

Chemical Analysis Report

SO-DIST-2022-06-14-01

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

Event Description: **2022 SMP: Hatchett Creek**
Request ID: **RQ-2022-06-13-32**
Customer: **SO-DIST**
Project ID: **SMP**

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

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 06-JUL-2022 13:43

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

Case Narrative

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

Results for the following analytical groups are included in this report: 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: Hatchett Creek Tidal 2

Collection Date/Time: 06/13/2022 10:00

Field ID: G3SD0192

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334143	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P415202	
	SM 2320 B-2011	Total Alkalinity	126	A	mg CaCO3/L	P415758	
	SM 2540 D-2011	TSS	6	IA	mg/L	P415654	
	SM 4500-F- C-2011	Fluoride	0.97		mg F/L	P415761	
2334144	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P415678	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P415404	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.037		mg N/L	P415832	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P415467	
	SM 5310 B-2011	Organic Carbon	6.1		mg C/L	P415408	

Ref. Method and Comment:

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

Sample Location: HatchettCreek@GroveStN

Collection Date/Time: 06/13/2022 10:45

Field ID: G3SD0194

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334155	EPA 8270E	Oxybenzone**	9.4	U	ng/L	P415327	LCS
		Acetochlor	0.24	U	ng/L	P415327	
		Octinoxate**	65	J	ng/L	P415327	
		Alachlor	0.24	U	ng/L	P415327	
		Avobenzone**	94	U	ng/L	P415327	
		Ametryn	0.56	U	ng/L	P415327	
		Atrazine	77		ng/L	P415327	
		PBDE-47**	3.8	U	ng/L	P415327	
		Atrazine Desethyl	9.3		ng/L	P415327	
		PBDE-99**	4.7	U	ng/L	P415327	
		Azinphos Methyl	1.9	U	ng/L	P415327	
		Tri-o-cresyl Phosphate**	5.6	U	ng/L	P415327	
		Azoxystrobin**	1.7	I	ng/L	P415327	
		Bromacil	0.47	U	ng/L	P415327	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	11	U	ng/L	P415327	
		Butylate	0.38	U	ng/L	P415327	RPD
		Caffeine**	21	I	ng/L	P415327	
		Carbophenothion	0.19	U	ng/L	P415327	
		Carfentrazone Ethyl**	0.094	U	ng/L	P415327	
		Chlorfenapyr**	0.26	I	ng/L	P415327	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P415327	
		Chlorpyrifos Methyl	0.047	U	ng/L	P415327	
		Coumaphos**	0.47	U	ng/L	P415327	
		Cyanazine	3.1	U	ng/L	P415327	
		Cyprodinil**	0.094	U	ng/L	P415327	
		Demeton	1.4	U	ng/L	P415327	
		Diazinon	0.12	U	ng/L	P415327	
		Difenoconazole**	0.56	U	ng/L	P415327	
		Dimethenamid**	0.094	U	ng/L	P415327	
		Dimethomorph**	0.16	U	ng/L	P415327	
		Disulfoton	0.47	U	ng/L	P415327	
		Dithiopyr**	0.16	U	ng/L	P415327	
		EPTC	1.2	U	ng/L	P415327	
		Ethion	0.14	U	ng/L	P415327	
		Ethoprop	0.094	U	ng/L	P415327	
		Etridiazole**	0.14	U	ng/L	P415327	
		Fenamiphos	0.47	U	ng/L	P415327	
		Fenbuconazole**	0.12	U	ng/L	P415327	
		Fipronil	1.1		ng/L	P415327	
		Fipronil Desulfinyl**	2.2		ng/L	P415327	
		Fipronil Sulfide	0.94		ng/L	P415327	
		Fipronil Sulfone	2.4		ng/L	P415327	
		Fluazifop-P-butyl**	0.094	U	ng/L	P415327	

Field ID: G3SD0194

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2334155	EPA 8270E	Fludioxonil**	0.12	U	ng/L	P415327	
		Flumioxazin**	1.6	U	ng/L	P415327	
		Flutolanil**	0.094	U	ng/L	P415327	
		Fluxapyroxad**	0.73		ng/L	P415327	
		Fonofos	0.19	U	ng/L	P415327	
		Hexazinone	0.60	I	ng/L	P415327	
		Imazalil**	0.71	U	ng/L	P415327	
		Iprodione**	0.56	U	ng/L	P415327	
		Loratadine**	0.094	U	ng/L	P415327	
		Malathion	0.33	U	ng/L	P415327	
		Metalaxyl	0.71	U	ng/L	P415327	
		Metolachlor	0.33	U	ng/L	P415327	
		Metribuzin	2.4	U	ng/L	P415327	
		Mevinphos	0.99	U	ng/L	P415327	
		Molinate	0.28	U	ng/L	P415327	
		Myclobutanil**	0.24	U	ng/L	P415327	
		Naled**	1.4	UJ	ng/L	P415327	LCS, MS
		Napropamide**	0.38	U	ng/L	P415327	
		Norflurazon	0.47	U	ng/L	P415327	
		Oxadiazon	1.2		ng/L	P415327	
		Oxyfluorfen**	0.14	U	ng/L	P415327	
		Parathion Ethyl	0.24	U	ng/L	P415327	
		Parathion Methyl	0.52	U	ng/L	P415327	
		Pendimethalin	0.94	U	ng/L	P415327	
		Phenytol**	3.3	U	ng/L	P415327	MS
		Phorate	0.49	U	ng/L	P415327	
		Prodiamine**	0.16	U	ng/L	P415327	
		Prometon	0.85	U	ng/L	P415327	
		Prometryn	0.19	U	ng/L	P415327	
		Pronamide**	0.14	U	ng/L	P415327	
		Propanil**	0.12	U	ng/L	P415327	
		Propargite**	1.4	U	ng/L	P415327	
		Propiconazole**	0.92	I	ng/L	P415327	
		Pyraflufen Ethyl**	0.24	U	ng/L	P415327	
		Pyridaben**	0.42	U	ng/L	P415327	
		Pyriproxyfen**	0.12	U	ng/L	P415327	
		Simazine	0.47	U	ng/L	P415327	
		Stirophos**	0.12	U	ng/L	P415327	MS
		Sulfentrazone**	6.7		ng/L	P415327	
		Tebuconazole**	1.1	I	ng/L	P415327	
		Terbufos	0.094	U	ng/L	P415327	
		Terbuthylazine	0.40	U	ng/L	P415327	
		Thiobencarb**	0.56	U	ng/L	P415327	
		Triadimefon**	0.24	U	ng/L	P415327	

Field ID: G3SD0194

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: MS accuracy for multiple 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: P415202

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415678

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415404

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415832

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415467

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

Reference Method: EPA 8270E
Batch ID: P415327

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Avobenzone	100	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfanyl	0.12	U	ng/L
Fipronil Desulfanyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Loratadine	0.10	U	ng/L
Loratadine	0.10	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	2.5	U	ng/L
Metribuzin	2.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Napropamide	0.40	U	ng/L
Napropamide	0.40	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415327

Component	Result	Code	Units
PBDE-47	4.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiatone	0.18	U	ng/L
Prodiatone	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronatone	0.15	U	ng/L
Pronatone	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P415758

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011
Batch ID: P415654

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415761

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P415408

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415202

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415678

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415404

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415832

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415467

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

Reference Method: EPA 8270E
Batch ID: P415327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	103		P	50 - 150
Acetochlor	97.6		P	70 - 121
Alachlor	92.5		P	68 - 119
Ametryn	97.4		P	64 - 139
Atrazine	100		P	76 - 120
Atrazine Desethyl	68.9		P	44 - 126
Avobenzone	103		P	76 - 212
Azinphos Methyl	127		P	43 - 192
Azoxystrobin	102		P	36 - 224
Bromacil	84.6		P	52 - 121
Butylate	67.8		P	28 - 91.0
Caffeine	87.9		P	50 - 134
Carbophenothion	100		P	56 - 129
Carfentrazone Ethyl	110		P	60 - 141
Chlorfenapyr	92.1		P	56 - 115
Chlorpyrifos Ethyl	100		P	60 - 118
Chlorpyrifos Methyl	101		P	68 - 119
Coumaphos	104		P	18 - 250
Cyanazine	129		P	61 - 250
Cyprodinil	96.0		P	55 - 145
Demeton	80.5		P	30 - 159
Diazinon	95.6		P	70 - 123

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P415327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Difenoconazole	132		P	49 - 204
Dimethenamid	78.7		P	64 - 115
Dimethomorph	92.8		P	12 - 219
Disulfoton	81.8		P	44 - 125
Dithiopyr	88.0		P	64 - 115
EPTC	66.5		P	28 - 86.0
Ethion	96.3		P	33 - 125
Ethoprop	87.9		P	64 - 116
Etridiazole	69.1		P	34 - 91.0
Fenamiphos	101		P	12 - 127
Fenbuconazole	94.8		P	59 - 151
Fipronil	99.1		P	67 - 129
Fipronil Desulfinyl	106		P	65 - 127
Fipronil Sulfide	87.4		P	61 - 116
Fipronil Sulfone	93.0		P	55 - 117
Fluazifop-P-butyl	98.1		P	62 - 127
Fludioxonil	93.1		P	62 - 128
Flumioxazin	142		P	33 - 250
Flutolanil	95.3		P	56 - 127
Fluxapyroxad	77.7		P	45 - 128
Fonofos	90.5		P	62 - 111
Hexazinone	103		P	46 - 139
Imazalil	70.4		P	38 - 142
Iprodione	106		P	47 - 135
Loratadine	87.9		P	10 - 244
Malathion	105		P	61 - 139
Metalaxyl	95.4		P	10 - 119
Metolachlor	93.2		P	65 - 118
Metribuzin	94.6		P	51 - 250
Mevinphos	83.2		P	53 - 121
Molinate	75.8		P	42 - 96.0
Myclobutanil	95.6		P	55 - 128
Naled	113		F	10 - 98.0
Napropamide	85.7		P	49 - 121
Norflurazon	92.9		P	61 - 126
Octinoxate	206		F	30 - 159
Oxadiazon	80.4		P	59 - 116
Oxybenzone	78.7		P	61 - 139
Oxyfluorfen	129		P	64 - 137
Parathion Ethyl	105		P	70 - 112
Parathion Methyl	114		P	76 - 133
PBDE-47	90.9		P	50 - 150
PBDE-99	92.9		P	50 - 150
Pendimethalin	106		P	52 - 117
Phenytol	64.9		P	10 - 199
Phorate	81.4		P	48 - 121
Prodiamine	56.4		P	26 - 142
Prometon	71.8		P	43 - 123
Prometryn	89.2		P	66 - 127
Pronamide	93.0		P	75 - 121
Propanil	93.6		P	45 - 150
Propargite	92.9		P	42 - 208

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P415327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propiconazole	90.0		P	60 - 125
Pyraflufen Ethyl	91.4		P	70 - 138
Pyridaben	96.9		P	35 - 245
Pyriproxyfen	93.1		P	30 - 149
Simazine	82.7		P	72 - 125
Stirophos	97.7		P	29 - 164
Sulfentrazone	93.8		P	21 - 139
Tebuconazole	77.8		P	10 - 115
Terbufos	106		P	60 - 123
Terbuthylazine	95.6		P	72 - 115
Thiobencarb	81.7		P	31 - 139
Tri-o-cresyl Phosphate	92.5		P	50 - 150
Triadimefon	92.1		P	65 - 116

Reference Method: SM 2320 B-2011
Batch ID: P415758

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.0		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P415761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.5		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P415408

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415678

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334144	Ammonia-N	106	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333621	Kjeldahl Nitrogen	102	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334290	NO2NO3-N	95.7	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415467

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334683	Total-P	102	100	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P415327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334212	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	105	102	P/P	50 - 150
2334212	Acetochlor	120	107	P/P	65 - 124
2334212	Alachlor	105	99.9	P/P	61 - 121
2334212	Ametryn	95.3	99.8	P/P	52 - 216
2334212	Atrazine Desethyl	50.7	47.0	P/P	15 - 160
2334212	Avobenzone	124	116	P/P	59 - 206
2334212	Azinphos Methyl	150	142	P/P	40 - 292
2334212	Azoxystrobin	127	114	P/P	12 - 242
2334212	Bromacil	106	84.2	P/P	54 - 167
2334212	Butylate	57.6	54.8	P/P	14 - 94.0
2334212	Caffeine	99.9	99.6	P/P	10 - 226
2334212	Carbophenothion	106	98.0	P/P	49 - 122
2334212	Carfentrazone Ethyl	118	101	P/P	53 - 138
2334212	Chlorfenapyr	83.5	73.1	P/P	50 - 150
2334212	Chlorpyrifos Ethyl	91.9	82.1	P/P	52 - 122
2334212	Chlorpyrifos Methyl	100	88.5	P/P	66 - 117
2334212	Coumaphos	102	88.3	P/P	50 - 220
2334212	Cyanazine	141	127	P/P	43 - 245
2334212	Cyprodinil	104	91.0	P/P	50 - 150
2334212	Demeton	95.9	83.9	P/P	43 - 188
2334212	Diazinon	122	111	P/P	69 - 131
2334212	Difenoconazole	169	148	P/P	34 - 231
2334212	Dimethenamid	98.2	87.7	P/P	55 - 118
2334212	Dimethomorph	115	107	P/P	50 - 150
2334212	Disulfoton	97.0	83.4	P/P	38 - 141
2334212	Dithiopyr	77.4	68.0	P/P	42 - 116
2334212	EPTC	52.7	51.4	P/P	18 - 85.0
2334212	Ethion	85.0	67.8	P/P	10 - 131

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P415327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334212	Ethoprop	99.3	89.2	P/P	65 - 129
2334212	Etridiazole	72.1	51.3	P/P	50 - 150
2334212	Fenamiphos	83.2	79.2	P/P	31 - 137
2334212	Fenbuconazole	116	99.4	P/P	57 - 160
2334212	Fipronil	117	103	P/P	62 - 132
2334212	Fipronil Desulfinyl	114	99.9	P/P	57 - 131
2334212	Fipronil Sulfide	92.4	81.5	P/P	15 - 138
2334212	Fipronil Sulfone	92.1	76.2	P/P	21 - 134
2334212	Fluazifop-P-butyl	108	95.7	P/P	54 - 133
2334212	Fludioxonil	115	101	P/P	58 - 127
2334212	Flumioxazin	191	165	P/P	33 - 300
2334212	Flutolanil	95.1	81.3	P/P	42 - 130
2334212	Fluxapyroxad	94.9	88.2	P/P	23 - 141
2334212	Fonofos	92.4	82.8	P/P	58 - 119
2334212	Hexazinone	101	92.3	P/P	68 - 172
2334212	Imazalil	92.8	92.2	P/P	48 - 283
2334212	Iprodione	119	104	P/P	38 - 140
2334212	Loratadine	102	94.0	P/P	50 - 150
2334212	Malathion	105	94.1	P/P	40 - 137
2334212	Metalaxyl	98.1	90.9	P/P	21 - 129
2334212	Metolachlor	107	98.4	P/P	55 - 122
2334212	Metribuzin	115	96.9	P/P	38 - 187
2334212	Mevinphos	95.4	81.1	P/P	54 - 134
2334212	Molinate	77.2	71.3	P/P	41 - 97.0
2334212	Myclobutanil	102	93.2	P/P	56 - 125
2334212	Naled	116	106	F/P	10 - 108
2334212	Napropamide	87.9	74.9	P/P	50 - 150
2334212	Norflurazon	102	84.0	P/P	32 - 122
2334212	Octinoxate	81.9	58.2	P/P	25 - 150
2334212	Oxybenzone	94.8	89.4	P/P	59 - 147
2334212	Oxyfluorfen	152	138	P/P	61 - 153
2334212	Parathion Ethyl	104	93.7	P/P	59 - 130
2334212	Parathion Methyl	124	109	P/P	65 - 155
2334212	PBDE-47	96.9	91.2	P/P	50 - 150
2334212	PBDE-99	95.6	90.5	P/P	50 - 150
2334212	Pendimethalin	118	105	P/P	49 - 138
2334212	Phenytoin	57.8	48.2	P/F	50 - 200
2334212	Phorate	92.2	80.9	P/P	54 - 161
2334212	Prodiamine	83.5	79.2	P/P	33 - 161
2334212	Prometon	76.5	68.7	P/P	48 - 140
2334212	Prometryn	78.8	68.0	P/P	55 - 134
2334212	Pronamide	115	102	P/P	66 - 137
2334212	Propanil	101	87.8	P/P	50 - 150
2334212	Propargite	83.6	76.8	P/P	50 - 200
2334212	Pyraflufen Ethyl	97.2	85.2	P/P	50 - 150
2334212	Pyridaben	103	96.5	P/P	50 - 200
2334212	Pyriproxyfen	93.6	87.2	P/P	10 - 165
2334212	Simazine	91.4	82.3	P/P	57 - 145
2334212	Stirophos	46.4	37.6	F/F	50 - 150
2334212	Sulfentrazone	112	97.4	P/P	34 - 140
2334212	Tebuconazole	89.2	76.6	P/P	10 - 127
2334212	Terbufos	120	104	P/P	59 - 138

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P415327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334212	Terbutylazine	118	102	P/P	68 - 119
2334212	Thiobencarb	91.4	80.3	P/P	50 - 150
2334212	Tri-o-cresyl Phosphate	102	95.3	P/P	50 - 150
2334212	Triadimefon	98.5	85.6	P/P	50 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P415761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334143	Fluoride	96.0	97.5	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P415408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333622	Organic Carbon	92.0	92.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P415202

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334285	Turbidity	5.46	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415678

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334144	Ammonia-N	0.129	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415404

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333621	Kjeldahl Nitrogen	4.85	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415832

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334290	NO2NO3-N	3.47	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415467

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334683	Total-P	1.85	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P415327

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334212	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	2.72	Spike	P	0 - 30
2334212	Acetochlor	11.8	Spike	P	0 - 27
2334212	Alachlor	4.56	Spike	P	0 - 27
2334212	Ametryn	4.63	Spike	P	0 - 34
2334212	Atrazine	12.5	Spike	P	0 - 41
2334212	Atrazine Desethyl	5.33	Spike	P	0 - 38
2334212	Avobenzone	6.52	Spike	P	0 - 30
2334212	Azinphos Methyl	5.11	Spike	P	0 - 62
2334212	Azoxystrobin	11.3	Spike	P	0 - 32
2334212	Bromacil	22.8	Spike	P	0 - 30
2334212	Butylate	4.86	Spike	P	0 - 59
2334212	Caffeine	0.256	Spike	P	0 - 60
2334212	Carbophenothion	7.85	Spike	P	0 - 25
2334212	Carfentrazone Ethyl	16.0	Spike	P	0 - 26
2334212	Chlorfenapyr	13.2	Spike	P	0 - 30
2334212	Chlorpyrifos Ethyl	11.2	Spike	P	0 - 27

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P415327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334212	Chlorpyrifos Methyl	12.6	Spike	P	0 - 26
2334212	Coumaphos	14.4	Spike	P	0 - 30
2334212	Cyanazine	10.2	Spike	P	0 - 58
2334212	Cyprodinil	13.3	Spike	P	0 - 30
2334212	Demeton	13.4	Spike	P	0 - 25
2334212	Diazinon	9.33	Spike	P	0 - 29
2334212	Difenoconazole	13.5	Spike	P	0 - 25
2334212	Dimethenamid	6.98	Spike	P	0 - 30
2334212	Dimethomorph	7.23	Spike	P	0 - 30
2334212	Disulfoton	15.1	Spike	P	0 - 33
2334212	Dithiopyr	12.1	Spike	P	0 - 22
2334212	EPTC	2.37	Spike	P	0 - 38
2334212	Ethion	22.5	Spike	P	0 - 79
2334212	Ethoprop	10.7	Spike	P	0 - 23
2334212	Etridiazole	33.7	Spike	F	0 - 30
2334212	Fenamiphos	4.84	Spike	P	0 - 58
2334212	Fenbuconazole	15.3	Spike	P	0 - 37
2334212	Fipronil	13.3	Spike	P	0 - 33
2334212	Fipronil Desulfanyl	10.6	Spike	P	0 - 26
2334212	Fipronil Sulfide	12.5	Spike	P	0 - 37
2334212	Fipronil Sulfone	15.2	Spike	P	0 - 50
2334212	Fluazifop-P-butyl	11.9	Spike	P	0 - 24
2334212	Fludioxonil	12.7	Spike	P	0 - 26
2334212	Flumioxazin	14.6	Spike	P	0 - 37
2334212	Flutolanil	15.7	Spike	P	0 - 26
2334212	Fluxapyroxad	7.34	Spike	P	0 - 34
2334212	Fonofos	11.0	Spike	P	0 - 27
2334212	Hexazinone	8.81	Spike	P	0 - 36
2334212	Imazalil	0.629	Spike	P	0 - 65
2334212	Iprodione	13.3	Spike	P	0 - 33
2334212	Loratadine	8.45	Spike	P	0 - 30
2334212	Malathion	10.6	Spike	P	0 - 44
2334212	Metalaxyl	7.55	Spike	P	0 - 38
2334212	Metolachlor	8.35	Spike	P	0 - 36
2334212	Metribuzin	17.4	Spike	P	0 - 63
2334212	Mevinphos	16.3	Spike	P	0 - 26
2334212	Molinate	8.00	Spike	P	0 - 40
2334212	Myclobutanil	6.45	Spike	P	0 - 21
2334212	Naled	8.95	Spike	P	0 - 26
2334212	Napropamide	15.9	Spike	P	0 - 30
2334212	Norflurazon	19.2	Spike	P	0 - 24
2334212	Octinoxate	17.2	Spike	P	0 - 30
2334212	Oxadiazon	6.19	Spike	P	0 - 27
2334212	Oxybenzone	5.82	Spike	P	0 - 30
2334212	Oxyfluorfen	9.95	Spike	P	0 - 24
2334212	Parathion Ethyl	10.2	Spike	P	0 - 28
2334212	Parathion Methyl	12.8	Spike	P	0 - 27
2334212	PBDE-47	6.02	Spike	P	0 - 30
2334212	PBDE-99	5.44	Spike	P	0 - 30
2334212	Pendimethalin	11.2	Spike	P	0 - 31
2334212	Phenytoin	18.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P415327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334212	Phorate	13.0	Spike	P	0 - 27
2334212	Prodiamine	5.35	Spike	P	0 - 52
2334212	Prometon	10.8	Spike	P	0 - 31
2334212	Prometryn	14.8	Spike	P	0 - 28
2334212	Pronamide	12.6	Spike	P	0 - 26
2334212	Propanil	14.1	Spike	P	0 - 30
2334212	Propargite	8.46	Spike	P	0 - 30
2334212	Propiconazole	5.49	Spike	P	0 - 31
2334212	Pyraflufen Ethyl	13.2	Spike	P	0 - 30
2334212	Pyridaben	6.63	Spike	P	0 - 30
2334212	Pyriproxyfen	7.11	Spike	P	0 - 50
2334212	Simazine	10.5	Spike	P	0 - 29
2334212	Stirophos	21.0	Spike	P	0 - 30
2334212	Sulfentrazone	14.3	Spike	P	0 - 33
2334212	Tebuconazole	9.04	Spike	P	0 - 44
2334212	Terbufos	14.0	Spike	P	0 - 29
2334212	Terbutylazine	13.7	Spike	P	0 - 27
2334212	Thiobencarb	13.0	Spike	P	0 - 30
2334212	Tri-o-cresyl Phosphate	6.41	Spike	P	0 - 30
2334212	Triadimefon	14.0	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P415758

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334143	Total Alkalinity	0.430	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011

Batch ID: P415761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334143	Fluoride	0.999	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P415408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333622	Organic Carbon	0.416	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2334155
Field Sample ID: G3SD0194

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	70.5	P	20 - 200
EPA 8270E	Simazine-d10	99.6	P	71 - 140
EPA 8270E	Terbufos-d10	93.8	P	62 - 131
EPA 8270E	Terphenyl-d14	81.8	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112824

Included Lab Sample IDs: 2334143

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

Reference Method: SM 5310 B-2011

Run ID: A112926

Included Lab Sample IDs: 2334144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.9	97.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113005

Included Lab Sample IDs: 2334144

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A113008

Included Lab Sample IDs: 2334144

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113018

Included Lab Sample IDs: 2334144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	100	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A113065

Included Lab Sample IDs: 2334143

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A113065

Included Lab Sample IDs: 2334143

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

Reference Method: EPA 8270E

Run ID: A113084

Included Lab Sample IDs: 2334155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.8		P	80 - 120
Alachlor	99.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A113084
 Included Lab Sample IDs: 2334155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ametryn	93.6		P	80 - 120
Atrazine Desethyl	103		P	80 - 120
Azinphos Methyl	94.1		P	80 - 120
Azoxystrobin	101		P	80 - 120
Bromacil	99.9		P	80 - 120
Butylate	99.1		P	80 - 120
Caffeine	105		P	80 - 120
Carbophenothion	96.8		P	80 - 120
Carfentrazone Ethyl	92.5		P	80 - 120
Chlorfenapyr	94.4		P	80 - 120
Chlorpyrifos Ethyl	98.1		P	80 - 120
Chlorpyrifos Methyl	99.2		P	80 - 120
Coumaphos	94.4		P	80 - 120
Cyanazine	95.5		P	80 - 120
Cyprodinil	102		P	80 - 120
Demeton	92.5		P	80 - 120
Diazinon	96.4		P	80 - 120
Difenoconazole	93.0		P	80 - 120
Dimethenamid	101		P	80 - 120
Dimethomorph	101		P	80 - 120
Disulfoton	97.9		P	80 - 120
Dithiopyr	97.2		P	80 - 120
EPTC	100		P	80 - 120
Ethion	95.7		P	80 - 120
Ethoprop	98.0		P	80 - 120
Etridiazole	96.4		P	80 - 120
Fenamiphos	97.3		P	80 - 120
Fenbuconazole	98.6		P	80 - 120
Fipronil	100		P	80 - 120
Fipronil Desulfinyl	98.7		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Fluazifop-P-butyl	91.9		P	80 - 120
Fludioxonil	95.3		P	80 - 120
Flumioxazin	91.6		P	80 - 120
Flutolanil	101		P	80 - 120
Fluxapyroxad	99.2		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	99.4		P	80 - 120
Imazalil	96.5		P	80 - 120
Iprodione	93.5		P	80 - 120
Loratadine	100		P	80 - 120
Malathion	94.4		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	99.9		P	80 - 120
Metribuzin	93.7		P	80 - 120
Mevinphos	101		P	80 - 120
Molinate	98.8		P	80 - 120
Myclobutanil	101		P	80 - 120
Naled	100		P	80 - 120
Napropamide	97.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113084
Included Lab Sample IDs: 2334155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Norflurazon	98.1		P	80 - 120
Oxadiazon	98.0		P	80 - 120
Oxyfluorfen	102		P	80 - 120
Parathion Ethyl	97.9		P	80 - 120
Parathion Methyl	104		P	80 - 120
Pendimethalin	104		P	80 - 120
Phenytoin	98.4		P	80 - 120
Phorate	97.5		P	80 - 120
Prodiamine	111		P	80 - 120
Prometon	99.6		P	80 - 120
Prometryn	95.5		P	80 - 120
Pronamide	101		P	80 - 120
Propanil	94.0		P	80 - 120
Propargite	95.6		P	80 - 120
Propiconazole	99.3		P	80 - 120
Pyraflufen Ethyl	102		P	80 - 120
Pyridaben	103		P	80 - 120
Pyriproxyfen	96.5		P	80 - 120
Simazine	98.4		P	80 - 120
Stirophos	97.0		P	80 - 120
Sulfentrazone	95.6		P	80 - 120
Tebuconazole	99.7		P	80 - 120
Terbufos	95.2		P	80 - 120
Terbuthylazine	92.4		P	80 - 120
Thiobencarb	103		P	80 - 120
Triadimefon	101		P	80 - 120

Reference Method: EPA 8270E
Run ID: A113091
Included Lab Sample IDs: 2334155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	110		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113114
Included Lab Sample IDs: 2334144

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A113161
Included Lab Sample IDs: 2334155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	96.7		P	80 - 120
Avobenzone	101		P	80 - 120
Octinoxate	94.6		P	80 - 120
Oxybenzone	99.3		P	80 - 120
PBDE-47	94.9		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E
Run ID: A113161
Included Lab Sample IDs: 2334155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PBDE-99	95.7		P	80 - 120
Tri-o-cresyl Phosphate	98.2		P	80 - 120

* 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	96.6				5.46	
EPA 350.1 Rev. 2.0	Ammonia-N	94.4	105	106			0.129
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	102	109			4.85
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	96.5	95.7	99.2			3.47
EPA 365.1 Rev. 2.0	Total-P	107	102	100			1.85
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	103	105	102			2.72
	Acetochlor	97.6	120	107			11.8
	Alachlor	92.5	105	99.9			4.56
	Ametryn	97.4	95.3	99.8			4.63
	Atrazine	100					12.5
	Atrazine Desethyl	68.9	50.7	47.0			5.33
	Avobenzone	103	124	116			6.52
	Azinphos Methyl	127	150	142			5.11
	Azoxystrobin	102	127	114			11.3
	Bromacil	84.6	106	84.2			22.8
	Butylate	67.8	57.6	54.8			4.86
	Caffeine	87.9	99.9	99.6			0.256
	Carbophenothion	100	106	98.0			7.85
	Carfentrazone Ethyl	110	118	101			16.0
	Chlorfenapyr	92.1	83.5	73.1			13.2
	Chlorpyrifos Ethyl	100	91.9	82.1			11.2
	Chlorpyrifos Methyl	101	100	88.5			12.6
	Coumaphos	104	102	88.3			14.4
	Cyanazine	129	141	127			10.2
	Cyprodinil	96.0	104	91.0			13.3
	Demeton	80.5	95.9	83.9			13.4
	Diazinon	95.6	122	111			9.33
	Difenoconazole	132	169	148			13.5
	Dimethenamid	78.7	98.2	87.7			6.98
	Dimethomorph	92.8	115	107			7.23
	Disulfoton	81.8	97.0	83.4			15.1
	Dithiopyr	88.0	77.4	68.0			12.1
	EPTC	66.5	52.7	51.4			2.37
	Ethion	96.3	85.0	67.8			22.5
	Ethoprop	87.9	99.3	89.2			10.7
	Etridiazole	69.1	72.1	51.3			33.7
	Fenamiphos	101	83.2	79.2			4.84
	Fenbuconazole	94.8	116	99.4			15.3
	Fipronil	99.1	117	103			13.3
	Fipronil Desulfinyl	106	114	99.9			10.6
	Fipronil Sulfide	87.4	92.4	81.5			12.5
	Fipronil Sulfone	93.0	92.1	76.2			15.2
	Fluazifop-P-butyl	98.1	108	95.7			11.9
	Fludioxonil	93.1	115	101			12.7
	Flumioxazin	142	191	165			14.6
	Flutolanil	95.3	95.1	81.3			15.7
	Fluxapyroxad	77.7	94.9	88.2			7.34
	Fonofos	90.5	92.4	82.8			11.0
	Hexazinone	103	101	92.3			8.81
	Imazalil	70.4	92.8	92.2			0.629
	Iprodione	106	119	104			13.3
	Loratadine	87.9	102	94.0			8.45

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Malathion	105	105	94.1			10.6
	Metalaxyl	95.4	98.1	90.9			7.55
	Metolachlor	93.2	107	98.4			8.35
	Metribuzin	94.6	115	96.9			17.4
	Mevinphos	83.2	95.4	81.1			16.3
	Molinate	75.8	77.2	71.3			8.00
	Myclobutanil	95.6	102	93.2			6.45
	Naled	113	116	106			8.95
	Napropamide	85.7	87.9	74.9			15.9
	Norflurazon	92.9	102	84.0			19.2
	Octinoxate	206	81.9	58.2			17.2
	Oxadiazon	80.4					6.19
	Oxybenzone	78.7	94.8	89.4			5.82
	Oxyfluorfen	129	152	138			9.95
	Parathion Ethyl	105	104	93.7			10.2
	Parathion Methyl	114	124	109			12.8
	PBDE-47	90.9	96.9	91.2			6.02
	PBDE-99	92.9	95.6	90.5			5.44
	Pendimethalin	106	118	105			11.2
	Phenytoin	64.9	57.8	48.2			18.2
	Phorate	81.4	92.2	80.9			13.0
	Prodiamine	56.4	83.5	79.2			5.35
	Prometon	71.8	76.5	68.7			10.8
	Prometryn	89.2	78.8	68.0			14.8
	Pronamide	93.0	115	102			12.6
	Propanil	93.6	101	87.8			14.1
	Propargite	92.9	83.6	76.8			8.46
	Propiconazole	90.0					5.49
	Pyraflufen Ethyl	91.4	97.2	85.2			13.2
	Pyridaben	96.9	103	96.5			6.63
	Pyriproxyfen	93.1	93.6	87.2			7.11
	Simazine	82.7	91.4	82.3			10.5
	Stirophos	97.7	46.4	37.6			21.0
	Sulfentrazone	93.8	112	97.4			14.3
	Tebuconazole	77.8	89.2	76.6			9.04
	Terbufos	106	120	104			14.0
	Terbutylazine	95.6	118	102			13.7
	Thiobencarb	81.7	91.4	80.3			13.0
	Tri-o-cresyl Phosphate	92.5	102	95.3			6.41
	Triadimefon	92.1	98.5	85.6			14.0
SM 2320 B-2011	Total Alkalinity	99.0				0.430	
SM 4500-F- C-2011	Fluoride	99.5	96.0	97.5			0.999
SM 5310 B-2011	Organic Carbon	96.0	92.0	92.4			0.416

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2334143
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2334144
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2334144
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2334144
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2334144
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2334155

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2334155
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2334143
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2334143
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2334143
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2334144

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	06/14/2022			06/14/2022 16:15	Khloe J Berg	2334143
EPA 350.1 Rev. 2.0	06/14/2022			06/23/2022 16:11	Judith K. Clark	2334144
EPA 351.2 Rev. 2.0	06/14/2022	06/22/2022 15:49	Samantha L Bates	06/23/2022 11:43	Alexandra J Mattheus	2334144
EPA 353.2 Rev. 2.0	06/14/2022			06/27/2022 14:28	Touraj Touran	2334144
EPA 365.1 Rev. 2.0	06/14/2022	06/22/2022 17:36	Adam P Silver	06/23/2022 11:38	James L Waggeberby	2334144
EPA 8270E	06/14/2022	06/20/2022 08:00	Rasheda Ghaffari	06/24/2022 17:40	Michael Poppell	2334155
	06/14/2022	06/20/2022 08:00	Rasheda Ghaffari	06/25/2022 22:31	Michael Poppell	2334155
	06/14/2022	06/20/2022 08:00	Rasheda Ghaffari	06/28/2022 16:06	Lipi Saha	2334155
SM 2320 B-2011	06/14/2022			06/24/2022 09:23	Dale L. Simmons	2334143
SM 2540 D-2011	06/14/2022			06/17/2022 14:36	Yijie Li	2334143
SM 4500-F- C-2011	06/14/2022			06/24/2022 08:09	Dale L. Simmons	2334143
SM 5310 B-2011	06/14/2022			06/18/2022 06:48	Khloe J Berg	2334144