

Chemical Analysis Report

SO-DIST-2020-01-30-02

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

Event Description: **2020 SMP : Lee**
Request ID: **RQ-2020-01-27-51**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 25-FEB-2020 12:01

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: Manuel Branch @ Park

Collection Date/Time: 01/29/2020 09:10

Field ID: G1SD0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152978	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P378034	
	EPA 300.0 Rev. 2.1	Chloride	130		mg Cl/L	P378302	
		Sulfate	27		mg SO4/L	P378305	
	SM 2120 B-2011	Color (true)	53		PCU	P377985	
	SM 2320 B-2011	Total Alkalinity	209		mg CaCO3/L	P378419	
	SM 2540 C-2011	TDS	507	A	mg/L	P378433	
	SM 2540 D-2011	TSS	2	UA	mg/L	P378238	
	SM 4500 F-C-2011	Fluoride	0.19		mg F/L	P378423	
2152979	EPA 350.1 Rev. 2.0	Ammonia-N	0.044		mg N/L	P378602	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P378408	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P378478	
	EPA 365.1 Rev. 2.0	Total-P	0.099		mg P/L	P378188	
	SM 5310 B-2011	Organic Carbon	9.1		mg C/L	P378473	
2152980	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.070		mg P/L	P377997	
2152998	EPA 8321B	Aldicarb	0.020	U	ug/L	P378093	
		Aldicarb Sulfone	0.0020	U	ug/L	P378093	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P378093	
		Carbaryl	0.0020	U	ug/L	P378093	
		Carbofuran	0.0020	U	ug/L	P378093	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P378093	
		Methiocarb	0.0020	U	ug/L	P378093	
		Methomyl	0.0020	U	ug/L	P378093	
		Oxamyl	0.0020	U	ug/L	P378093	
		Propoxur	0.0020	U	ug/L	P378093	
		2,4-D	0.0020	U	ug/L	P377959	
		Acesulfame K**	0.13	I	ug/L	P378149	MS
2152999		AMPA**	0.10	I	ug/L	P378149	
		Sucralose**	0.23		ug/L	P378149	
		Acetaminophen**	0.083		ug/L	P377959	
		Acetamidiprid**	0.0020	U	ug/L	P377959	
		Endothall**	0.25	U	ug/L	P378149	MS
		Glufosinate**	0.10	U	ug/L	P378149	
		Glyphosate**	0.14	I	ug/L	P378149	
		Afidopyropen**	0.0020	UJ	ug/L	P377959	
		Bentazon	0.022		ug/L	P377959	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377959	
		Carbamazepine**	0.0017	I	ug/L	P377959	
		Clothianidin**	0.0020	U	ug/L	P377959	
		Dinotefuran**	0.0020	U	ug/L	P377959	
		Diuron	0.0020	U	ug/L	P377959	
		Fenuron	0.016	U	ug/L	P377959	
		Fluridone**	8.0E-04	U	ug/L	P377959	
		Imazapyr**	0.019		ug/L	P377959	

Field ID: G1SD0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152999	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P377959	
		Ibuprofen**	0.020	U	ug/L	P377959	
		Imidacloprid	0.015		ug/L	P377959	
		Linuron	0.0040	U	ug/L	P377959	
		Mandestrobin**	0.0020	UJ	ug/L	P377959	
		MCP	0.0023	I	ug/L	P377959	
		Naproxen**	0.15		ug/L	P377959	
		Primidone**	0.0040	U	ug/L	P377959	
		Pyraclostrobin**	0.0020	U	ug/L	P377959	
		Thiamethoxam**	0.0020	U	ug/L	P377959	
		Tolfenpyrad**	0.0020	U	ug/L	P377959	
		Triclopyr**	0.0040	U	ug/L	P377959	
2153003	EPA 8270E	Aldrin	4.3	U	ng/L	P378488	
		Alpha-BHC	2.1	U	ng/L	P378488	
		Alpha-Chlordane	1.1	U	ng/L	P378488	
		Beta-BHC	11	UJ	ng/L	P378488	CCV
		Bifenthrin**	4.3	U	ng/L	P378488	
		Delta-BHC	8.6	UJ	ng/L	P378488	CCV
		Gamma-BHC	8.6	UJ	ng/L	P378488	CCV
		Carbophenothion	11	U	ng/L	P378488	
		Chlorothalonil	2.1	U	ng/L	P378488	
		Cis-Nonachlor**	1.1	U	ng/L	P378488	
		Cypermethrin	21	U	ng/L	P378488	
		DDD-p,p'	6.4	U	ng/L	P378488	
		DDE-p,p'	6.4	U	ng/L	P378488	
		DDT-p,p'	7.5	U	ng/L	P378488	
		Dicofol	32	U	ng/L	P378488	
		Dieldrin	4.3	U	ng/L	P378488	
		Endosulfan I	4.3	U	ng/L	P378488	
		Endosulfan II	4.3	U	ng/L	P378488	
		Endosulfan Sulfate	2.1	U	ng/L	P378488	
		Endrin	2.1	U	ng/L	P378488	
		Endrin Aldehyde	2.1	U	ng/L	P378488	
		Endrin Ketone	2.1	U	ng/L	P378488	
		Ethalfuralin**	3.2	U	ng/L	P378488	
		Gamma-Chlordane	1.1	U	ng/L	P378488	
		Heptachlor	1.6	U	ng/L	P378488	MS
		Heptachlor Epoxide	2.1	U	ng/L	P378488	
		Hexachlorobenzene	2.1	U	ng/L	P378488	
		Methoxychlor	4.3	U	ng/L	P378488	
		Mirex	2.1	U	ng/L	P378488	
		Permethrin	11	U	ng/L	P378488	
		Trans-Nonachlor**	1.1	U	ng/L	P378488	
		Trifluralin	2.7	U	ng/L	P378488	
	EPA 8276	Chlordane	5.4	U	ng/L	P378488	

Field ID: G1SD0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153003	EPA 8276	Toxaphene	32	U	ng/L	P378488	
2153004	EPA 8270E	Acetochlor	0.25	U	ng/L	P378084	
		Alachlor	0.25	U	ng/L	P378084	
		Ametryn	0.59	U	ng/L	P378084	
		Atrazine	2.7		ng/L	P378084	
		Atrazine Desethyl	3.8	I	ng/L	P378084	
		Azinphos Methyl	2.0	U	ng/L	P378084	
		Bromacil	0.49	U	ng/L	P378084	
		Butylate	0.39	U	ng/L	P378084	
		Carbophenothion	0.49	U	ng/L	P378084	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P378084	
		Chlorpyrifos Methyl	0.049	U	ng/L	P378084	
		Cyanazine	3.2	U	ng/L	P378084	
		Demeton	1.5	U	ng/L	P378084	
		Diazinon	0.12	U	ng/L	P378084	
		Dimethenamid**	0.099	U	ng/L	P378084	
		Disulfoton	0.49	UJ	ng/L	P378084	CCV
		Dithiopyr**	0.099	U	ng/L	P378084	
		EPTC	1.2	U	ng/L	P378084	
		Ethion	0.15	U	ng/L	P378084	
		Ethoprop	0.099	U	ng/L	P378084	
		Fenamiphos	0.49	U	ng/L	P378084	
		Fipronil	0.25	U	ng/L	P378084	
		Fipronil Desulfinyl**	0.12	U	ng/L	P378084	
		Fipronil Sulfide	0.72		ng/L	P378084	
		Fipronil Sulfone	0.73		ng/L	P378084	
		Flumioxazin**	1.7	U	ng/L	P378084	
		Fonofos	0.20	U	ng/L	P378084	
		Hexazinone	16		ng/L	P378084	
		Imazalil**	0.74	U	ng/L	P378084	
		Malathion	0.35	UJ	ng/L	P378084	CCV, RPD
		Metalaxyl	0.74	U	ng/L	P378084	
		Metolachlor	0.49	U	ng/L	P378084	
		Metribuzin	3.2	UJ	ng/L	P378084	CCV
		Mevinphos	0.49	U	ng/L	P378084	
		Molinate	0.30	U	ng/L	P378084	
		Norflurazon	0.49	U	ng/L	P378084	
		Oxadiazon**	3.2		ng/L	P378084	
		Parathion Ethyl	0.25	U	ng/L	P378084	
		Parathion Methyl	0.54	U	ng/L	P378084	
		Pendimethalin	0.99	U	ng/L	P378084	
		Phorate	0.25	U	ng/L	P378084	
		Prodiamine**	0.17	U	ng/L	P378084	
		Prometon	0.89	U	ng/L	P378084	
		Prometryn	0.20	U	ng/L	P378084	MS

Field ID: G1SD0070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153004	EPA 8270E	Pronamide**	0.15	U	ng/L	P378084	
		Propiconazole**	2.5		ng/L	P378084	
		Simazine	0.49	U	ng/L	P378084	
		Sulfentrazone**	16		ng/L	P378084	
		Tebuconazole**	0.49	U	ng/L	P378084	
		Terbufos	0.099	U	ng/L	P378084	
		Terbuthylazine	0.42	U	ng/L	P378084	
2153007	EPA 200.7 Rev. 4.4	Barium	19.2		ug/L	P378159	
		Calcium	85.9		mg/L	P378159	
		Iron	310		ug/L	P378159	
		Magnesium	9.87		mg/L	P378159	
		Potassium	2.7		mg/L	P378159	
		Sodium	73.8		mg/L	P378159	
	EPA 200.8 Rev. 5.4	Zinc	5.5	I	ug/L	P378159	
		Aluminum	20		ug/L	P378159	
		Antimony	0.19	I	ug/L	P378159	
		Arsenic	1.59		ug/L	P378159	
		Boron**	83.1		ug/L	P378159	
		Cadmium	0.020	U	ug/L	P378159	
		Chromium	0.75	I	ug/L	P378159	
		Copper	0.86		ug/L	P378159	
		Lead	0.52		ug/L	P378159	
		Nickel	0.50	U	ug/L	P378159	
		Selenium	0.20	U	ug/L	P378159	
		Silver	0.010	U	ug/L	P378159	
		Thallium	0.10	U	ug/L	P378159	
		Hardness	255		mg/L	P378159	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples and relative percent difference 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 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for dinotefuran could not be assessed due to high concentration of parameter in the spiked sample. Results confirmed in re-analysis.

EPA 8270E: 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.

Sample Location: Manuel Branch @ Park

Collection Date/Time: 01/29/2020 09:15

Field ID: G1SD0070_Dup

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153001	EPA 8321B	Aldicarb	0.020	U	ug/L	P378093	
		Aldicarb Sulfone	0.0020	U	ug/L	P378093	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P378093	
		Carbaryl	0.0020	U	ug/L	P378093	
		Carbofuran	0.0020	U	ug/L	P378093	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P378093	
		Methiocarb	0.0020	U	ug/L	P378093	
		Methomyl	0.0020	U	ug/L	P378093	
		Oxamyl	0.0020	U	ug/L	P378093	
		Propoxur	0.0020	U	ug/L	P378093	
2153002		2,4-D	0.0020	U	ug/L	P377959	
		Acesulfame K**	0.13	I	ug/L	P378149	MS
		AMPA**	0.11	I	ug/L	P378149	
		Sucralose**	0.26		ug/L	P378149	
		Acetaminophen**	0.080		ug/L	P377959	
		Acetamiprid**	0.0020	U	ug/L	P377959	
		Endothall**	0.25	U	ug/L	P378149	MS
		Glufosinate**	0.10	U	ug/L	P378149	
		Glyphosate**	0.16	I	ug/L	P378149	
		Afidopyropen**	0.0020	UJ	ug/L	P377959	
		Bentazon	0.022		ug/L	P377959	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377959	
		Carbamazepine**	0.0017	I	ug/L	P377959	
		Clothianidin**	0.0020	U	ug/L	P377959	
		Dinotefuran**	0.0020	U	ug/L	P377959	
		Diuron	0.0020	U	ug/L	P377959	
		Fenuron	0.016	U	ug/L	P377959	
		Fluridone**	8.0E-04	U	ug/L	P377959	
		Imazapyr**	0.019		ug/L	P377959	
		Hydrocodone**	0.0020	U	ug/L	P377959	
		Ibuprofen**	0.020	U	ug/L	P377959	
		Imidacloprid	0.019		ug/L	P377959	
		Linuron	0.0040	U	ug/L	P377959	
		Mandestrobin**	0.0020	UJ	ug/L	P377959	
		MCPP	0.0025	I	ug/L	P377959	
		Naproxen**	0.12		ug/L	P377959	
		Primidone**	0.0040	U	ug/L	P377959	
		Pyraclostrobin**	0.0020	U	ug/L	P377959	
		Thiamethoxam**	0.0020	U	ug/L	P377959	
		Tolfenpyrad**	0.0020	U	ug/L	P377959	
		Triclopyr**	0.0040	U	ug/L	P377959	
2153005	EPA 8270E	Aldrin	4.4	U	ng/L	P378488	
		Alpha-BHC	2.2	U	ng/L	P378488	
		Alpha-Chlordane	1.1	U	ng/L	P378488	

Field ID: G1SD0070_Dup

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153005	EPA 8270E	Beta-BHC	11	UJ	ng/L	P378488	CCV
		Bifenthrin**	4.4	U	ng/L	P378488	
		Delta-BHC	8.8	UJ	ng/L	P378488	CCV
		Gamma-BHC	8.8	UJ	ng/L	P378488	CCV
		Carbophenothion	11	U	ng/L	P378488	
		Chlorothalonil	2.2	U	ng/L	P378488	
		Cis-Nonachlor**	1.1	U	ng/L	P378488	
		Cypermethrin	22	U	ng/L	P378488	
		DDD-p,p'	6.6	U	ng/L	P378488	
		DDE-p,p'	6.6	U	ng/L	P378488	
		DDT-p,p'	7.7	U	ng/L	P378488	
		Dicofol	33	U	ng/L	P378488	
		Dieldrin	4.4	U	ng/L	P378488	
		Endosulfan I	4.4	U	ng/L	P378488	
		Endosulfan II	4.4	U	ng/L	P378488	
		Endosulfan Sulfate	2.2	U	ng/L	P378488	
		Endrin	2.2	U	ng/L	P378488	
		Endrin Aldehyde	2.2	U	ng/L	P378488	
		Endrin Ketone	2.2	U	ng/L	P378488	
		Ethalfuralin**	3.3	U	ng/L	P378488	
		Gamma-Chlordane	1.1	U	ng/L	P378488	
		Heptachlor	1.6	U	ng/L	P378488	MS
		Heptachlor Epoxide	2.2	U	ng/L	P378488	
		Hexachlorobenzene	2.2	U	ng/L	P378488	
		Methoxychlor	4.4	U	ng/L	P378488	
		Mirex	2.2	U	ng/L	P378488	
		Permethrin	11	U	ng/L	P378488	
		Trans-Nonachlor**	1.1	U	ng/L	P378488	
		Trifluralin	2.7	U	ng/L	P378488	
	EPA 8276	Chlordane	5.5	U	ng/L	P378488	
		Toxaphene	33	U	ng/L	P378488	
		Acetochlor	0.24	U	ng/L	P378084	
2153006	EPA 8270E	Alachlor	0.24	U	ng/L	P378084	
		Ametryn	0.59	U	ng/L	P378084	
		Atrazine	2.8		ng/L	P378084	
		Atrazine Desethyl	4.0	I	ng/L	P378084	
		Azinphos Methyl	2.0	U	ng/L	P378084	
		Bromacil	0.49	U	ng/L	P378084	
		Butylate	0.39	U	ng/L	P378084	
		Carbophenothion	0.49	U	ng/L	P378084	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P378084	
		Chlorpyrifos Methyl	0.049	U	ng/L	P378084	
		Cyanazine	3.2	U	ng/L	P378084	
		Demeton	1.5	U	ng/L	P378084	
		Diazinon	0.12	U	ng/L	P378084	

Field ID: G1SD0070_Dup

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153006	EPA 8270E	Dimethenamid**	0.098	U	ng/L	P378084	
		Disulfoton	0.49	UJ	ng/L	P378084	CCV
		Dithiopyr**	0.098	U	ng/L	P378084	
		EPTC	1.2	U	ng/L	P378084	
		Ethion	0.15	U	ng/L	P378084	
		Ethoprop	0.098	U	ng/L	P378084	
		Fenamiphos	0.49	U	ng/L	P378084	
		Fipronil	0.24	U	ng/L	P378084	
		Fipronil Desulfinyl**	0.12	U	ng/L	P378084	
		Fipronil Sulfide	0.71		ng/L	P378084	
		Fipronil Sulfone	0.75		ng/L	P378084	
		Flumioxazin**	1.7	U	ng/L	P378084	
		Fonofos	0.20	U	ng/L	P378084	
		Hexazinone	16		ng/L	P378084	
		Imazalil**	0.73	U	ng/L	P378084	
		Malathion	0.34	UJ	ng/L	P378084	CCV, RPD
		Metalaxyl	0.73	U	ng/L	P378084	
		Metolachlor	0.49	U	ng/L	P378084	
		Metribuzin	3.2	UJ	ng/L	P378084	CCV
		Mevinphos	0.49	U	ng/L	P378084	
		Molinate	0.29	U	ng/L	P378084	
		Norflurazon	0.49	U	ng/L	P378084	
		Oxadiazon**	3.2		ng/L	P378084	
		Parathion Ethyl	0.24	U	ng/L	P378084	
		Parathion Methyl	0.54	U	ng/L	P378084	
		Pendimethalin	0.98	U	ng/L	P378084	
		Phorate	0.24	U	ng/L	P378084	
		Prodiamine**	0.17	U	ng/L	P378084	
		Prometon	0.88	U	ng/L	P378084	
		Prometryn	0.20	U	ng/L	P378084	MS
		Pronamide**	0.15	U	ng/L	P378084	
		Propiconazole**	2.6		ng/L	P378084	
		Simazine	0.49	U	ng/L	P378084	
		Sulfentrazone**	16		ng/L	P378084	
		Tebuconazole**	0.49	U	ng/L	P378084	
		Terbufos	0.098	U	ng/L	P378084	
		Terbuthylazine	0.42	U	ng/L	P378084	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for dinotefuran could not be assessed due to high concentration of parameter in the spiked sample. Results confirmed in re-analysis.

EPA 8270E: 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.

Sample Location: WhiskeyCreek@CountryClb

Collection Date/Time: 01/29/2020 10:15

Field ID: G3SD0077

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2153000	EPA 8321B	2,4-D	0.0042	I	ug/L	P377959	
		Acesulfame K**	0.10	UJ	ug/L	P378149	MS, SUR
		AMPA**	1.0	U	ug/L	P378149	
		Sucralose**	0.17	J	ug/L	P378149	SUR
		Acetaminophen**	0.0080	U	ug/L	P377959	
		Acetamiprid**	0.0020	U	ug/L	P377959	
		Endothall**	0.25	UJ	ug/L	P378149	MS, SUR
		Glufosinate**	1.0	U	ug/L	P378149	
		Glyphosate**	1.0	U	ug/L	P378149	
		Afidopyropen**	0.0020	UJ	ug/L	P377959	
		Bentazon	0.027		ug/L	P377959	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377959	
		Carbamazepine**	0.0015	I	ug/L	P377959	
		Clothianidin**	0.0020	U	ug/L	P377959	
		Dinotefuran**	0.0033	I	ug/L	P377959	
		Diuron	0.0020	U	ug/L	P377959	
		Fenuron	0.016	U	ug/L	P377959	
		Fluridone**	0.011		ug/L	P377959	
		Imazapyr**	0.034		ug/L	P377959	
		Hydrocodone**	0.0020	U	ug/L	P377959	
		Ibuprofen**	0.020	U	ug/L	P377959	
		Imidacloprid	0.012		ug/L	P377959	
		Linuron	0.0040	U	ug/L	P377959	
		Mandestrobin**	0.0020	UJ	ug/L	P377959	
		MCPP	0.0020	U	ug/L	P377959	
		Naproxen**	0.0080	U	ug/L	P377959	
		Primidone**	0.0040	U	ug/L	P377959	
		Pyraclostrobin**	0.0020	U	ug/L	P377959	
		Thiamethoxam**	0.0020	U	ug/L	P377959	
		Tolfenpyrad**	0.0020	U	ug/L	P377959	
		Triclopyr**	0.0040	U	ug/L	P377959	

Ref. Method and Comment:

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for dinotefuran could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8321B: Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P378034

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378159

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: P378159

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378302

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378305

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378602

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378408

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378478

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378188

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377997

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

Reference Method: EPA 8270E
Batch ID: P378084

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P378084

Component	Result	Code	Units
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
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 8270E
Batch ID: P378488

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	10	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P378488

Component	Result	Code	Units
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P378488

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P377959

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

Reference Method: EPA 8321B
Batch ID: P378093

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P378093

Component	Result	Code	Units
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P378149

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: P377985

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P378419

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

Reference Method: SM 2540 C-2011
Batch ID: P378433

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P378238

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P378423

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: P378473

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: P378159

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	97.5		P	85 - 115
Calcium	102		P	85 - 115
Iron	101		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	97.0		P	85 - 115
Sodium	100		P	85 - 115
Zinc	97.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378159

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.6		P	85 - 115
Antimony	107		P	85 - 115
Arsenic	105		P	85 - 115
Boron	104		P	85 - 115
Cadmium	107		P	85 - 115
Chromium	105		P	85 - 115
Copper	100		P	85 - 115
Lead	104		P	85 - 115
Nickel	100		P	85 - 115
Selenium	100		P	85 - 115
Silver	108		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378302

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378305

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378602

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.0		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378478

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: P378188

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: P377997

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

Reference Method: EPA 8270E
Batch ID: P378084

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	89.6	94.9	P/P	71 - 122
Alachlor	90.7	94.4	P/P	70 - 121
Ametryn	115	111	P/P	49 - 137
Atrazine	89.3	95.2	P/P	76 - 125
Atrazine Desethyl	77.5	78.9	P/P	31 - 144
Azinphos Methyl	113	118	P/P	67 - 150
Bromacil	87.8	91.7	P/P	36 - 121
Butylate	37.9	49.4	P/P	33 - 88.0
Carbophenothion	82.0	91.8	P/P	50 - 150
Chlorpyrifos Ethyl	83.1	91.5	P/P	73 - 117
Chlorpyrifos Methyl	83.0	93.0	P/P	68 - 121
Cyanazine	100	109	P/P	20 - 250
Demeton	71.6	80.7	P/P	30 - 123
Diazinon	87.7	96.3	P/P	70 - 128
Dimethenamid	89.5	96.0	P/P	66 - 122
Disulfoton	75.8	65.1	P/P	46 - 124
Dithiopyr	87.6	89.2	P/P	69 - 122
EPTC	36.3	42.0	P/P	31 - 90.0
Ethion	76.0	85.4	P/P	45 - 135
Ethoprop	67.6	78.8	P/P	59 - 118
Fenamiphos	90.5	102	P/P	30 - 136
Fipronil	94.4	102	P/P	57 - 127
Fipronil Desulfinyl	86.7	95.7	P/P	51 - 122
Fipronil Sulfide	77.2	84.9	P/P	57 - 119
Fipronil Sulfone	82.0	89.5	P/P	51 - 119
Flumioxazin	127	136	P/P	70 - 200
Fonofos	73.4	81.2	P/P	60 - 120
Hexazinone	94.3	99.6	P/P	57 - 142
Imazalil	81.2	83.3	P/P	50 - 150
Malathion	92.6	100	P/P	67 - 128
Metalaxyl	85.6	90.8	P/P	21 - 148
Metolachlor	95.1	100	P/P	70 - 120
Metribuzin	121	124	P/P	20 - 253
Mevinphos	64.7	73.2	P/P	47 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P378084

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molinate	49.2	54.9	P/P	41 - 99.0
Norflurazon	85.3	92.7	P/P	54 - 127
Oxadiazon	81.1	84.9	P/P	65 - 122
Parathion Ethyl	85.5	88.1	P/P	71 - 113
Parathion Methyl	88.5	97.4	P/P	73 - 129
Pendimethalin	86.2	88.2	P/P	63 - 130
Phorate	79.6	84.2	P/P	48 - 118
Prodiamine	77.6	84.6	P/P	20 - 144
Prometon	87.1	87.4	P/P	53 - 120
Prometryn	106	109	P/P	63 - 119
Pronamide	88.8	96.0	P/P	50 - 150
Propiconazole	93.8	100	P/P	50 - 150
Simazine	90.9	96.0	P/P	77 - 129
Sulfentrazone	81.8	88.0	P/P	50 - 150
Tebuconazole	68.9	71.8	P/P	20 - 118
Terbufos	79.8	84.0	P/P	61 - 119
Terbutylazine	87.8	90.8	P/P	75 - 119

Reference Method: EPA 8270E
Batch ID: P378488

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	41.7	40.6	P/P	20 - 87.0
Alpha-BHC	83.8	86.2	P/P	65 - 142
Alpha-Chlordane	85.6	83.6	P/P	58 - 106
Beta-BHC	126	125	P/P	65 - 179
Bifenthrin	75.2	73.8	P/P	38 - 128
Carbophenothion	83.8	85.0	P/P	20 - 144
Chlorothalonil	96.0	96.1	P/P	20 - 214
Cis-Nonachlor	86.5	84.4	P/P	56 - 113
Cypermethrin	81.4	82.7	P/P	37 - 130
DDD-p,p'	87.4	85.5	P/P	66 - 119
DDE-p,p'	86.5	87.5	P/P	53 - 108
DDT-p,p'	80.6	78.5	P/P	57 - 133
Delta-BHC	158	153	P/P	68 - 187
Dicofol	104	103	P/P	66 - 123
Dieldrin	95.3	91.9	P/P	65 - 111
Endosulfan I	94.3	94.4	P/P	65 - 115
Endosulfan II	94.3	91.1	P/P	68 - 133
Endosulfan Sulfate	94.3	88.9	P/P	62 - 127
Endrin	89.0	88.5	P/P	64 - 122
Endrin Aldehyde	99.3	92.5	P/P	61 - 132
Endrin Ketone	96.4	91.9	P/P	66 - 120
Ethalfuralin	76.8	76.1	P/P	57 - 127
Gamma-BHC	129	130	P/P	71 - 158
Gamma-Chlordane	80.8	79.7	P/P	53 - 106
Heptachlor	54.0	55.3	P/P	45 - 96.0
Heptachlor Epoxide	88.8	86.6	P/P	64 - 109
Hexachlorobenzene	75.4	78.0	P/P	46 - 103
Methoxychlor	89.3	86.6	P/P	69 - 149
Mirex	72.1	72.9	P/P	31 - 90.0
Permethrin	77.5	75.8	P/P	41 - 108

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P378488

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Trans-Nonachlor	82.1	80.5	P/P	50 - 107
Trifluralin	76.6	76.1	P/P	58 - 119

Reference Method: EPA 8276
Batch ID: P378488

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	87.7	89.4	P/P	47 - 119
Toxaphene	99.3	95.7	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P377959

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	134		P	30 - 160
Acetaminophen	92.3		P	30 - 160
Acetamiprid	93.5		P	30 - 160
Afidopyropen	96.7		P	30 - 160
Bentazon	73.7		P	30 - 160
Benzovindiflupyr	77.4		P	30 - 160
Carbamazepine	89.5		P	30 - 160
Clothianidin	93.8		P	30 - 160
Dinotefuran	110		P	30 - 160
Diuron	74.4		P	30 - 160
Fenuron	111		P	30 - 160
Fluridone	92.7		P	30 - 160
Hydrocodone	108		P	30 - 160
Ibuprofen	81.0		P	30 - 160
Imazapyr	114		P	30 - 160
Imidacloprid	96.0		P	30 - 160
Linuron	73.2		P	30 - 160
Mandestrobin	94.7		P	30 - 160
MCPP	127		P	30 - 160
Naproxen	73.1		P	30 - 160
Primidone	88.1		P	30 - 160
Pyraclostrobin	86.1		P	30 - 160
Thiamethoxam	103		P	30 - 160
Tolfenpyrad	59.1		P	30 - 160
Triclopyr	101		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P378093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	69.9		P	30 - 160
Aldicarb	45.3		P	30 - 160
Aldicarb Sulfone	92.7		P	30 - 160
Aldicarb Sulfoxide	86.4		P	30 - 160
Carbaryl	59.1		P	30 - 160
Carbofuran	67.7		P	30 - 160
Methiocarb	64.2		P	30 - 160
Methomyl	80.9		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P378093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Oxamyl	80.9		P	30 - 160
Propoxur	70.6		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P378149

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.9		P	40 - 150
AMPA	127		P	40 - 150
Endothall	121		P	40 - 150
Glufosinate	118		P	40 - 150
Glyphosate	117		P	40 - 140
Sucralose	95.5		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P377985

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

Reference Method: SM 2320 B-2011
Batch ID: P378419

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P378423

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P378473

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152723	Barium	97.3		P	80 - 120
2152723	Calcium	102		P	80 - 120
2152723	Iron	100		P	80 - 120
2152723	Magnesium	102		P	80 - 120
2152723	Potassium	94.7		P	80 - 120
2152723	Sodium	102		P	80 - 120
2152723	Zinc	96.4		P	80 - 120
2153526	Barium	99.9	96.4	P/P	80 - 120
2153526	Calcium	100		P	80 - 120
2153526	Iron	102	102	P/P	80 - 120
2153526	Magnesium	100	102	P/P	80 - 120
2153526	Potassium	97.0	95.8	P/P	80 - 120
2153526	Sodium	101		P	80 - 120
2153526	Zinc	98.7	95.6	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378159

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152723	Aluminum	97.4		P	80 - 120
2152723	Antimony	108		P	80 - 120
2152723	Arsenic	109		P	80 - 120
2152723	Boron	102		P	80 - 120
2152723	Cadmium	107		P	80 - 120
2152723	Chromium	108		P	80 - 120
2152723	Copper	103		P	80 - 120
2152723	Lead	108		P	80 - 120
2152723	Nickel	101		P	80 - 120
2152723	Selenium	99.6		P	80 - 120
2152723	Silver	107		P	80 - 120
2152723	Thallium	111		P	80 - 120
2153526	Aluminum	97.2	97.5	P/P	80 - 120
2153526	Antimony	107	107	P/P	80 - 120
2153526	Arsenic	106	107	P/P	80 - 120
2153526	Boron	104	104	P/P	80 - 120
2153526	Cadmium	107	106	P/P	80 - 120
2153526	Chromium	107	107	P/P	80 - 120
2153526	Copper	99.9	101	P/P	80 - 120
2153526	Lead	104	104	P/P	80 - 120
2153526	Nickel	100	101	P/P	80 - 120
2153526	Selenium	99.0	97.5	P/P	80 - 120
2153526	Silver	105	104	P/P	80 - 120
2153526	Thallium	106	107	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153011	Chloride	100		P	90 - 110
2153385	Chloride	101		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P378305

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153011	Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P378602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152923	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P378408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152979	Kjeldahl Nitrogen	104	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P378478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153039	NO2NO3-N	97.3	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P378188

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152901	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377997

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152921	O-Phosphate-P	98.4	98.2	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P378084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153594	Acetochlor	99.7	107	P/P	68 - 126
2153594	Alachlor	92.3	109	P/P	66 - 125
2153594	Ametryn	111	130	P/P	31 - 182
2153594	Atrazine Desethyl	78.8	87.7	P/P	13 - 161
2153594	Azinphos Methyl	104	113	P/P	54 - 162
2153594	Butylate	50.1	54.5	P/P	16 - 92.0
2153594	Carbophenothion	84.5	86.7	P/P	50 - 150
2153594	Chlorpyrifos Ethyl	96.3	93.3	P/P	63 - 124
2153594	Chlorpyrifos Methyl	94.8	99.8	P/P	64 - 125
2153594	Cyanazine	94.2	113	P/P	13 - 245
2153594	Demeton	92.3	102	P/P	20 - 154
2153594	Diazinon	99.9	110	P/P	66 - 141
2153594	Dimethenamid	100	107	P/P	50 - 130
2153594	Disulfoton	76.2	68.4	P/P	55 - 130
2153594	Dithiopyr	93.9	106	P/P	66 - 122
2153594	EPTC	53.4	54.1	P/P	15 - 93.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P378084

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153594	Ethion	83.2	87.1	P/P	15 - 148
2153594	Ethoprop	95.9	104	P/P	59 - 126
2153594	Fenamiphos	106	110	P/P	39 - 137
2153594	Fipronil	109	122	P/P	47 - 131
2153594	Fipronil Desulfinyl	96.9	108	P/P	43 - 121
2153594	Fipronil Sulfide	104	114	P/P	29 - 134
2153594	Fipronil Sulfone	83.3	100	P/P	19 - 131
2153594	Flumioxazin	131	148	P/P	70 - 200
2153594	Fonofos	86.9	89.7	P/P	62 - 128
2153594	Hexazinone	105	103	P/P	58 - 154
2153594	Imazalil	130	125	P/P	50 - 150
2153594	Malathion	70.6	104	P/P	54 - 135
2153594	Metalaxyl	95.8	103	P/P	46 - 136
2153594	Metolachlor	99.5	103	P/P	62 - 126
2153594	Metribuzin	181	187	P/P	44 - 277
2153594	Mevinphos	82.3	86.5	P/P	44 - 135
2153594	Molinate	68.8	74.5	P/P	31 - 104
2153594	Norflurazon	91.3	101	P/P	32 - 134
2153594	Oxadiazon	81.5	93.0	P/P	55 - 123
2153594	Parathion Ethyl	92.9	100	P/P	67 - 120
2153594	Parathion Methyl	103	114	P/P	70 - 140
2153594	Pendimethalin	92.4	105	P/P	59 - 145
2153594	Phorate	88.8	94.3	P/P	52 - 127
2153594	Prodiamine	41.9	47.7	P/P	11 - 157
2153594	Prometon	71.3	100	P/P	55 - 130
2153594	Prometryn	128	140	F/F	55 - 127
2153594	Pronamide	115	127	P/P	50 - 150
2153594	Propiconazole	96.8	112	P/P	50 - 150
2153594	Simazine	93.8	108	P/P	58 - 159
2153594	Tebuconazole	67.0	72.4	P/P	10 - 122
2153594	Terbufos	94.6	99.8	P/P	65 - 131
2153594	Terbutylazine	91.0	96.3	P/P	63 - 131

Reference Method: EPA 8270E
Batch ID: P378488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153375	Aldrin	43.5	35.3	P/P	32 - 82.0
2153375	Alpha-BHC	77.9	96.2	P/P	68 - 157
2153375	Alpha-Chlordane	84.8	82.3	P/P	54 - 108
2153375	Beta-BHC	117	143	P/P	54 - 200
2153375	Bifenthrin	71.8	70.4	P/P	49 - 124
2153375	Carbophenothion	99.9	94.5	P/P	42 - 173
2153375	Chlorothalonil	119	122	P/P	10 - 289
2153375	Cis-Nonachlor	85.1	82.0	P/P	53 - 112
2153375	Cypermethrin	86.8	81.8	P/P	43 - 141
2153375	DDD-p,p'	88.1	83.8	P/P	58 - 125
2153375	DDE-p,p'	77.1	81.2	P/P	50 - 108
2153375	DDT-p,p'	76.8	77.9	P/P	52 - 140
2153375	Delta-BHC	155	184	P/P	61 - 228
2153375	Dicofol	116	117	P/P	59 - 130
2153375	Dieldrin	92.7	89.9	P/P	57 - 121

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P378488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153375	Endosulfan I	89.3	103	P/P	62 - 123
2153375	Endosulfan II	99.9	94.5	P/P	48 - 163
2153375	Endosulfan Sulfate	93.5	89.8	P/P	63 - 132
2153375	Endrin	93.6	87.9	P/P	58 - 128
2153375	Endrin Aldehyde	94.7	88.2	P/P	44 - 126
2153375	Endrin Ketone	94.2	90.9	P/P	68 - 127
2153375	Ethalfuralin	75.6	75.0	P/P	55 - 131
2153375	Gamma-BHC	135	171	P/P	54 - 206
2153375	Gamma-Chlordane	80.0	77.9	P/P	52 - 105
2153375	Heptachlor	46.9	48.0	F/P	47 - 94.0
2153375	Heptachlor Epoxide	88.5	86.3	P/P	61 - 113
2153375	Hexachlorobenzene	72.5	72.1	P/P	45 - 100
2153375	Methoxychlor	90.5	88.7	P/P	63 - 153
2153375	Mirex	66.0	64.6	P/P	38 - 90.0
2153375	Permethrin	75.7	75.6	P/P	45 - 112
2153375	Trans-Nonachlor	80.6	78.5	P/P	50 - 103
2153375	Trifluralin	75.4	75.6	P/P	57 - 122

Reference Method: EPA 8276
Batch ID: P378488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153003	Chlordane	100	102	P/P	34 - 129
2153003	Toxaphene	93.0	89.8	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P377959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152702	2,4-D	132	120	P/P	30 - 160
2152702	Acetaminophen	91.7	89.6	P/P	30 - 160
2152702	Acetamiprid	101	97.3	P/P	30 - 160
2152702	Afidopyropen	79.7	77.4	P/P	30 - 160
2152702	Bentazon	49.0	54.3	P/P	30 - 160
2152702	Benzovindiflupyr	83.9	81.4	P/P	30 - 160
2152702	Carbamazepine	94.5	83.4	P/P	30 - 160
2152702	Clothianidin	102	95.7	P/P	30 - 160
2152702	Diuron	70.9	73.5	P/P	30 - 160
2152702	Fenuron	66.4	64.4	P/P	30 - 160
2152702	Fluridone	112	102	P/P	30 - 160
2152702	Hydrocodone	104	87.2	P/P	30 - 160
2152702	Ibuprofen	81.9	80.8	P/P	30 - 160
2152702	Imazapyr	105	99.6	P/P	30 - 160
2152702	Imidacloprid	146	140	P/P	30 - 160
2152702	Linuron	70.1	69.2	P/P	30 - 160
2152702	Mandestrobin	93.6	92.4	P/P	30 - 160
2152702	MCP	123	119	P/P	30 - 160
2152702	Naproxen	93.7	77.4	P/P	30 - 160
2152702	Primidone	100	99.0	P/P	30 - 160
2152702	Pyraclostrobin	92.5	90.3	P/P	30 - 160
2152702	Thiamethoxam	144	139	P/P	30 - 160
2152702	Tolfenpyrad	65.7	63.7	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P377959

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152702	Triclopyr	94.7	84.3	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P378093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152481	3-Hydroxycarbofuran	85.1	77.1	P/P	30 - 160
2152481	Aldicarb	72.0	63.6	P/P	30 - 160
2152481	Aldicarb Sulfone	116	100	P/P	30 - 160
2152481	Aldicarb Sulfoxide	63.1	55.5	P/P	30 - 160
2152481	Carbaryl	64.6	52.0	P/P	30 - 160
2152481	Carbofuran	70.3	62.2	P/P	30 - 160
2152481	Methiocarb	67.3	58.7	P/P	30 - 160
2152481	Methomyl	89.3	88.3	P/P	30 - 160
2152481	Oxamyl	110	94.5	P/P	30 - 160
2152481	Propoxur	58.5	55.9	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P378149

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152739	Acesulfame K	24.6	25.0	F/F	40 - 150
2152739	AMPA	127	127	P/P	40 - 150
2152739	Endothall	153	149	F/P	40 - 150
2152739	Glufosinate	117	108	P/P	40 - 150
2152739	Glyphosate	91.0	79.1	P/P	40 - 140
2152739	Sucralose	99.6	95.7	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P378423

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2153386	Fluoride	98.1	98.8	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P378473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2152979	Organic Carbon	105	98.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P378034

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152962	Turbidity	3.51	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P378159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153526	Barium	3.30	Spike	P	0 - 20
2153526	Calcium	0.326	Spike	P	0 - 20
2153526	Iron	0.411	Spike	P	0 - 20
2153526	Magnesium	1.06	Spike	P	0 - 20
2153526	Potassium	0.873	Spike	P	0 - 20
2153526	Sodium	1.23	Spike	P	0 - 20
2153526	Zinc	3.08	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P378159

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153526	Aluminum	0.201	Spike	P	0 - 20
2153526	Antimony	0.337	Spike	P	0 - 20
2153526	Arsenic	0.670	Spike	P	0 - 20
2153526	Boron	0.435	Spike	P	0 - 20
2153526	Cadmium	0.577	Spike	P	0 - 20
2153526	Chromium	0.140	Spike	P	0 - 20
2153526	Copper	0.658	Spike	P	0 - 20
2153526	Lead	0.155	Spike	P	0 - 20
2153526	Nickel	0.726	Spike	P	0 - 20
2153526	Selenium	1.45	Spike	P	0 - 20
2153526	Silver	1.17	Spike	P	0 - 20
2153526	Thallium	0.659	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P378302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153385	Chloride	1.21	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P378602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152923	Ammonia-N	0.212	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P378408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152979	Kjeldahl Nitrogen	2.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P378478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153039	NO2NO3-N	0.399	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P378188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152901	Total-P	1.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377997

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152921	O-Phosphate-P	0.203	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P378084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153594	Acetochlor	7.38	Spike	P	0 - 30
2153594	Alachlor	16.4	Spike	P	0 - 30
2153594	Ametryn	13.2	Spike	P	0 - 30
2153594	Atrazine	6.72	Spike	P	0 - 30
2153594	Atrazine Desethyl	7.25	Spike	P	0 - 30
2153594	Azinphos Methyl	8.33	Spike	P	0 - 30
2153594	Bromacil	9.64	Spike	P	0 - 30
2153594	Butylate	8.55	Spike	P	0 - 30
2153594	Carbophenothion	2.52	Spike	P	0 - 30
2153594	Chlorpyrifos Ethyl	3.17	Spike	P	0 - 30
2153594	Chlorpyrifos Methyl	5.22	Spike	P	0 - 30
2153594	Cyanazine	17.9	Spike	P	0 - 30
2153594	Demeton	10.5	Spike	P	0 - 30
2153594	Diazinon	9.54	Spike	P	0 - 30
2153594	Dimethenamid	6.86	Spike	P	0 - 30
2153594	Disulfoton	10.8	Spike	P	0 - 30
2153594	Dithiopyr	10.9	Spike	P	0 - 30
2153594	EPTC	1.28	Spike	P	0 - 30
2153594	Ethion	4.62	Spike	P	0 - 30
2153594	Ethoprop	7.61	Spike	P	0 - 30
2153594	Fenamiphos	3.85	Spike	P	0 - 30
2153594	Fipronil	8.65	Spike	P	0 - 30
2153594	Fipronil Desulfinyl	7.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P378084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153594	Fipronil Sulfide	7.50	Spike	P	0 - 30
2153594	Fipronil Sulfone	6.24	Spike	P	0 - 30
2153594	Flumioxazin	12.2	Spike	P	0 - 30
2153594	Fonofos	3.18	Spike	P	0 - 30
2153594	Hexazinone	1.58	Spike	P	0 - 30
2153594	Imazalil	4.00	Spike	P	0 - 30
2153594	Malathion	38.2	Spike	F	0 - 30
2153594	Metalaxyl	7.20	Spike	P	0 - 30
2153594	Metolachlor	3.59	Spike	P	0 - 30
2153594	Metribuzin	3.31	Spike	P	0 - 30
2153594	Mevinphos	4.93	Spike	P	0 - 30
2153594	Molinate	7.94	Spike	P	0 - 30
2153594	Norflurazon	9.58	Spike	P	0 - 30
2153594	Oxadiazon	11.0	Spike	P	0 - 30
2153594	Parathion Ethyl	7.36	Spike	P	0 - 30
2153594	Parathion Methyl	9.88	Spike	P	0 - 30
2153594	Pendimethalin	12.3	Spike	P	0 - 30
2153594	Phorate	6.01	Spike	P	0 - 30
2153594	Prodiamine	13.0	Spike	P	0 - 30
2153594	Prometon	14.7	Spike	P	0 - 30
2153594	Prometryn	8.72	Spike	P	0 - 30
2153594	Pronamide	9.37	Spike	P	0 - 30
2153594	Propiconazole	8.34	Spike	P	0 - 30
2153594	Simazine	7.62	Spike	P	0 - 30
2153594	Sulfentrazone	7.85	Spike	P	0 - 30
2153594	Tebuconazole	6.53	Spike	P	0 - 30
2153594	Terbufos	5.34	Spike	P	0 - 30
2153594	Terbutylazine	5.73	Spike	P	0 - 30
LFB	Acetochlor	5.75	LCS	P	0 - 30
LFB	Alachlor	4.00	LCS	P	0 - 30
LFB	Ametryn	4.16	LCS	P	0 - 30
LFB	Atrazine	6.35	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.79	LCS	P	0 - 30
LFB	Azinphos Methyl	4.36	LCS	P	0 - 30
LFB	Bromacil	4.33	LCS	P	0 - 30
LFB	Butylate	26.3	LCS	P	0 - 30
LFB	Carbophenothion	11.2	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	9.64	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	11.3	LCS	P	0 - 30
LFB	Cyanazine	8.35	LCS	P	0 - 30
LFB	Demeton	12.0	LCS	P	0 - 30
LFB	Diazinon	9.38	LCS	P	0 - 30
LFB	Dimethenamid	7.05	LCS	P	0 - 30
LFB	Disulfoton	15.2	LCS	P	0 - 30
LFB	Dithiopyr	1.73	LCS	P	0 - 30
LFB	EPTC	14.6	LCS	P	0 - 30
LFB	Ethion	11.6	LCS	P	0 - 30
LFB	Ethoprop	15.3	LCS	P	0 - 30
LFB	Fenamiphos	12.3	LCS	P	0 - 30
LFB	Fipronil	7.99	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	9.83	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P378084

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fipronil Sulfide	9.50	LCS	P	0 - 30
LFB	Fipronil Sulfone	8.74	LCS	P	0 - 30
LFB	Flumioxazin	7.45	LCS	P	0 - 30
LFB	Fonofos	10.1	LCS	P	0 - 30
LFB	Hexazinone	5.52	LCS	P	0 - 30
LFB	Imazalil	2.63	LCS	P	0 - 30
LFB	Malathion	7.79	LCS	P	0 - 30
LFB	Metalaxyl	5.93	LCS	P	0 - 30
LFB	Metolachlor	5.00	LCS	P	0 - 30
LFB	Metribuzin	2.24	LCS	P	0 - 30
LFB	Mevinphos	12.4	LCS	P	0 - 30
LFB	Molinate	10.9	LCS	P	0 - 30
LFB	Norflurazon	8.29	LCS	P	0 - 30
LFB	Oxadiazon	4.56	LCS	P	0 - 30
LFB	Parathion Ethyl	2.95	LCS	P	0 - 30
LFB	Parathion Methyl	9.59	LCS	P	0 - 30
LFB	Pendimethalin	2.31	LCS	P	0 - 30
LFB	Phorate	5.67	LCS	P	0 - 30
LFB	Prodiamine	8.68	LCS	P	0 - 30
LFB	Prometon	0.336	LCS	P	0 - 30
LFB	Prometryn	2.29	LCS	P	0 - 30
LFB	Pronamide	7.75	LCS	P	0 - 30
LFB	Propiconazole	6.67	LCS	P	0 - 30
LFB	Simazine	5.41	LCS	P	0 - 30
LFB	Sulfentrazone	7.22	LCS	P	0 - 30
LFB	Tebuconazole	4.03	LCS	P	0 - 30
LFB	Terbufos	5.07	LCS	P	0 - 30
LFB	Terbutylazine	3.40	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P378488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153375	Aldrin	21.0	Spike	P	0 - 30
2153375	Alpha-BHC	21.0	Spike	P	0 - 30
2153375	Alpha-Chlordane	2.92	Spike	P	0 - 30
2153375	Beta-BHC	20.1	Spike	P	0 - 30
2153375	Bifenthrin	2.00	Spike	P	0 - 30
2153375	Carbophenothion	5.54	Spike	P	0 - 30
2153375	Chlorothalonil	2.95	Spike	P	0 - 30
2153375	Cis-Nonachlor	3.66	Spike	P	0 - 30
2153375	Cypermethrin	5.97	Spike	P	0 - 30
2153375	DDD-p,p'	5.04	Spike	P	0 - 30
2153375	DDE-p,p'	5.17	Spike	P	0 - 30
2153375	DDT-p,p'	1.40	Spike	P	0 - 30
2153375	Delta-BHC	17.2	Spike	P	0 - 30
2153375	Dicofol	0.411	Spike	P	0 - 30
2153375	Dieldrin	2.96	Spike	P	0 - 30
2153375	Endosulfan I	14.1	Spike	P	0 - 30
2153375	Endosulfan II	5.59	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P378488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153375	Endosulfan Sulfate	4.10	Spike	P	0 - 30
2153375	Endrin	6.23	Spike	P	0 - 30
2153375	Endrin Aldehyde	7.10	Spike	P	0 - 30
2153375	Endrin Ketone	3.54	Spike	P	0 - 30
2153375	Ethalfuralin	0.803	Spike	P	0 - 30
2153375	Gamma-BHC	24.0	Spike	P	0 - 30
2153375	Gamma-Chlordane	2.69	Spike	P	0 - 30
2153375	Heptachlor	2.51	Spike	P	0 - 30
2153375	Heptachlor Epoxide	2.48	Spike	P	0 - 30
2153375	Hexachlorobenzene	0.582	Spike	P	0 - 30
2153375	Methoxychlor	2.08	Spike	P	0 - 30
2153375	Mirex	2.16	Spike	P	0 - 30
2153375	Permethrin	0.0861	Spike	P	0 - 30
2153375	Trans-Nonachlor	2.63	Spike	P	0 - 30
2153375	Trifluralin	0.260	Spike	P	0 - 30
LFB	Aldrin	2.83	LCS	P	0 - 30
LFB	Alpha-BHC	2.83	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.35	LCS	P	0 - 30
LFB	Beta-BHC	0.165	LCS	P	0 - 30
LFB	Bifenthrin	1.82	LCS	P	0 - 30
LFB	Carbophenothion	1.44	LCS	P	0 - 30
LFB	Chlorothalonil	0.101	LCS	P	0 - 30
LFB	Cis-Nonachlor	2.38	LCS	P	0 - 30
LFB	Cypermethrin	1.56	LCS	P	0 - 30
LFB	DDD-p,p'	2.12	LCS	P	0 - 30
LFB	DDE-p,p'	1.15	LCS	P	0 - 30
LFB	DDT-p,p'	2.67	LCS	P	0 - 30
LFB	Delta-BHC	2.77	LCS	P	0 - 30
LFB	Dicofol	1.32	LCS	P	0 - 30
LFB	Dieldrin	3.64	LCS	P	0 - 30
LFB	Endosulfan I	0.0637	LCS	P	0 - 30
LFB	Endosulfan II	3.42	LCS	P	0 - 30
LFB	Endosulfan Sulfate	5.90	LCS	P	0 - 30
LFB	Endrin	0.665	LCS	P	0 - 30
LFB	Endrin Aldehyde	7.04	LCS	P	0 - 30
LFB	Endrin Ketone	4.75	LCS	P	0 - 30
LFB	Ethalfuralin	0.812	LCS	P	0 - 30
LFB	Gamma-BHC	1.12	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.36	LCS	P	0 - 30
LFB	Heptachlor	2.51	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.47	LCS	P	0 - 30
LFB	Hexachlorobenzene	3.33	LCS	P	0 - 30
LFB	Methoxychlor	3.12	LCS	P	0 - 30
LFB	Mirex	1.09	LCS	P	0 - 30
LFB	Permethrin	2.23	LCS	P	0 - 30
LFB	Trans-Nonachlor	1.95	LCS	P	0 - 30
LFB	Trifluralin	0.660	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P378488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153003	Chlordane	2.22	Spike	P	0 - 30
2153003	Toxaphene	3.51	Spike	P	0 - 30
LFB	Chlordane	1.97	LCS	P	0 - 30
LFB	Toxaphene	3.73	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377959

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152702	2,4-D	9.54	Spike	P	0 - 30
2152702	Acetaminophen	2.36	Spike	P	0 - 30
2152702	Acetamiprid	3.84	Spike	P	0 - 30
2152702	Afidopyropen	2.90	Spike	P	0 - 30
2152702	Bentazon	4.19	Spike	P	0 - 30
2152702	Benzovindiflupyr	2.76	Spike	P	0 - 30
2152702	Carbamazepine	11.8	Spike	P	0 - 30
2152702	Clothianidin	6.01	Spike	P	0 - 30
2152702	Dinotefuran	7.13	Spike	P	0 - 30
2152702	Diuron	3.66	Spike	P	0 - 30
2152702	Fenuron	2.07	Spike	P	0 - 30
2152702	Fluridone	9.26	Spike	P	0 - 30
2152702	Hydrocodone	17.7	Spike	P	0 - 30
2152702	Ibuprofen	1.36	Spike	P	0 - 30
2152702	Imazapyr	3.84	Spike	P	0 - 30
2152702	Imidacloprid	3.69	Spike	P	0 - 30
2152702	Linuron	1.43	Spike	P	0 - 30
2152702	Mandestrobin	1.33	Spike	P	0 - 30
2152702	MCP	3.66	Spike	P	0 - 30
2152702	Naproxen	19.1	Spike	P	0 - 30
2152702	Primidone	1.44	Spike	P	0 - 30
2152702	Pyraclostrobin	2.37	Spike	P	0 - 30
2152702	Thiamethoxam	3.21	Spike	P	0 - 30
2152702	Tolfenpyrad	3.03	Spike	P	0 - 30
2152702	Triclopyr	11.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P378093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152481	3-Hydroxycarbofuran	9.88	Spike	P	0 - 30
2152481	Aldicarb	12.4	Spike	P	0 - 30
2152481	Aldicarb Sulfone	13.8	Spike	P	0 - 30
2152481	Aldicarb Sulfoxide	12.9	Spike	P	0 - 30
2152481	Carbaryl	21.6	Spike	P	0 - 30
2152481	Carbofuran	12.2	Spike	P	0 - 30
2152481	Methiocarb	13.6	Spike	P	0 - 30
2152481	Methomyl	1.14	Spike	P	0 - 30
2152481	Oxamyl	15.5	Spike	P	0 - 30
2152481	Propoxur	3.05	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P378149

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152739	Acesulfame K	1.38	Spike	P	0 - 30
2152739	AMPA	0.275	Spike	P	0 - 30
2152739	Endothall	2.70	Spike	P	0 - 30
2152739	Glufosinate	8.06	Spike	P	0 - 30
2152739	Glyphosate	4.84	Spike	P	0 - 30
2152739	Sucralose	3.23	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P377985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153038	Color (true)	8.27	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P378419

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153386	Total Alkalinity	0.663	Sample	P	0 - 2.8

Reference Method: SM 2540 C-2011
 Batch ID: P378433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152978	TDS	0.394	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P378423

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2153386	Fluoride	0.470	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
 Batch ID: P378473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152979	Organic Carbon	4.31	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2152998
Field Sample ID: G1SD0070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	50.4	P	30 - 160

Lab Sample ID: 2152999
Field Sample ID: G1SD0070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.5	P	30 - 160
EPA 8321B	Diuron-d6	77.5	P	30 - 160
EPA 8321B	Endothall-d6	87.8	P	30 - 160
EPA 8321B	Endothall-d6	87.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	65.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	58.8	P	30 - 160
EPA 8321B	Primidone-d5	92.4	P	30 - 160
EPA 8321B	Sucralose-d6	30.1	P	30 - 160
EPA 8321B	Sucralose-d6	30.1	P	30 - 160

Lab Sample ID: 2153000
Field Sample ID: G3SD0077

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.2	P	30 - 160
EPA 8321B	Diuron-d6	79.6	P	30 - 160
EPA 8321B	Endothall-d6	197	F	30 - 160
EPA 8321B	Endothall-d6	197	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	70.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	70.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.7	P	30 - 160
EPA 8321B	Primidone-d5	93.9	P	30 - 160
EPA 8321B	Sucralose-d6	23.2	F	30 - 160
EPA 8321B	Sucralose-d6	23.2	F	30 - 160

Lab Sample ID: 2153001
Field Sample ID: G1SD0070_Dup

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	69.3	P	30 - 160

Lab Sample ID: 2153002
Field Sample ID: G1SD0070_Dup

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	122	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.1	P	30 - 160
EPA 8321B	Diuron-d6	74.5	P	30 - 160
EPA 8321B	Endothall-d6	148	P	30 - 160
EPA 8321B	Endothall-d6	148	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2153002
Field Sample ID: G1SD0070_Dup

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	53.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	53.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	88.9	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	33.5	P	30 - 160
EPA 8321B	Sucralose-d6	33.5	P	30 - 160

Lab Sample ID: 2153003
Field Sample ID: G1SD0070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	87.6	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	69.5	P	34 - 106
EPA 8276	Decachlorobiphenyl	79.0	P	26 - 97.0
EPA 8276	PCNB	97.5	P	38 - 141

Lab Sample ID: 2153004
Field Sample ID: G1SD0070

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	100	P	72 - 135
EPA 8270E	Terbufos-d10	95.8	P	57 - 134

Lab Sample ID: 2153005
Field Sample ID: G1SD0070_Dup

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	89.7	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	83.9	P	34 - 106
EPA 8276	Decachlorobiphenyl	81.9	P	26 - 97.0
EPA 8276	PCNB	97.8	P	38 - 141

Lab Sample ID: 2153006
Field Sample ID: G1SD0070_Dup

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	103	P	72 - 135
EPA 8270E	Terbufos-d10	93.0	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A97206

Included Lab Sample IDs: 2152978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	103	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A97207

Included Lab Sample IDs: 2152980

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.2	98.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A97226

Included Lab Sample IDs: 2152978

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

Reference Method: EPA 8321B

Run ID: A97267

Included Lab Sample IDs: 2152999, 2153000, 2153002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	107	P/P	50 - 150
Acetaminophen	88.9	93.3	P/P	60 - 160
Acetamiprid	111	111	P/P	50 - 150
Afidopyropen	110	99.6	P/P	50 - 150
Bentazon	106	102	P/P	50 - 160
Benzovindiflupyr	110	106	P/P	50 - 150
Carbamazepine	112	108	P/P	60 - 150
Clothianidin	113	110	P/P	60 - 150
Dinotefuran	93.9	96.2	P/P	50 - 150
Diuron	92.3	101	P/P	60 - 150
Fenuron	102	104	P/P	60 - 150
Fluridone	109	112	P/P	60 - 160
Hydrocodone	107	104	P/P	60 - 150
Ibuprofen	102	88.9	P/P	50 - 160
Imazapyr	112	117	P/P	50 - 150
Imidacloprid	96.5	93.5	P/P	60 - 150
Linuron	102	103	P/P	60 - 150
Mandestrobin	108	110	P/P	50 - 150
MCPP	95.8	91.2	P/P	50 - 150
Naproxen	89.4	124	P/P	50 - 160
Primidone	95.6	98.3	P/P	60 - 150
Pyraclostrobin	111	109	P/P	60 - 150
Thiamethoxam	104	113	P/P	50 - 150
Tolfenpyrad	111	111	P/P	60 - 150
Triclopyr	99.1	109	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A97294

Included Lab Sample IDs: 2152999, 2153000, 2153002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	125	P/P	60 - 160
AMPA	125	116	P/P	60 - 160
Glufosinate	114	111	P/P	60 - 160
Glufosinate	125	114	P/P	60 - 160
Glyphosate	118	125	P/P	60 - 160
Glyphosate	125	115	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A97313

Included Lab Sample IDs: 2152998, 2153001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	124	100	P/P	60 - 150
Aldicarb	128	93.4	P/P	60 - 150
Aldicarb Sulfone	118	98.4	P/P	50 - 150
Aldicarb Sulfoxide	120	97.4	P/P	50 - 150
Carbaryl	131	106	P/P	60 - 150
Carbofuran	126	108	P/P	50 - 150
Methiocarb	139	110	P/P	50 - 150
Methomyl	122	97.7	P/P	50 - 150
Oxamyl	128	102	P/P	50 - 150
Propoxur	141	109	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97316

Included Lab Sample IDs: 2153007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.0	99.1	P/P	90 - 110
Calcium	97.8	97.7	P/P	90 - 110
Iron	98.0	98.3	P/P	90 - 110
Magnesium	97.7	98.0	P/P	90 - 110
Potassium	95.6	96.2	P/P	90 - 110
Sodium	97.1	97.9	P/P	90 - 110
Zinc	99.5	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A97327

Included Lab Sample IDs: 2152978

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

Reference Method: SM 2320 B-2011

Run ID: A97356

Included Lab Sample IDs: 2152978

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A97356

Included Lab Sample IDs: 2152978

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

Reference Method: SM 5310 B-2011

Run ID: A97368

Included Lab Sample IDs: 2152979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97369

Included Lab Sample IDs: 2152979

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97374

Included Lab Sample IDs: 2152979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.3	99.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97402

Included Lab Sample IDs: 2153007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.3	96.8	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	99.6	101	P/P	90 - 110
Copper	95.5	95.8	P/P	90 - 110
Lead	99.3	99.2	P/P	90 - 110
Selenium	100	101	P/P	90 - 110
Thallium	98.9	99.1	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A97406

Included Lab Sample IDs: 2153003, 2153005

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: EPA 8270E

Run ID: A97413

Included Lab Sample IDs: 2153004, 2153006

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	105		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A97413

Included Lab Sample IDs: 2153004, 2153006

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alachlor	104		P	80 - 120
Ametryn	106		P	80 - 120
Atrazine	102		P	80 - 120
Atrazine Desethyl	86.1		P	80 - 120
Azinphos Methyl	108		P	80 - 120
Bromacil	106		P	80 - 120
Butylate	111		P	80 - 120
Carbophenothion	103		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	83.8		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	104		P	80 - 120
Dimethenamid	106		P	80 - 120
Disulfoton	79.2*		F	80 - 120
Dithiopyr	106		P	80 - 120
EPTC	107		P	80 - 120
Ethion	95.4		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	88.1		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	98.8		P	80 - 120
Fipronil Sulfone	100		P	80 - 120
Flumioxazin	95.0		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	92.7		P	80 - 120
Imazalil	100		P	80 - 120
Malathion	69.6*		F	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	113		P	80 - 120
Metribuzin	77.3*		F	80 - 120
Mevinphos	103		P	80 - 120
Molinate	110		P	80 - 120
Norflurazon	104		P	80 - 120
Oxadiazon	105		P	80 - 120
Parathion Ethyl	95.3		P	80 - 120
Parathion Methyl	98.8		P	80 - 120
Pendimethalin	97.4		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	105		P	80 - 120
Prometon	112		P	80 - 120
Prometryn	113		P	80 - 120
Pronamide	106		P	80 - 120
Propiconazole	105		P	80 - 120
Simazine	102		P	80 - 120
Sulfentrazone	105		P	80 - 120
Tebuconazole	109		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	105		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97415

Included Lab Sample IDs: 2152979

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.7	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A97416

Included Lab Sample IDs: 2152979

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97451

Included Lab Sample IDs: 2153007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	106	108	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97475

Included Lab Sample IDs: 2152999, 2153000, 2153002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	72.3	76.4	P/P	60 - 160
Endothall	123	156	P/P	60 - 160

Reference Method: EPA 8270E

Run ID: A97521

Included Lab Sample IDs: 2153003, 2153005

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	88.0		P	80 - 120
Alpha-BHC	99.0		P	80 - 120
Alpha-Chlordane	99.8		P	80 - 120
Beta-BHC	122*		F	80 - 120
Bifenthrin	99.7		P	80 - 120
Carbophenothion	90.5		P	80 - 120
Chlorothalonil	98.4		P	80 - 120
Cis-Nonachlor	100		P	80 - 120
Cypermethrin	99.5		P	80 - 120
DDD-p,p'	97.4		P	80 - 120
DDE-p,p'	106		P	80 - 120
DDT-p,p'	100		P	80 - 120
Delta-BHC	126*		F	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	103		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	93.2		P	80 - 120
Endosulfan Sulfate	96.3		P	80 - 120
Endrin	108		P	80 - 120
Endrin Aldehyde	96.6		P	80 - 120
Endrin Ketone	100		P	80 - 120
Ethalfuralin	97.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A97521

Included Lab Sample IDs: 2153003, 2153005

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-BHC	122*		F	80 - 120
Gamma-Chlordane	99.5		P	80 - 120
Heptachlor	82.8		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	106		P	80 - 120
Methoxychlor	102		P	80 - 120
Mirex	99.0		P	80 - 120
Permethrin	97.8		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Trifluralin	98.5		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97560

Included Lab Sample IDs: 2153007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	102	96.8	P/P	90 - 110
Nickel	98.4	98.9	P/P	90 - 110
Silver	102	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A97720

Included Lab Sample IDs: 2152999, 2153000, 2153002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.9	96.0	P/P	60 - 160

* 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							3.51	
EPA 200.7 Rev. 4.4	Barium	97.5		97.3	99.9	96.4			3.30
	Calcium	102		100	102				0.326
	Iron	101		100	102	102			0.411
	Magnesium	103		100	102	102			1.06
	Potassium	97.0		94.7	97.0	95.8			0.873
	Sodium	100		102	101				1.23
	Zinc	97.3		96.4	95.6	98.7			3.08
EPA 200.8 Rev. 5.4	Aluminum	99.6		97.2	97.5	97.4			0.201
	Antimony	107		107	107	108			0.337
	Arsenic	105		106	107	109			0.670
	Boron	104		102	104	104			0.435
	Cadmium	107		107	106	107			0.577
	Chromium	105		107	107	108			0.140
	Copper	100		99.9	101	103			0.658
	Lead	104		104	104	108			0.155
	Nickel	100		101	100	101			0.726
	Selenium	100		99.0	97.5	99.6			1.45
	Silver	108		107	105	104			1.17
	Thallium	104		106	107	111			0.659
EPA 300.0 Rev. 2.1	Chloride	102		101	100			1.21	
	Sulfate	101		99.9					
EPA 350.1 Rev. 2.0	Ammonia-N	99.2		100	100				0.212
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.0		104	108				2.33
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	98.5		97.3	97.8				0.399
EPA 365.1 Rev. 2.0	Total-P	104		103	104				1.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		98.4	98.2				0.203
EPA 8270E	Acetochlor	89.6	94.9	99.7	107		5.75		7.38
	Alachlor	90.7	94.4	92.3	109		4.00		16.4
	Aldrin	41.7	40.6	35.3	43.5		2.83		21.0
	Alpha-BHC	83.8	86.2	77.9	96.2		2.83		21.0
	Alpha-Chlordane	85.6	83.6	84.8	82.3		2.35		2.92
	Ametryn	115	111	111	130		4.16		13.2
	Atrazine	89.3	95.2				6.35		6.72
	Atrazine Desethyl	77.5	78.9	78.8	87.7		1.79		7.25
	Azinphos Methyl	113	118	104	113		4.36		8.33
	Beta-BHC	126	125	117	143		0.165		20.1
	Bifenthrin	75.2	73.8	71.8	70.4		1.82		2.00
	Bromacil	87.8	91.7				4.33		9.64
	Butylate	37.9	49.4	50.1	54.5		26.3		8.55
	Carbophenothion	82.0	91.8	84.5	86.7		11.2		2.52
	Carbophenothion	83.8	85.0	99.9	94.5		1.44		5.54
	Chlorothalonil	96.0	96.1	122	119		0.101		2.95
	Chlorpyrifos Ethyl	83.1	91.5	96.3	93.3		9.64		3.17
	Chlorpyrifos Methyl	83.0	93.0	94.8	99.8		11.3		5.22
	Cis-Nonachlor	86.5	84.4	82.0	85.1		2.38		3.66
	Cyanazine	100	109	94.2	113		8.35		17.9
	Cypermethrin	81.4	82.7	81.8	86.8		1.56		5.97
	DDD-p,p'	87.4	85.5	83.8	88.1		2.12		5.04
	DDE-p,p'	86.5	87.5	81.2	77.1		1.15		5.17
	DDT-p,p'	80.6	78.5	77.9	76.8		2.67		1.40
	Delta-BHC	158	153	155	184		2.77		17.2
	Demeton	71.6	80.7	92.3	102		12.0		10.5
	Diazinon	87.7	96.3	99.9	110		9.38		9.54

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Dicofol	104	103	117	116	1.32		0.411
	Dieldrin	95.3	91.9	89.9	92.7	3.64		2.96
	Dimethenamid	89.5	96.0	100	107	7.05		6.86
	Disulfoton	75.8	65.1	76.2	68.4	15.2		10.8
	Dithiopyr	87.6	89.2	93.9	106	1.73		10.9
	Endosulfan I	94.3	94.4	103	89.3	0.0637		14.1
	Endosulfan II	94.3	91.1	94.5	99.9	3.42		5.59
	Endosulfan Sulfate	94.3	88.9	89.8	93.5	5.90		4.10
	Endrin	89.0	88.5	87.9	93.6	0.665		6.23
	Endrin Aldehyde	99.3	92.5	88.2	94.7	7.04		7.10
	Endrin Ketone	96.4	91.9	90.9	94.2	4.75		3.54
	EPTC	36.3	42.0	53.4	54.1	14.6		1.28
	Ethalfuralin	76.8	76.1	75.6	75.0	0.812		0.803
	Ethion	76.0	85.4	83.2	87.1	11.6		4.62
	Ethoprop	67.6	78.8	95.9	104	15.3		7.61
	Fenamiphos	90.5	102	106	110	12.3		3.85
	Fipronil	94.4	102	109	122	7.99		8.65
	Fipronil Desulfinyl	86.7	95.7	96.9	108	9.83		7.03
	Fipronil Sulfide	77.2	84.9	104	114	9.50		7.50
	Fipronil Sulfone	82.0	89.5	83.3	100	8.74		6.24
	Flumioxazin	127	136	131	148	7.45		12.2
	Fonofos	73.4	81.2	86.9	89.7	10.1		3.18
	Gamma-BHC	129	130	135	171	1.12		24.0
	Gamma-Chlordane	80.8	79.7	80.0	77.9	1.36		2.69
	Heptachlor	54.0	55.3	46.9	48.0	2.51		2.51
	Heptachlor Epoxide	88.8	86.6	88.5	86.3	2.47		2.48
	Hexachlorobenzene	75.4	78.0	72.5	72.1	3.33		0.582
	Hexazinone	94.3	99.6	105	103	5.52		1.58
	Imazalil	81.2	83.3	130	125	2.63		4.00
	Malathion	92.6	100	70.6	104	7.79		38.2
	Metalaxyl	85.6	90.8	95.8	103	5.93		7.20
	Methoxychlor	89.3	86.6	90.5	88.7	3.12		2.08
	Metolachlor	95.1	100	99.5	103	5.00		3.59
	Metribuzin	121	124	181	187	2.24		3.31
	Mevinphos	64.7	73.2	82.3	86.5	12.4		4.93
	Mirex	72.1	72.9	66.0	64.6	1.09		2.16
	Molinate	49.2	54.9	68.8	74.5	10.9		7.94
	Norflurazon	85.3	92.7	91.3	101	8.29		9.58
	Oxadiazon	81.1	84.9	81.5	93.0	4.56		11.0
	Parathion Ethyl	85.5	88.1	92.9	100	2.95		7.36
	Parathion Methyl	88.5	97.4	103	114	9.59		9.88
	Pendimethalin	86.2	88.2	92.4	105	2.31		12.3
	Permethrin	77.5	75.8	75.7	75.6	2.23		0.0861
	Phorate	79.6	84.2	88.8	94.3	5.67		6.01
	Prodiamine	77.6	84.6	41.9	47.7	8.68		13.0
	Prometon	87.1	87.4	71.3	100	0.336		14.7
	Prometryn	106	109	128	140	2.29		8.72
	Pronamide	88.8	96.0	115	127	7.75		9.37
	Propiconazole	93.8	100	96.8	112	6.67		8.34
	Simazine	90.9	96.0	93.8	108	5.41		7.62
	Sulfentrazone	81.8	88.0			7.22		7.85
	Tebuconazole	68.9	71.8	67.0	72.4	4.03		6.53
	Terbufos	79.8	84.0	94.6	99.8	5.07		5.34
	Terbuthylazine	87.8	90.8	91.0	96.3	3.40		5.73

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Trans-Nonachlor	82.1	80.5	80.6	78.5	1.95		2.63
	Trifluralin	76.6	76.1	75.4	75.6	0.660		0.260
EPA 8276	Chlordane	87.7	89.4	100	102	1.97		2.22
	Toxaphene	99.3	95.7	93.0	89.8	3.73		3.51
EPA 8321B	2,4-D	134		132	120			9.54
	3-Hydroxycarbofuran	69.9		85.1	77.1			9.88
	Acesulfame K	92.9		24.6	25.0			1.38
	Acetaminophen	92.3		91.7	89.6			2.36
	Acetamiprid	93.5		101	97.3			3.84
	Afidopyropen	96.7		79.7	77.4			2.90
	Aldicarb	45.3		72.0	63.6			12.4
	Aldicarb Sulfone	92.7		116	100			13.8
	Aldicarb Sulfoxide	86.4		55.5	63.1			12.9
	AMPA	127		127	127			0.275
	Bentazon	73.7		49.0	54.3			4.19
	Benzovindiflupyr	77.4		83.9	81.4			2.76
	Carbamazepine	89.5		94.5	83.4			11.8
	Carbaryl	59.1		64.6	52.0			21.6
	Carbofuran	67.7		62.2	70.3			12.2
	Clothianidin	93.8		102	95.7			6.01
	Dinotefuran	110						7.13
	Diuron	74.4		70.9	73.5			3.66
	Endothall	121		153	149			2.70
	Fenuron	111		66.4	64.4			2.07
	Fluridone	92.7		112	102			9.26
	Glufosinate	118		117	108			8.06
	Glyphosate	117		91.0	79.1			4.84
	Hydrocodone	108		104	87.2			17.7
	Ibuprofen	81.0		81.9	80.8			1.36
	Imazapyr	114		99.6	105			3.84
	Imidacloprid	96.0		146	140			3.69
	Linuron	73.2		70.1	69.2			1.43
	Mandestrobin	94.7		93.6	92.4			1.33
	MCPP	127		123	119			3.66
	Methiocarb	64.2		67.3	58.7			13.6
	Methomyl	80.9		89.3	88.3			1.14
	Naproxen	73.1		93.7	77.4			19.1
	Oxamyl	80.9		110	94.5			15.5
	Primidone	88.1		100	99.0			1.44
	Propoxur	70.6		58.5	55.9			3.05
	Pyraclostrobin	86.1		92.5	90.3			2.37
	Sucralose	95.5		99.6	95.7			3.23
	Thiamethoxam	103		144	139			3.21
	Tolfenpyrad	59.1		65.7	63.7			3.03
	Triclopyr	101		94.7	84.3			11.5
SM 2120 B-2011	Color (true)	102					8.27	
SM 2320 B-2011	Total Alkalinity	102					0.663	
SM 2540 C-2011	TDS						0.394	
SM 4500 F-C-2011	Fluoride	98.5		98.1	98.8			0.470
SM 5310 B-2011	Organic Carbon	104		105	98.6			4.31

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2152978
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2153007
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2153007
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2152978
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2152978
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2152979
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2152979
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2152979
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2152979
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2152980
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2153003, 2153005
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2153004, 2153006
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2153003, 2153005
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2152998, 2153001
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2152999, 2153000, 2153002
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2152999, 2153000, 2153002
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2152978
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2152978
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2153007
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2152978
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2152978
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2152978
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2152979

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	01/30/2020			01/30/2020 17:11	Yen Ta	2152978
EPA 200.7 Rev. 4.4	01/30/2020	02/03/2020 14:55	Elliott D. Healy	02/04/2020 20:26	Betina Topolski	2153007
EPA 200.8 Rev. 5.4	01/30/2020	02/03/2020 14:55	Elliott D. Healy	02/07/2020 21:55	Justin Cutchin	2153007
	01/30/2020	02/03/2020 14:55	Elliott D. Healy	02/11/2020 16:42	Justin Cutchin	2153007
	01/30/2020	02/03/2020 14:55	Elliott D. Healy	02/14/2020 17:42	Justin Cutchin	2153007
EPA 300.0 Rev. 2.1	01/30/2020			02/04/2020 00:36	Elliott Rodriguez	2152978
EPA 350.1 Rev. 2.0	01/30/2020			02/10/2020 10:12	Ping Hua	2152979
EPA 351.2 Rev. 2.0	01/30/2020	02/06/2020 12:00	Jhamieka S. Greenwood	02/07/2020 08:11	Jhamieka S. Greenwood	2152979
EPA 353.2 Rev. 2.0	01/30/2020			02/06/2020 11:05	Beverly Y. Sanders	2152979
EPA 365.1 Rev. 2.0	01/30/2020	02/03/2020 15:03	Lipi Saha	02/05/2020 13:47	Benjamin T. Nordmann	2152979
EPA 365.1 Rev. 2.0 dissolved	01/30/2020			01/30/2020 16:49	Carlos Miranda	2152980
EPA 8270E	01/30/2020	02/03/2020 09:00	Rasheda Ghaffari	02/05/2020 17:08	Vandana T. Nagar	2153004
	01/30/2020	02/03/2020 09:00	Rasheda Ghaffari	02/05/2020 17:35	Vandana T. Nagar	2153006
	01/30/2020	02/04/2020 09:00	Rasheda Ghaffari	02/07/2020 20:52	Julie Wi	2153003
	01/30/2020	02/04/2020 09:00	Rasheda Ghaffari	02/07/2020 21:24	Julie Wi	2153005
EPA 8276	01/30/2020	02/04/2020 09:00	Rasheda Ghaffari	02/07/2020 04:24	Michael Poppell	2153003
	01/30/2020	02/04/2020 09:00	Rasheda Ghaffari	02/07/2020 05:19	Michael Poppell	2153005
EPA 8321B	01/30/2020	01/31/2020 10:00	Hoor Shaik	02/02/2020 10:24	Juyoung Kim	2152999
	01/30/2020	01/31/2020 10:00	Hoor Shaik	02/02/2020 10:58	Juyoung Kim	2153000
	01/30/2020	01/31/2020 10:00	Hoor Shaik	02/02/2020 11:33	Juyoung Kim	2153002
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 01:30	Rebecca Ware	2152999
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 01:51	Rebecca Ware	2153002
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 03:49	Rebecca Ware	2153000
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 12:45	Rebecca Ware	2152999
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 12:59	Rebecca Ware	2153000
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/04/2020 13:12	Rebecca Ware	2153002
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/18/2020 02:09	Rebecca Ware	2152999
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/18/2020 02:21	Rebecca Ware	2153000
	01/30/2020	02/03/2020 16:30	Rebecca Ware	02/18/2020 02:33	Rebecca Ware	2153002
	01/30/2020	02/04/2020 10:00	Hoor Shaik	02/04/2020 22:03	Juyoung Kim	2152998
	01/30/2020	02/04/2020 10:00	Hoor Shaik	02/04/2020 22:37	Juyoung Kim	2153001
SM 2120 B-2011	01/30/2020			01/30/2020 16:43	Madeline Funaro	2152978
SM 2320 B-2011	01/30/2020			02/05/2020 05:03	Dale L. Simmons	2152978
SM 2340B	01/30/2020			02/04/2020 20:26	Betina Topolski	2153007
SM 2540 C-2011	01/30/2020			02/03/2020 17:30	Blanca Fach	2152978
SM 2540 D-2011	01/30/2020			02/03/2020 17:30	Blanca Fach	2152978
SM 4500 F-C-2011	01/30/2020			02/05/2020 05:03	Dale L. Simmons	2152978
SM 5310 B-2011	01/30/2020			02/05/2020 22:31	Madeline Funaro	2152979