	P380780	
		Metribuzin	3.4	U	ng/L	P380780	
		Mevinphos	0.52	U	ng/L	P380780	
		Molinate	0.31	U	ng/L	P380780	
		Naled**	1.6	U	ng/L	P380780	
		Norflurazon	59		ng/L	P380780	
		Oxadiazon**	0.10	U	ng/L	P380780	
		Parathion Ethyl	0.26	U	ng/L	P380780	
		Parathion Methyl	0.57	U	ng/L	P380780	
		Pendimethalin	1.0	U	ng/L	P380780	
		Phorate	0.26	U	ng/L	P380780	
		Prodiamine**	0.18	U	ng/L	P380780	RPD
		Prometon	0.93	U	ng/L	P380780	
		Prometryn	0.21	U	ng/L	P380780	
		Pronamide**	0.16	U	ng/L	P380780	
		Propiconazole**	0.52	U	ng/L	P380780	
		Simazine	1.3	I	ng/L	P380780	
		Sulfentrazone**	0.52	U	ng/L	P380780	
		Tebuconazole**	0.52	U	ng/L	P380780	MS, RPD
		Terbufos	0.10	U	ng/L	P380780	
		Terbuthylazine	0.44	U	ng/L	P380780	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

EPA 365.1 Rev. 2.0: Total-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. MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: 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: P380531

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: P380615

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380619

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380967

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380967

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380629

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381094

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380737

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380502

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

Reference Method: EPA 8270E
Batch ID: P380780

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: P380780

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: P380458

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P380458

Component	Result	Code	Units
Mandestrobin	0.0020	U	ug/L
MCP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P380603

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: P380478

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P380926

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

Reference Method: SM 2540 C-2011
Batch ID: P381108

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P380981

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

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: P380667

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: P380615

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380619

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380967

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380629

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P380629

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P381094

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P380737

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: P380502

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

Reference Method: EPA 8270E
 Batch ID: P380780

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	89.1	86.4	P/P	71 - 122
Alachlor	89.4	84.8	P/P	70 - 121
Ametryn	98.8	95.2	P/P	49 - 137
Atrazine	113	104	P/P	76 - 125
Atrazine Desethyl	82.1	80.0	P/P	31 - 144
Azinphos Methyl	112	89.9	P/P	67 - 150
Bromacil	92.9	86.2	P/P	36 - 121
Butylate	59.0	71.7	P/P	33 - 88.0
Carbophenothion	84.3	82.6	P/P	50 - 150
Chlorpyrifos Ethyl	92.2	87.7	P/P	73 - 117
Chlorpyrifos Methyl	96.5	92.4	P/P	68 - 121
Cyanazine	106	103	P/P	20 - 250
Demeton	89.5	93.1	P/P	30 - 123
Diazinon	93.1	89.9	P/P	70 - 128
Dimethenamid	80.8	83.5	P/P	66 - 122
Disulfoton	91.6	90.7	P/P	46 - 124
Dithiopyr	80.8	78.7	P/P	69 - 122
EPTC	51.2	70.2	P/P	31 - 90.0
Ethion	17.1	32.6	F/F	45 - 135
Ethoprop	98.2	93.6	P/P	59 - 118
Fenamiphos	77.8	84.8	P/P	30 - 136
Fipronil	84.2	86.0	P/P	57 - 127
Fipronil Desulfinyl	86.2	87.8	P/P	51 - 122
Fipronil Sulfide	82.2	80.0	P/P	57 - 119
Fipronil Sulfone	75.6	71.7	P/P	51 - 119
Flumioxazin	79.7	168	P/P	70 - 200
Fonofos	97.5	93.9	P/P	60 - 120
Hexazinone	95.9	92.8	P/P	57 - 142

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P380780

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imazalil	93.2	86.9	P/P	50 - 150
Malathion	109	106	P/P	67 - 128
Metalaxyl	91.2	85.9	P/P	21 - 148
Metolachlor	79.6	76.4	P/P	70 - 120
Metribuzin	125	119	P/P	20 - 253
Mevinphos	115	100	P/P	47 - 116
Molinate	74.2	75.7	P/P	41 - 99.0
Naled	49.4	58.0	P/P	40 - 130
Norflurazon	81.3	78.8	P/P	54 - 127
Oxadiazon	82.0	79.9	P/P	65 - 122
Parathion Ethyl	97.3	91.5	P/P	71 - 113
Parathion Methyl	110	106	P/P	73 - 129
Pendimethalin	85.0	77.6	P/P	63 - 130
Phorate	101	95.9	P/P	48 - 118
Prodiamine	50.0	57.3	P/P	20 - 144
Prometon	95.6	89.3	P/P	53 - 120
Prometryn	96.5	93.1	P/P	63 - 119
Pronamide	97.4	98.8	P/P	50 - 150
Propiconazole	76.8	73.4	P/P	50 - 150
Simazine	108	106	P/P	77 - 129
Sulfentrazone	63.7	57.4	P/P	50 - 150
Tebuconazole	32.9	41.8	P/P	20 - 118
Terbufos	104	98.3	P/P	61 - 119
Terbuthylazine	95.2	90.7	P/P	75 - 119

Reference Method: EPA 8321B
Batch ID: P380458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	30 - 160
Acetaminophen	70.3		P	30 - 160
Acetamiprid	81.0		P	30 - 160
Afidopyropen	84.1		P	30 - 160
Bentazon	72.5		P	30 - 160
Benzovindiflupyr	72.1		P	30 - 160
Carbamazepine	89.3		P	30 - 160
Clothianidin	74.9		P	30 - 160
Dinotefuran	73.4		P	30 - 160
Diuron	75.1		P	30 - 160
Fenuron	78.3		P	30 - 160
Fluridone	69.7		P	30 - 160
Hydrocodone	64.8		P	30 - 160
Ibuprofen	75.5		P	30 - 160
Imazapyr	83.4		P	30 - 160
Imidacloprid	86.3		P	30 - 160
Linuron	72.0		P	30 - 160
Mandestrobin	73.3		P	30 - 160
MCPP	95.7		P	30 - 160
Naproxen	74.5		P	30 - 160
Primidone	79.0		P	30 - 160
Pyraclostrobin	71.6		P	30 - 160
Thiamethoxam	85.0		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P380458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	51.1		P	30 - 160
Triclopyr	111		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P380603

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	77.2		P	40 - 150
AMPA	92.5		P	40 - 150
Endothall	128		P	40 - 150
Glufosinate	121		P	40 - 150
Glyphosate	93.7		P	40 - 140
Sucralose	104		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P380478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P380926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

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

Reference Method: SM 5310 B-2011
Batch ID: P380667

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		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: P380615

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163754	Chloride	97.5		P	90 - 110
2163855	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163855	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380967

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163666	Ammonia-N	101	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380629

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163668	Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381094

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163668	NO2NO3-N	98.8	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163898	O-Phosphate-P	98.8	98.0	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P380780

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161812	Acetochlor	80.8	82.3	P/P	68 - 126
2161812	Alachlor	77.1	76.7	P/P	66 - 125
2161812	Ametryn	81.0	85.1	P/P	31 - 182
2161812	Atrazine	101	103	P/P	68 - 137
2161812	Atrazine Desethyl	60.5	55.0	P/P	13 - 161
2161812	Azinphos Methyl	110	96.4	P/P	54 - 162
2161812	Butylate	64.8	84.3	P/P	16 - 92.0
2161812	Carbophenothion	53.7	59.8	P/P	50 - 150
2161812	Chlorpyrifos Ethyl	84.7	85.9	P/P	63 - 124
2161812	Chlorpyrifos Methyl	83.3	81.6	P/P	64 - 125
2161812	Cyanazine	72.6	35.2	P/P	13 - 245
2161812	Demeton	98.5	105	P/P	20 - 154
2161812	Diazinon	86.1	88.1	P/P	66 - 141
2161812	Dimethenamid	62.0	32.0	P/F	50 - 130
2161812	Disulfoton	80.1	68.4	P/P	55 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P380780

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2161812	Dithiopyr	61.6	68.5	F/P	66 - 122
2161812	EPTC	55.2	80.4	P/P	15 - 93.0
2161812	Ethion	13.0	5.67	F/F	15 - 148
2161812	Ethoprop	114	118	P/P	59 - 126
2161812	Fenamiphos	91.8	80.6	P/P	39 - 137
2161812	Fipronil	70.8	70.1	P/P	47 - 131
2161812	Fipronil Desulfinyl	72.4	70.9	P/P	43 - 121
2161812	Fipronil Sulfide	70.4	69.8	P/P	29 - 134
2161812	Fipronil Sulfone	60.7	60.7	P/P	19 - 131
2161812	Flumioxazin	114	96.7	P/P	70 - 200
2161812	Fonofos	86.8	90.7	P/P	62 - 128
2161812	Hexazinone	88.1	96.7	P/P	58 - 154
2161812	Imazalil	69.2	79.1	P/P	50 - 150
2161812	Malathion	90.6	96.6	P/P	54 - 135
2161812	Metolachlor	68.8	65.6	P/P	62 - 126
2161812	Metribuzin	103	102	P/P	44 - 277
2161812	Mevinphos	120	125	P/P	44 - 135
2161812	Molinate	68.9	86.0	P/P	31 - 104
2161812	Naled	54.9	59.7	P/P	40 - 130
2161812	Oxadiazon	63.6	64.0	P/P	55 - 123
2161812	Parathion Ethyl	88.6	95.8	P/P	67 - 120
2161812	Parathion Methyl	107	119	P/P	70 - 140
2161812	Pendimethalin	77.9	86.6	P/P	59 - 145
2161812	Phorate	94.6	95.8	P/P	52 - 127
2161812	Prodiamine	29.5	58.1	P/P	11 - 157
2161812	Prometon	82.2	86.9	P/P	55 - 130
2161812	Prometryn	80.8	85.3	P/P	55 - 127
2161812	Pronamide	92.9	92.6	P/P	50 - 150
2161812	Propiconazole	54.2	50.9	P/P	50 - 150
2161812	Simazine	108	101	P/P	58 - 159
2161812	Sulfentrazone	55.2	55.1	P/P	50 - 150
2161812	Tebuconazole	8.44	5.49	F/F	10 - 122
2161812	Terbufos	98.4	99.1	P/P	65 - 131
2161812	Terbuthylazine	86.6	89.0	P/P	63 - 131

Reference Method: EPA 8321B
Batch ID: P380458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163321	Acetaminophen	82.8	72.8	P/P	30 - 160
2163321	Acetamiprid	84.6	69.5	P/P	30 - 160
2163321	Afidopyropen	120	115	P/P	30 - 160
2163321	Bentazon	27.3	29.7	F/F	30 - 160
2163321	Benzovindiflupyr	82.4	83.3	P/P	30 - 160
2163321	Carbamazepine	75.6	70.0	P/P	30 - 160
2163321	Clothianidin	68.6	89.2	P/P	30 - 160
2163321	Dinotefuran	97.6	104	P/P	30 - 160
2163321	Diuron	67.1	72.0	P/P	30 - 160
2163321	Fenuron	54.2	70.2	P/P	30 - 160
2163321	Fluridone	75.6	75.2	P/P	30 - 160
2163321	Hydrocodone	70.6	80.5	P/P	30 - 160
2163321	Ibuprofen	68.0	71.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P380458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163321	Imazapyr	63.7	67.3	P/P	30 - 160
2163321	Imidacloprid	142	152	P/P	30 - 160
2163321	Linuron	61.0	65.0	P/P	30 - 160
2163321	Mandestrobin	75.1	77.1	P/P	30 - 160
2163321	MCPP	96.0	102	P/P	30 - 160
2163321	Naproxen	78.9	78.0	P/P	30 - 160
2163321	Primidone	72.3	88.2	P/P	30 - 160
2163321	Pyraclostrobin	82.2	84.4	P/P	30 - 160
2163321	Thiamethoxam	109	125	P/P	30 - 160
2163321	Tolfenpyrad	75.9	75.0	P/P	30 - 160
2163321	Triclopyr	132	124	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P380603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163766	Acesulfame K	19.2	20.2	F/F	40 - 150
2163766	AMPA	96.6	90.1	P/P	40 - 150
2163766	Endothall	111	115	P/P	40 - 150
2163766	Glufosinate	104	113	P/P	40 - 150
2163766	Glyphosate	124	119	P/P	40 - 140
2163766	Sucralose	85.0	109	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163858	Fluoride	97.8	97.8	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P380667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2163862	Organic Carbon	100	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P380531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163740	Turbidity	3.24	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: P380615

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163754	Chloride	0.470	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P380619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P380619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163754	Sulfate	0.350	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P380967

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163666	Ammonia-N	1.47	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P380629

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163668	Kjeldahl Nitrogen	0.299	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P381094

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163668	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P380737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163713	Total-P	1.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P380502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163898	O-Phosphate-P	0.813	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P380780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161812	Acetochlor	1.83	Spike	P	0 - 30
2161812	Alachlor	0.468	Spike	P	0 - 30
2161812	Ametryn	5.02	Spike	P	0 - 30
2161812	Atrazine	1.14	Spike	P	0 - 30
2161812	Atrazine Desethyl	9.62	Spike	P	0 - 30
2161812	Azinphos Methyl	12.9	Spike	P	0 - 30
2161812	Bromacil	14.9	Spike	P	0 - 30
2161812	Butylate	26.1	Spike	P	0 - 30
2161812	Carbophenothion	10.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2161812	Chlorpyrifos Ethyl	1.44	Spike	P	0 - 30
2161812	Chlorpyrifos Methyl	1.99	Spike	P	0 - 30
2161812	Cyanazine	69.4	Spike	F	0 - 30
2161812	Demeton	6.52	Spike	P	0 - 30
2161812	Diazinon	2.24	Spike	P	0 - 30
2161812	Dimethenamid	63.8	Spike	F	0 - 30
2161812	Disulfoton	15.7	Spike	P	0 - 30
2161812	Dithiopyr	10.7	Spike	P	0 - 30
2161812	EPTC	37.2	Spike	F	0 - 30
2161812	Ethion	78.7	Spike	F	0 - 30
2161812	Ethoprop	3.83	Spike	P	0 - 30
2161812	Fenamiphos	13.0	Spike	P	0 - 30
2161812	Fipronil	1.04	Spike	P	0 - 30
2161812	Fipronil Desulfinyl	2.01	Spike	P	0 - 30
2161812	Fipronil Sulfide	0.834	Spike	P	0 - 30
2161812	Fipronil Sulfone	0.0371	Spike	P	0 - 30
2161812	Flumioxazin	16.4	Spike	P	0 - 30
2161812	Fonofos	4.43	Spike	P	0 - 30
2161812	Hexazinone	9.33	Spike	P	0 - 30
2161812	Imazalil	13.3	Spike	P	0 - 30
2161812	Malathion	6.37	Spike	P	0 - 30
2161812	Metalaxyl	5.48	Spike	P	0 - 30
2161812	Metolachlor	4.62	Spike	P	0 - 30
2161812	Metribuzin	0.955	Spike	P	0 - 30
2161812	Mevinphos	4.36	Spike	P	0 - 30
2161812	Molinate	22.1	Spike	P	0 - 30
2161812	Naled	8.39	Spike	P	0 - 30
2161812	Norflurazon	10.5	Spike	P	0 - 30
2161812	Oxadiazon	0.706	Spike	P	0 - 30
2161812	Parathion Ethyl	7.82	Spike	P	0 - 30
2161812	Parathion Methyl	11.1	Spike	P	0 - 30
2161812	Pendimethalin	10.5	Spike	P	0 - 30
2161812	Phorate	1.28	Spike	P	0 - 30
2161812	Prodiamine	65.3	Spike	F	0 - 30
2161812	Prometon	5.56	Spike	P	0 - 30
2161812	Prometryn	5.43	Spike	P	0 - 30
2161812	Pronamide	0.252	Spike	P	0 - 30
2161812	Propiconazole	6.20	Spike	P	0 - 30
2161812	Simazine	2.24	Spike	P	0 - 30
2161812	Sulfentrazone	0.151	Spike	P	0 - 30
2161812	Tebuconazole	42.4	Spike	F	0 - 30
2161812	Terbufos	0.780	Spike	P	0 - 30
2161812	Terbutylazine	2.69	Spike	P	0 - 30
LFB	Acetochlor	3.15	LCS	P	0 - 30
LFB	Alachlor	5.26	LCS	P	0 - 30
LFB	Ametryn	3.69	LCS	P	0 - 30
LFB	Atrazine	7.96	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.55	LCS	P	0 - 30
LFB	Azinphos Methyl	22.3	LCS	P	0 - 30
LFB	Bromacil	7.57	LCS	P	0 - 30
LFB	Butylate	19.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P380780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	2.09	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	4.95	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.29	LCS	P	0 - 30
LFB	Cyanazine	3.04	LCS	P	0 - 30
LFB	Demeton	3.97	LCS	P	0 - 30
LFB	Diazinon	3.53	LCS	P	0 - 30
LFB	Dimethenamid	3.29	LCS	P	0 - 30
LFB	Disulfoton	0.941	LCS	P	0 - 30
LFB	Dithiopyr	2.63	LCS	P	0 - 30
LFB	EPTC	31.2	LCS	F	0 - 30
LFB	Ethion	62.3	LCS	F	0 - 30
LFB	Ethoprop	4.77	LCS	P	0 - 30
LFB	Fenamiphos	8.62	LCS	P	0 - 30
LFB	Fipronil	2.15	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	1.86	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.75	LCS	P	0 - 30
LFB	Fipronil Sulfone	5.26	LCS	P	0 - 30
LFB	Flumioxazin	71.1	LCS	F	0 - 30
LFB	Fonofos	3.78	LCS	P	0 - 30
LFB	Hexazinone	3.29	LCS	P	0 - 30
LFB	Imazalil	7.04	LCS	P	0 - 30
LFB	Malathion	3.42	LCS	P	0 - 30
LFB	Metalaxyl	6.02	LCS	P	0 - 30
LFB	Metolachlor	4.13	LCS	P	0 - 30
LFB	Metribuzin	5.10	LCS	P	0 - 30
LFB	Mevinphos	13.2	LCS	P	0 - 30
LFB	Molinate	2.01	LCS	P	0 - 30
LFB	Naled	15.9	LCS	P	0 - 30
LFB	Norflurazon	3.14	LCS	P	0 - 30
LFB	Oxadiazon	2.64	LCS	P	0 - 30
LFB	Parathion Ethyl	6.10	LCS	P	0 - 30
LFB	Parathion Methyl	3.82	LCS	P	0 - 30
LFB	Pendimethalin	9.07	LCS	P	0 - 30
LFB	Phorate	5.00	LCS	P	0 - 30
LFB	Prodiamine	13.6	LCS	P	0 - 30
LFB	Prometon	6.88	LCS	P	0 - 30
LFB	Prometryn	3.59	LCS	P	0 - 30
LFB	Pronamide	1.38	LCS	P	0 - 30
LFB	Propiconazole	4.41	LCS	P	0 - 30
LFB	Simazine	2.30	LCS	P	0 - 30
LFB	Sulfentrazone	10.5	LCS	P	0 - 30
LFB	Tebuconazole	23.9	LCS	P	0 - 30
LFB	Terbufos	5.54	LCS	P	0 - 30
LFB	Terbutylazine	4.85	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163321	2,4-D	2.12	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P380458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163321	Acetaminophen	8.34	Spike	P	0 - 30
2163321	Acetamiprid	19.6	Spike	P	0 - 30
2163321	Afidopyropen	4.94	Spike	P	0 - 30
2163321	Bentazon	2.92	Spike	P	0 - 30
2163321	Benzovindiflupyr	1.08	Spike	P	0 - 30
2163321	Carbamazepine	7.73	Spike	P	0 - 30
2163321	Clothianidin	24.9	Spike	P	0 - 30
2163321	Dinotefuran	6.53	Spike	P	0 - 30
2163321	Diuron	7.03	Spike	P	0 - 30
2163321	Fenuron	25.7	Spike	P	0 - 30
2163321	Fluridone	0.527	Spike	P	0 - 30
2163321	Hydrocodone	13.1	Spike	P	0 - 30
2163321	Ibuprofen	4.75	Spike	P	0 - 30
2163321	Imazapyr	2.10	Spike	P	0 - 30
2163321	Imidacloprid	6.51	Spike	P	0 - 30
2163321	Linuron	6.27	Spike	P	0 - 30
2163321	Mandestrobin	2.63	Spike	P	0 - 30
2163321	MCPP	6.38	Spike	P	0 - 30
2163321	Naproxen	1.18	Spike	P	0 - 30
2163321	Primidone	19.8	Spike	P	0 - 30
2163321	Pyraclostrobin	2.59	Spike	P	0 - 30
2163321	Thiamethoxam	13.4	Spike	P	0 - 30
2163321	Tolfenpyrad	1.18	Spike	P	0 - 30
2163321	Triclopyr	6.69	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P380603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163766	Acesulfame K	3.67	Spike	P	0 - 30
2163766	AMPA	5.88	Spike	P	0 - 30
2163766	Endothall	2.89	Spike	P	0 - 30
2163766	Glufosinate	8.46	Spike	P	0 - 30
2163766	Glyphosate	3.31	Spike	P	0 - 30
2163766	Sucralose	15.7	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P380478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163754	Color (true)	1.85	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P380926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2164176	Total Alkalinity	0.203	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
Batch ID: P381108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163665	TDS	3.35	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P381258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163858	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
Batch ID: P380667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2163862	Organic Carbon	1.67	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2163766
Field Sample ID: G3SW0086

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	111	P	30 - 160
EPA 8321B	Acetaminophen-d4	73.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.8	P	30 - 160
EPA 8321B	Diuron-d6	99.1	P	30 - 160
EPA 8321B	Endothall-d6	91.5	P	30 - 160
EPA 8321B	Endothall-d6	91.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	132	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.9	P	30 - 160
EPA 8321B	Primidone-d5	87.6	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2163770
Field Sample ID: G3SW0086

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	122	P	72 - 135
EPA 8270E	Terbufos-d10	104	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A98096

Included Lab Sample IDs: 2163754

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.0	99.9	P/P	90 - 110
Sulfate	99.7	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A98133

Included Lab Sample IDs: 2163756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.5	96.6	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A98135

Included Lab Sample IDs: 2163754

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A98149

Included Lab Sample IDs: 2163754

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98192

Included Lab Sample IDs: 2163767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.8	100	P/P	90 - 110
Antimony	91.6	96.1	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Boron	101	103	P/P	90 - 110
Chromium	99.1	101	P/P	90 - 110
Lead	99.0	100	P/P	90 - 110
Nickel	99.8	102	P/P	90 - 110
Selenium	97.7	99.2	P/P	90 - 110
Silver	93.3	94.6	P/P	90 - 110
Thallium	97.1	98.4	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A98194

Included Lab Sample IDs: 2163755

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A98208
Included Lab Sample IDs: 2163766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.3	97.4	P/P	40 - 200
Glufosinate	115	125	P/P	40 - 200
Glyphosate	100	102	P/P	40 - 200

Reference Method: EPA 8321B
Run ID: A98210
Included Lab Sample IDs: 2163766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	78.7	83.6	P/P	60 - 160
Endothall	119	117	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A98214
Included Lab Sample IDs: 2163766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.6	75.3	P/P	50 - 150
Acetaminophen	92.3	89.6	P/P	60 - 160
Acetamiprid	108	94.0	P/P	50 - 150
Afidopyropen	129	114	P/P	50 - 150
Bentazon	124	114	P/P	50 - 160
Benzovindiflupyr	108	102	P/P	50 - 150
Carbamazepine	112	101	P/P	60 - 150
Clothianidin	98.9	79.4	P/P	60 - 150
Dinotefuran	92.1	86.2	P/P	50 - 150
Diuron	123	107	P/P	60 - 150
Fenuron	95.3	93.2	P/P	60 - 150
Fluridone	98.2	97.1	P/P	60 - 160
Hydrocodone	101	91.7	P/P	60 - 150
Ibuprofen	86.7	90.0	P/P	50 - 160
Imazapyr	100	82.8	P/P	50 - 150
Imidacloprid	98.8	94.9	P/P	60 - 150
Linuron	107	109	P/P	60 - 150
Mandestrobin	101	96.1	P/P	50 - 150
MCPP	70.5	68.0	P/P	50 - 150
Naproxen	95.7	135	P/P	50 - 160
Primidone	94.3	86.6	P/P	60 - 150
Pyraclostrobin	102	99.5	P/P	60 - 150
Thiamethoxam	107	93.8	P/P	50 - 150
Tolfenpyrad	113	116	P/P	60 - 150
Triclopyr	109	95.4	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A98222
Included Lab Sample IDs: 2163755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A98229
 Included Lab Sample IDs: 2163766

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	63.5	106	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A98232
 Included Lab Sample IDs: 2163767

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

Reference Method: EPA 200.7 Rev. 4.4
 Run ID: A98252
 Included Lab Sample IDs: 2163767

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: EPA 365.1 Rev. 2.0
 Run ID: A98266
 Included Lab Sample IDs: 2163755

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

Reference Method: SM 2320 B-2011
 Run ID: A98293
 Included Lab Sample IDs: 2163754

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A98309
 Included Lab Sample IDs: 2163755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	100	P/P	90 - 110

Reference Method: EPA 8270E
 Run ID: A98360
 Included Lab Sample IDs: 2163770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A98360
 Included Lab Sample IDs: 2163770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	101		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	98.3		P	80 - 120
Butylate	103		P	80 - 120
Carbophenothion	96.8		P	80 - 120
Chlorpyrifos Ethyl	96.9		P	80 - 120
Chlorpyrifos Methyl	96.8		P	80 - 120
Cyanazine	96.3		P	80 - 120
Demeton	96.6		P	80 - 120
Diazinon	99.2		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	99.7		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	93.2		P	80 - 120
Ethion	97.1		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	98.3		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	101		P	80 - 120
Fipronil Sulfone	98.8		P	80 - 120
Flumioxazin	93.9		P	80 - 120
Fonofos	98.4		P	80 - 120
Hexazinone	101		P	80 - 120
Imazalil	100		P	80 - 120
Malathion	98.4		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	101		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	94.7		P	80 - 120
Naled	102		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	99.1		P	80 - 120
Parathion Methyl	99.2		P	80 - 120
Pendimethalin	99.7		P	80 - 120
Phorate	96.4		P	80 - 120
Prodiamine	99.7		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	102		P	80 - 120
Pronamide	102		P	80 - 120
Propiconazole	103		P	80 - 120
Simazine	100		P	80 - 120
Sulfentrazone	97.8		P	80 - 120
Tebuconazole	98.1		P	80 - 120
Terbufos	97.3		P	80 - 120
Terbutylazine	99.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A98374

Included Lab Sample IDs: 2163755

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

Reference Method: EPA 8270E

Run ID: A98397

Included Lab Sample IDs: 2163770

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	100		P	80 - 120
Metalaxyl	107		P	80 - 120
Norflurazon	104		P	80 - 120

Reference Method: SM 4500 F-C-2011

Run ID: A98428

Included Lab Sample IDs: 2163754

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	97.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A98446

Included Lab Sample IDs: 2163767

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	99.8	102	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						3.24	
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	100		97.5	99.1		0.470	
	Sulfate	100		100			0.350	
EPA 350.1 Rev. 2.0	Ammonia-N	101		101	99.6			1.47
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.1		106	106			0.299
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5		98.8	98.8			0.0
EPA 365.1 Rev. 2.0	Total-P	104						1.75
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9		98.8	98.0			0.813
EPA 8270E	Acetochlor	86.4	89.1	80.8	82.3	3.15		1.83
	Alachlor	84.8	89.4	77.1	76.7	5.26		0.468
	Ametryn	95.2	98.8	81.0	85.1	3.69		5.02
	Atrazine	104	113	101	103	7.96		1.14
	Atrazine Desethyl	80.0	82.1	55.0	60.5	2.55		9.62
	Azinphos Methyl	89.9	112	96.4	110	22.3		12.9
	Bromacil	86.2	92.9			7.57		14.9
	Butylate	71.7	59.0	84.3	64.8	19.5		26.1
	Carbophenothion	84.3	82.6	59.8	53.7	2.09		10.8
	Chlorpyrifos Ethyl	87.7	92.2	84.7	85.9	4.95		1.44
	Chlorpyrifos Methyl	92.4	96.5	83.3	81.6	4.29		1.99
	Cyanazine	103	106	72.6	35.2	3.04		69.4
	Demeton	93.1	89.5	98.5	105	3.97		6.52
	Diazinon	89.9	93.1	86.1	88.1	3.53		2.24
	Dimethenamid	83.5	80.8	62.0	32.0	3.29		63.8
	Disulfoton	90.7	91.6	80.1	68.4	0.941		15.7
	Dithiopyr	78.7	80.8	61.6	68.5	2.63		10.7
	EPTC	70.2	51.2	55.2	80.4	31.2		37.2
	Ethion	32.6	17.1	13.0	5.67	62.3		78.7
	Ethoprop	98.2	93.6	114	118	4.77		3.83
	Fenamiphos	84.8	77.8	91.8	80.6	8.62		13.0
	Fipronil	86.0	84.2	70.8	70.1	2.15		1.04
	Fipronil Desulfanyl	87.8	86.2	72.4	70.9	1.86		2.01
	Fipronil Sulfide	80.0	82.2	70.4	69.8	2.75		0.834
	Fipronil Sulfone	71.7	75.6	60.7	60.7	5.26		0.0371
	Flumioxazin	168	79.7	114	96.7	71.1		16.4
	Fonofos	93.9	97.5	86.8	90.7	3.78		4.43

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Hexazinone	92.8	95.9	88.1	96.7	3.29	9.33
	Imazalil	86.9	93.2	69.2	79.1	7.04	13.3
	Malathion	106	109	90.6	96.6	3.42	6.37
	Metalaxyl	85.9	91.2			6.02	5.48
	Metolachlor	76.4	79.6	68.8	65.6	4.13	4.62
	Metribuzin	119	125	103	102	5.10	0.955
	Mevinphos	100	115	120	125	13.2	4.36
	Molinate	75.7	74.2	68.9	86.0	2.01	22.1
	Naled	58.0	49.4	54.9	59.7	15.9	8.39
	Norflurazon	78.8	81.3			3.14	10.5
	Oxadiazon	79.9	82.0	63.6	64.0	2.64	0.706
	Parathion Ethyl	91.5	97.3	88.6	95.8	6.10	7.82
	Parathion Methyl	106	110	107	119	3.82	11.1
	Pendimethalin	77.6	85.0	77.9	86.6	9.07	10.5
	Phorate	95.9	101	94.6	95.8	5.00	1.28
	Prodiamine	57.3	50.0	29.5	58.1	13.6	65.3
	Prometon	89.3	95.6	82.2	86.9	6.88	5.56
	Prometryn	93.1	96.5	80.8	85.3	3.59	5.43
	Pronamide	98.8	97.4	92.9	92.6	1.38	0.252
	Propiconazole	73.4	76.8	54.2	50.9	4.41	6.20
	Simazine	106	108	108	101	2.30	2.24
	Sulfentrazone	57.4	63.7	55.1	55.2	10.5	0.151
	Tebuconazole	32.9	41.8	5.49	8.44	23.9	42.4
	Terbufos	98.3	104	99.1	98.4	5.54	0.780
	Terbutylazine	90.7	95.2	89.0	86.6	4.85	2.69
EPA 8321B	2,4-D	105					2.12
	Acesulfame K	77.2		19.2	20.2		3.67
	Acetaminophen	70.3		82.8	72.8		8.34
	Acetamiprid	81.0		84.6	69.5		19.6
	Afidopyropen	84.1		120	115		4.94
	AMPA	92.5		96.6	90.1		5.88
	Bentazon	72.5		27.3	29.7		2.92
	Benzovindiflupyr	72.1		82.4	83.3		1.08
	Carbamazepine	89.3		75.6	70.0		7.73
	Clothianidin	74.9		68.6	89.2		24.9
	Dinotefuran	73.4		97.6	104		6.53
	Diuron	75.1		67.1	72.0		7.03
	Endothall	128		111	115		2.89
	Fenuron	78.3		54.2	70.2		25.7
	Fluridone	69.7		75.6	75.2		0.527
	Glufosinate	121		104	113		8.46
	Glyphosate	93.7		124	119		3.31
	Hydrocodone	64.8		70.6	80.5		13.1
	Ibuprofen	75.5		68.0	71.3		4.75
	Imazapyr	83.4		63.7	67.3		2.10
	Imidacloprid	86.3		142	152		6.51
	Linuron	72.0		61.0	65.0		6.27
	Mandestrobin	73.3		75.1	77.1		2.63
	MCPP	95.7		96.0	102		6.38
	Naproxen	74.5		78.9	78.0		1.18
	Primidone	79.0		72.3	88.2		19.8
	Pyraclostrobin	71.6		82.2	84.4		2.59
	Sucralose	104		85.0	109		15.7
	Thiamethoxam	85.0		109	125		13.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Tolfenpyrad	51.1	75.9	75.0			1.18
	Triclopyr	111	132	124			6.69
SM 2120 B-2011	Color (true)	101				1.85	
SM 2320 B-2011	Total Alkalinity	104				0.203	
SM 2540 C-2011	TDS					3.35	
SM 4500 F-C-2011	Fluoride	96.7	97.8	97.8			0.0
SM 5310 B-2011	Organic Carbon	98.1	100	103			1.67

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2163754
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2163767
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2163767
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2163754
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2163754
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2163755
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2163755
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2163755
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2163755
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2163756
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2163770
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2163766
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2163766
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2163754
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2163754
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2163767
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2163754
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2163754
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2163754
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2163755

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	03/11/2020			03/11/2020 19:16	Yen Ta	2163754
EPA 200.7 Rev. 4.4	03/11/2020	03/12/2020 15:45	Elliott D. Healy	03/17/2020 15:08	Betina Topolski	2163767
EPA 200.8 Rev. 5.4	03/11/2020	03/12/2020 15:45	Elliott D. Healy	03/13/2020 22:33	Alexander Thompson	2163767
	03/11/2020	03/12/2020 15:45	Elliott D. Healy	03/16/2020 13:33	Justin Cutchin	2163767
	03/11/2020	03/18/2020 14:20	Elliott D. Healy	03/24/2020 17:41	Justin Cutchin	2163767
EPA 300.0 Rev. 2.1	03/11/2020			03/13/2020 03:05	Lipi Saha	2163754
EPA 350.1 Rev. 2.0	03/11/2020			03/19/2020 14:56	Ping Hua	2163755
EPA 351.2 Rev. 2.0	03/11/2020	03/13/2020 12:19	Sima Feizi	03/16/2020 14:38	Julia Storbeck	2163755
EPA 353.2 Rev. 2.0	03/11/2020			03/20/2020 10:17	Beverly Y. Sanders	2163755
EPA 365.1 Rev. 2.0	03/11/2020	03/16/2020 14:28	Yen Ta	03/17/2020 16:25	Benjamin T. Nordmann	2163755
EPA 365.1 Rev. 2.0 dissolved	03/11/2020			03/11/2020 16:29	Carlos Miranda	2163756
EPA 8270E	03/11/2020	03/17/2020 09:00	Julie Wi	03/19/2020 16:05	Vandana T. Nagar	2163770
	03/11/2020	03/17/2020 09:00	Julie Wi	03/20/2020 19:48	Vandana T. Nagar	2163770
EPA 8321B	03/11/2020	03/12/2020 10:00	Hoor Shaik	03/15/2020 08:53	Juyoung Kim	2163766
	03/11/2020	03/12/2020 10:00	Hoor Shaik	03/16/2020 17:51	Juyoung Kim	2163766
	03/11/2020	03/13/2020 11:00	Mohammad Ghaffari	03/13/2020 12:47	Mohammad Ghaffari	2163766
	03/11/2020	03/13/2020 11:00	Mohammad Ghaffari	03/15/2020 14:57	Mohammad Ghaffari	2163766
	03/11/2020	03/13/2020 11:00	Mohammad Ghaffari	03/16/2020 12:58	Mohammad Ghaffari	2163766
SM 2120 B-2011	03/11/2020			03/11/2020 18:07	Madeline Gruver	2163754
SM 2320 B-2011	03/11/2020			03/18/2020 22:39	Dale L. Simmons	2163754
SM 2340B	03/11/2020			03/17/2020 15:08	Betina Topolski	2163767
SM 2540 C-2011	03/11/2020			03/13/2020 15:32	Yijie Li	2163754
SM 2540 D-2011	03/11/2020			03/13/2020 15:32	Yijie Li	2163754
SM 4500 F-C-2011	03/11/2020			03/24/2020 14:06	Dale L. Simmons	2163754
SM 5310 B-2011	03/11/2020			03/13/2020 12:49	Lauren Lees	2163755