

Chemical Analysis Report

SO-DIST-2022-10-20-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

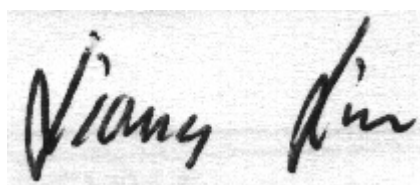
Event Description: **2022 SMP: Hatchett Creek**
Request ID: **RQ-2022-10-17-77**
Customer: **SO-DIST**
Project ID: **SMP**

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: 09-NOV-2022 10:33

A handwritten signature in black ink, appearing to read "Liang Lin", is shown 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 1

Collection Date/Time: 10/19/2022 09:25

Field ID: G3SD0191

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2364007	EPA 8270E	Oxybenzone**	9.7	U	ng/L	P421323	
		Acetochlor	0.24	U	ng/L	P421323	
		Octinoxate**	19	U	ng/L	P421323	
		Alachlor	0.24	U	ng/L	P421323	
		Avobenzone**	97	U	ng/L	P421323	
		Ametryn	0.58	U	ng/L	P421323	
		Atrazine	5.2		ng/L	P421323	
		PBDE-47**	3.9	U	ng/L	P421323	
		Atrazine Desethyl	1.5	U	ng/L	P421323	
		PBDE-99**	4.8	U	ng/L	P421323	
		Azinphos Methyl	1.9	U	ng/L	P421323	
		Tri-o-cresyl Phosphate**	5.8	U	ng/L	P421323	
		Azoxystrobin	0.68	I	ng/L	P421323	
		Bromacil	0.48	U	ng/L	P421323	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P421323	
		Butylate	0.39	U	ng/L	P421323	
		Dechlorane Plus**	29	U	ng/L	P421323	
		Caffeine**	41		ng/L	P421323	
		Carbophenothion	0.19	U	ng/L	P421323	
		Carfentrazone Ethyl	0.097	U	ng/L	P421323	
		Chlorfenapyr	0.17	U	ng/L	P421323	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P421323	
		Chlorpyrifos Methyl	0.048	U	ng/L	P421323	
		Coumaphos	0.48	U	ng/L	P421323	
		Cyanazine	3.1	U	ng/L	P421323	
		Cyprodinil	0.097	U	ng/L	P421323	
		Demeton	1.5	U	ng/L	P421323	
		Diazinon	0.12	U	ng/L	P421323	
		Difenoconazole	0.58	U	ng/L	P421323	
		Dimethenamid	0.097	U	ng/L	P421323	
		Dimethomorph	0.17	U	ng/L	P421323	
		Disulfoton	0.48	U	ng/L	P421323	
		Dithiopyr	0.60	U	ng/L	P421323	
		EPTC	1.2	U	ng/L	P421323	
		Ethion	0.15	U	ng/L	P421323	
		Ethoprop	0.097	U	ng/L	P421323	
		Etridiazole	0.15	U	ng/L	P421323	
		Fenamiphos	0.48	U	ng/L	P421323	
		Fenbuconazole	0.12	U	ng/L	P421323	
		Fipronil	1.0	J	ng/L	P421323	MS
		Fipronil Desulfinyl**	1.7		ng/L	P421323	
		Fipronil Sulfide	0.67	J	ng/L	P421323	MS
		Fipronil Sulfone	2.3		ng/L	P421323	

Field ID: G3SD0191

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2364007	EPA 8270E	Fluazifop-P-butyl	0.097	U	ng/L	P421323	
		Fludioxonil	0.12	U	ng/L	P421323	
		Flumioxazin	4.4	U	ng/L	P421323	
		Flutolanil	0.63		ng/L	P421323	
		Fluxapyroxad	1.6		ng/L	P421323	
		Fonofos	0.19	U	ng/L	P421323	
		Hexazinone	0.95	I	ng/L	P421323	
		Imazalil	0.73	U	ng/L	P421323	
		Iprodione	0.58	U	ng/L	P421323	
		Loratadine**	0.34	U	ng/L	P421323	
		Malathion	0.34	U	ng/L	P421323	
		Metalaxyl	0.73	U	ng/L	P421323	
		Metolachlor	0.43	I	ng/L	P421323	
		Metribuzin	1.5	U	ng/L	P421323	
		Mevinphos	1.0	U	ng/L	P421323	
		Molinate	0.29	U	ng/L	P421323	
		Myclobutanil	0.24	U	ng/L	P421323	
		Naled	67		ng/L	P421323	
		Napropamide	0.39	U	ng/L	P421323	
		Norflurazon	0.48	U	ng/L	P421323	
		Oxadiazon	2.2		ng/L	P421323	
		Oxyfluorfen	0.15	U	ng/L	P421323	
		Parathion Ethyl	0.24	U	ng/L	P421323	
		Parathion Methyl	0.53	U	ng/L	P421323	
		Pendimethalin	0.97	U	ng/L	P421323	
		Phenytol**	3.4	U	ng/L	P421323	
		Phorate	0.51	U	ng/L	P421323	
		Prodiamine	0.17	U	ng/L	P421323	
		Prometon	0.87	U	ng/L	P421323	
		Prometryn	0.19	U	ng/L	P421323	
		Pronamide	0.15	U	ng/L	P421323	
		Propanil	0.12	U	ng/L	P421323	
		Propargite	1.5	U	ng/L	P421323	
		Propiconazole	0.48	U	ng/L	P421323	
		Pyraflufen Ethyl	0.24	U	ng/L	P421323	
		Pyridaben	0.44	U	ng/L	P421323	
		Pyriproxyfen	0.12	U	ng/L	P421323	
		Simazine	2.2		ng/L	P421323	
		Stirophos	0.12	U	ng/L	P421323	
		Sulfentrazone	21		ng/L	P421323	
		Tebuconazole	0.48	U	ng/L	P421323	
		Terbufos	0.097	U	ng/L	P421323	
		Terbutylazine	0.41	U	ng/L	P421323	
		Thiobencarb	0.58	U	ng/L	P421323	
		Triadimefon	0.24	U	ng/L	P421323	

Field ID: G3SD0191

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: 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.

Sample Location: Hatchett Creek Tidal 2

Collection Date/Time: 10/19/2022 09:35

Field ID: G3SD0192

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2364001	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P421207	
	SM 2320 B-2011	Total Alkalinity	186	A	mg CaCO3/L	P421458	
	SM 2540 D-2015	TSS	3	U	mg/L	P421405	
	SM 4500-F- C-2011	Fluoride	0.37		mg F/L	P421463	
2364002	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P421682	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.99		mg N/L	P421503	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P421715	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P421416	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P421636	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: HatchettCreek@GroveStN

Collection Date/Time: 10/19/2022 09:55

Field ID: G3SD0194

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2364008	EPA 8270E	Oxybenzone**	9.9	U	ng/L	P421323	
		Acetochlor	0.25	U	ng/L	P421323	
		Octinoxate**	20	U	ng/L	P421323	
		Alachlor	0.25	U	ng/L	P421323	
		Avobenzone**	99	U	ng/L	P421323	
		Ametryn	1.7	I	ng/L	P421323	
		Atrazine	3.9		ng/L	P421323	
		PBDE-47**	4.0	U	ng/L	P421323	
		Atrazine Desethyl	1.5	U	ng/L	P421323	
		PBDE-99**	4.9	U	ng/L	P421323	
		Azinphos Methyl	2.0	U	ng/L	P421323	
		Tri-o-cresyl Phosphate**	5.9	U	ng/L	P421323	
		Azoxystrobin	0.69	I	ng/L	P421323	
		Bromacil	0.49	U	ng/L	P421323	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P421323	
		Butylate	0.40	U	ng/L	P421323	
		Dechlorane Plus**	30	U	ng/L	P421323	
		Caffeine**	45		ng/L	P421323	
		Carbophenothion	0.20	U	ng/L	P421323	
		Carfentrazone Ethyl	0.099	U	ng/L	P421323	
		Chlorfenapyr	0.17	U	ng/L	P421323	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P421323	
		Chlorpyrifos Methyl	0.049	U	ng/L	P421323	
		Coumaphos	0.49	U	ng/L	P421323	
		Cyanazine	3.2	U	ng/L	P421323	
		Cyprodinil	0.099	U	ng/L	P421323	
		Demeton	1.5	U	ng/L	P421323	
		Diazinon	0.12	U	ng/L	P421323	
		Difenoconazole	0.59	U	ng/L	P421323	
		Dimethenamid	0.099	U	ng/L	P421323	
		Dimethomorph	0.17	U	ng/L	P421323	
		Disulfoton	0.49	U	ng/L	P421323	
		Dithiopyr	0.62	U	ng/L	P421323	
		EPTC	1.2	U	ng/L	P421323	
		Ethion	0.15	U	ng/L	P421323	
		Ethoprop	0.099	U	ng/L	P421323	
		Etridiazole	0.15	U	ng/L	P421323	
		Fenamiphos	0.49	U	ng/L	P421323	
		Fenbuconazole	0.12	U	ng/L	P421323	
		Fipronil	1.2		ng/L	P421323	MS
		Fipronil Desulfinyl**	1.3		ng/L	P421323	
		Fipronil Sulfide	0.68		ng/L	P421323	MS
		Fipronil Sulfone	2.2		ng/L	P421323	

Field ID: G3SD0194

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2364008	EPA 8270E	Fluazifop-P-butyl	0.099	U	ng/L	P421323	
		Fludioxonil	0.12	U	ng/L	P421323	
		Flumioxazin	4.4	U	ng/L	P421323	
		Flutolanil	0.61		ng/L	P421323	
		Fluxapyroxad	1.9		ng/L	P421323	
		Fonofos	0.20	U	ng/L	P421323	
		Hexazinone	0.57	I	ng/L	P421323	
		Imazalil	0.74	U	ng/L	P421323	
		Iprodione	0.59	U	ng/L	P421323	
		Loratadine**	0.35	U	ng/L	P421323	
		Malathion	0.35	U	ng/L	P421323	
		Metalaxyl	0.74	U	ng/L	P421323	
		Metolachlor	0.35	U	ng/L	P421323	
		Metribuzin	1.5	U	ng/L	P421323	
		Mevinphos	1.0	U	ng/L	P421323	
		Molinate	0.30	U	ng/L	P421323	
		Myclobutanil	0.25	U	ng/L	P421323	
		Naled	72		ng/L	P421323	
		Napropamide	0.40	U	ng/L	P421323	
		Norflurazon	0.49	U	ng/L	P421323	
		Oxadiazon	2.2		ng/L	P421323	
		Oxyfluorfen	0.15	U	ng/L	P421323	
		Parathion Ethyl	0.25	U	ng/L	P421323	
		Parathion Methyl	0.54	U	ng/L	P421323	
		Pendimethalin	0.99	U	ng/L	P421323	
		Phenytol**	3.5	U	ng/L	P421323	
		Phorate	0.52	U	ng/L	P421323	
		Prodiamine	0.17	U	ng/L	P421323	
		Prometon	1.7	I	ng/L	P421323	
		Prometryn	0.20	U	ng/L	P421323	
		Pronamide	0.15	U	ng/L	P421323	
		Propanil	0.12	U	ng/L	P421323	
		Propargite	1.5	U	ng/L	P421323	
		Propiconazole	0.49	U	ng/L	P421323	
		Pyraflufen Ethyl	0.25	U	ng/L	P421323	
		Pyridaben	0.44	U	ng/L	P421323	
		Pyriproxyfen	0.12	U	ng/L	P421323	
		Simazine	1.7	I	ng/L	P421323	
		Stirophos	0.12	U	ng/L	P421323	
		Sulfentrazone	22		ng/L	P421323	
		Tebuconazole	0.49	U	ng/L	P421323	
		Terbufos	0.099	U	ng/L	P421323	
		Terbutylazine	0.42	U	ng/L	P421323	
		Thiobencarb	0.59	U	ng/L	P421323	
		Triadimefon	0.25	U	ng/L	P421323	

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: MS accuracy for multiple parameters not assessed due to high content of these parameters in the sample spiked.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421207

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421503

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421715

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421416

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

Reference Method: EPA 8270E
Batch ID: P421323

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: P421323

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
Dechlorane Plus	30	U	ng/L
Dechlorane Plus	30	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	0.62	U	ng/L
Dithiopyr	0.62	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 Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P421323

Component	Result	Code	Units
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
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	4.5	U	ng/L
Flumioxazin	4.5	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	0.35	U	ng/L
Loratadine	0.35	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	1.5	U	ng/L
Metribuzin	1.5	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P421323

Component	Result	Code	Units
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
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
Pronamide	0.15	U	ng/L
Pronamide	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: P421458

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

Reference Method: SM 2540 D-2015
Batch ID: P421405

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P421463

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P421636

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: P421207

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421503

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421416

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

Reference Method: EPA 8270E
Batch ID: P421323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	99.9		P	42 - 162
Acetochlor	91.4		P	69 - 123
Alachlor	86.4		P	65 - 118
Ametryn	91.9		P	58 - 141
Atrazine	99.8		P	73 - 118
Atrazine Desethyl	67.4		P	32 - 125
Avobenzone	107		P	40 - 203
Azinphos Methyl	145		P	36 - 197
Azoxystrobin	113		P	58 - 226
Bromacil	89.4		P	48 - 120
Butylate	72.4		P	27 - 85.0
Caffeine	79.8		P	40 - 137
Carbophenothion	88.7		P	54 - 132
Carfentrazone Ethyl	95.6		P	60 - 142
Chlorfenapyr	80.7		P	53 - 117
Chlorpyrifos Ethyl	92.5		P	59 - 116
Chlorpyrifos Methyl	78.4		P	66 - 119
Coumaphos	108		P	11 - 234
Cyanazine	93.1		P	61 - 248
Cyprodinil	77.9		P	50 - 147
Dechlorane Plus	84.3		P	47 - 182
Demeton	82.9		P	30 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P421323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diazinon	92.6		P	67 - 126
Difenoconazole	101		P	38 - 205
Dimethenamid	72.5		P	57 - 111
Dimethomorph	134		P	16 - 212
Disulfoton	73.0		P	46 - 126
Dithiopyr	84.3		P	62 - 115
EPTC	57.1		P	28 - 80.0
Ethion	65.8		P	24 - 122
Ethoprop	90.7		P	62 - 113
Etridiazole	65.0		P	28 - 92.0
Fenamiphos	98.2		P	57 - 128
Fenbuconazole	100		P	52 - 155
Fipronil	76.8		P	63 - 130
Fipronil Desulfinyl	80.3		P	61 - 130
Fipronil Sulfide	60.1		P	56 - 117
Fipronil Sulfone	65.1		P	52 - 118
Fluazifop-P-butyl	94.5		P	61 - 128
Fludioxonil	88.5		P	59 - 129
Flumioxazin	147		P	30 - 250
Flutolanil	91.7		P	53 - 127
Fluxapyroxad	68.2		P	42 - 132
Fonofos	72.4		P	61 - 110
Hexazinone	101		P	46 - 139
Imazalil	86.8		P	40 - 139
Iprodione	92.2		P	40 - 146
Loratadine	143		P	10 - 224
Malathion	103		P	61 - 135
Metalaxyl	80.0		P	58 - 121
Metolachlor	90.9		P	64 - 118
Metribuzin	91.8		P	45 - 245
Mevinphos	83.3		P	49 - 118
Molinate	73.1		P	42 - 92.0
Myclobutanil	86.9		P	55 - 127
Naled	72.6		P	10 - 114
Napropamide	78.0		P	39 - 121
Norflurazon	80.8		P	55 - 129
Octinoxate	148		P	26 - 166
Oxadiazon	73.5		P	54 - 115
Oxybenzone	96.1		P	49 - 135
Oxyfluorfen	117		P	64 - 139
Parathion Ethyl	103		P	70 - 111
Parathion Methyl	115		P	76 - 136
PBDE-47	116		P	41 - 148
PBDE-99	92.5		P	38 - 147
Pendimethalin	88.0		P	52 - 118
Phenytol	41.2		P	10 - 162
Phorate	76.1		P	40 - 122
Prodiamine	50.7		P	26 - 141
Prometon	55.8		P	54 - 122
Prometryn	61.5		P	61 - 128
Pronamide	106		P	72 - 121
Propanil	118		P	45 - 144

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P421323

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propargite	68.2		P	10 - 199
Propiconazole	81.5		P	56 - 127
Pyraflufen Ethyl	76.2		P	56 - 140
Pyridaben	106		P	26 - 211
Pyriproxyfen	104		P	33 - 194
Simazine	81.5		P	67 - 121
Stirophos	65.7		P	20 - 142
Sulfentrazone	76.2		P	21 - 144
Tebuconazole	48.2		P	10 - 122
Terbufos	95.8		P	60 - 129
Terbuthylazine	82.8		P	69 - 113
Thiobencarb	93.4		P	51 - 120
Tri-o-cresyl Phosphate	103		P	49 - 150
Triadimefon	80.9		P	56 - 114

Reference Method: SM 2320 B-2011

Batch ID: P421458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 2540 D-2015

Batch ID: P421405

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.1		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P421463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P421636

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363291	Ammonia-N	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363997	Kjeldahl Nitrogen	92.7	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364119	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364076	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P421323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364007	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	92.6	98.3	P/P	26 - 165
2364007	Acetochlor	90.0	84.9	P/P	67 - 124
2364007	Alachlor	83.1	94.0	P/P	60 - 120
2364007	Ametryn	99.8	110	P/P	54 - 216
2364007	Atrazine Desethyl	67.3	62.2	P/P	15 - 122
2364007	Avobenzone	99.7	111	P/P	37 - 178
2364007	Azinphos Methyl	110	107	P/P	40 - 292
2364007	Azoxystrobin	127	118	P/P	35 - 220
2364007	Bromacil	88.8	86.4	P/P	45 - 127
2364007	Butylate	54.1	57.2	P/P	20 - 83.0
2364007	Carbophenothion	76.3	66.4	P/P	57 - 127
2364007	Carfentrazone Ethyl	81.5	75.0	P/P	51 - 141
2364007	Chlorfenapyr	56.5	53.5	P/P	46 - 111
2364007	Chlorpyrifos Ethyl	60.2	72.2	P/P	52 - 120
2364007	Chlorpyrifos Methyl	84.6	92.2	P/P	63 - 119
2364007	Coumaphos	68.3	57.2	P/P	10 - 228
2364007	Cyanazine	96.7	82.8	P/P	59 - 241
2364007	Cyprodinil	59.5	59.3	P/P	47 - 146
2364007	Dechlorane Plus	73.2	83.5	P/P	50 - 150
2364007	Demeton	97.0	93.9	P/P	40 - 136
2364007	Diazinon	93.8	89.3	P/P	69 - 132
2364007	Difenoconazole	91.2	83.0	P/P	57 - 258
2364007	Dimethenamid	76.5	69.6	P/P	54 - 110
2364007	Dimethomorph	146	140	P/P	28 - 210
2364007	Disulfoton	79.7	72.7	P/P	43 - 133
2364007	Dithiopyr	71.1	74.8	P/P	39 - 116
2364007	EPTC	45.8	40.5	P/P	20 - 78.0
2364007	Ethion	70.8	48.3	P/P	17 - 119

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P421323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364007	Ethoprop	98.1	87.6	P/P	66 - 120
2364007	Etridiazole	67.3	65.6	P/P	28 - 96.0
2364007	Fenamiphos	47.9	57.4	P/P	41 - 126
2364007	Fenbuconazole	83.1	72.0	P/P	42 - 169
2364007	Fipronil	48.9	70.0	F/P	61 - 132
2364007	Fipronil Desulfinyl	66.6	84.1	P/P	56 - 132
2364007	Fipronil Sulfide	13.1	16.7	F/F	48 - 119
2364007	Fluazifop-P-butyl	77.6	70.3	P/P	53 - 131
2364007	Fludioxonil	78.7	77.6	P/P	56 - 127
2364007	Flumioxazin	112	100	P/P	19 - 300
2364007	Flutolanil	69.1	70.7	P/P	41 - 127
2364007	Fluxapyroxad	64.5	52.8	P/P	42 - 172
2364007	Fonofos	59.2	64.1	P/P	59 - 113
2364007	Hexazinone	117	105	P/P	66 - 122
2364007	Imazalil	65.0	97.5	P/P	21 - 283
2364007	Iprodione	78.4	67.3	P/P	43 - 150
2364007	Loratadine	140	142	P/P	23 - 201
2364007	Malathion	84.6	84.4	P/P	58 - 136
2364007	Metalaxyl	77.8	74.8	P/P	55 - 120
2364007	Metolachlor	83.7	82.0	P/P	57 - 121
2364007	Metribuzin	115	109	P/P	58 - 294
2364007	Mevinphos	86.8	80.4	P/P	50 - 126
2364007	Molinate	62.2	64.2	P/P	42 - 93.0
2364007	Myclobutanil	89.4	89.2	P/P	55 - 125
2364007	Napropamide	62.5	59.1	P/P	39 - 110
2364007	Norflurazon	72.0	66.2	P/P	48 - 128
2364007	Octinoxate	118	104	P/P	21 - 159
2364007	Oxadiazon	57.1	57.6	P/P	43 - 112
2364007	Oxybenzone	81.4	84.9	P/P	41 - 142
2364007	Oxyfluorfen	110	115	P/P	64 - 153
2364007	Parathion Ethyl	95.7	90.0	P/P	69 - 114
2364007	Parathion Methyl	120	113	P/P	79 - 139
2364007	PBDE-47	96.6	101	P/P	27 - 144
2364007	PBDE-99	81.7	84.7	P/P	18 - 150
2364007	Pendimethalin	76.6	65.7	P/P	50 - 139
2364007	Phenytol	41.2	32.5	P/P	10 - 146
2364007	Phorate	65.3	59.1	P/P	54 - 161
2364007	Prodiamine	49.1	43.3	P/P	30 - 161
2364007	Prometon	96.3	85.3	P/P	45 - 134
2364007	Prometryn	61.9	64.3	P/P	45 - 137
2364007	Pronamide	103	104	P/P	65 - 133
2364007	Propanil	125	124	P/P	49 - 142
2364007	Propargite	71.0	52.2	P/P	10 - 203
2364007	Propiconazole	76.9	70.9	P/P	38 - 146
2364007	Pyraflufen Ethyl	63.9	59.5	P/P	34 - 153
2364007	Pyridaben	76.5	77.7	P/P	12 - 192
2364007	Pyriproxyfen	91.3	79.6	P/P	33 - 180
2364007	Simazine	99.6	88.3	P/P	51 - 157
2364007	Stirophos	61.2	49.3	P/P	10 - 128
2364007	Tebuconazole	55.7	36.4	P/P	10 - 133
2364007	Terbufos	85.6	83.2	P/P	65 - 139
2364007	Terbutylazine	94.2	82.8	P/P	66 - 117

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P421323

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364007	Thiobencarb	83.3	83.2	P/P	51 - 119
2364007	Tri-o-cresyl Phosphate	81.1	85.4	P/P	31 - 144
2364007	Triadimefon	80.5	80.3	P/P	48 - 119

Reference Method: SM 4500-F- C-2011

Batch ID: P421463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2364001	Fluoride	99.6	99.6	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P421636

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2363291	Organic Carbon	92.1	93.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363980	Turbidity	3.43	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P421682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363291	Ammonia-N	0.351	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363997	Kjeldahl Nitrogen	2.03	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P421715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364119	NO2NO3-N	0.364	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P421416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364076	Total-P	1.40	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P421323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364007	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	5.97	Spike	P	0 - 37
2364007	Acetochlor	5.83	Spike	P	0 - 28
2364007	Alachlor	12.3	Spike	P	0 - 30
2364007	Ametryn	9.85	Spike	P	0 - 32
2364007	Atrazine	11.4	Spike	P	0 - 41
2364007	Atrazine Desethyl	8.02	Spike	P	0 - 36
2364007	Avobenzone	10.7	Spike	P	0 - 36
2364007	Azinphos Methyl	2.80	Spike	P	0 - 75
2364007	Azoxystrobin	6.20	Spike	P	0 - 39
2364007	Bromacil	2.70	Spike	P	0 - 33
2364007	Butylate	5.58	Spike	P	0 - 44
2364007	Caffeine	1.01	Spike	P	0 - 74
2364007	Carbophenothion	13.8	Spike	P	0 - 25
2364007	Carfentrazone Ethyl	8.28	Spike	P	0 - 27
2364007	Chlorfenapyr	5.52	Spike	P	0 - 24
2364007	Chlorpyrifos Ethyl	18.2	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P421323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364007	Chlorpyrifos Methyl	8.56	Spike	P	0 - 26
2364007	Coumaphos	17.7	Spike	P	0 - 28
2364007	Cyanazine	15.6	Spike	P	0 - 48
2364007	Cyprodinil	0.341	Spike	P	0 - 29
2364007	Dechlorane Plus	13.2	Spike	P	0 - 30
2364007	Demeton	3.26	Spike	P	0 - 33
2364007	Diazinon	4.95	Spike	P	0 - 29
2364007	Difenoconazole	9.38	Spike	P	0 - 34
2364007	Dimethenamid	9.38	Spike	P	0 - 39
2364007	Dimethomorph	4.58	Spike	P	0 - 51
2364007	Disulfoton	9.13	Spike	P	0 - 30
2364007	Dithiopyr	5.08	Spike	P	0 - 26
2364007	EPTC	12.2	Spike	P	0 - 43
2364007	Ethion	37.8	Spike	P	0 - 79
2364007	Ethoprop	11.3	Spike	P	0 - 29
2364007	Etridiazole	2.66	Spike	P	0 - 33
2364007	Fenamiphos	18.1	Spike	P	0 - 40
2364007	Fenbuconazole	14.3	Spike	P	0 - 74
2364007	Fipronil	24.5	Spike	P	0 - 29
2364007	Fipronil Desulfinyl	14.6	Spike	P	0 - 32
2364007	Fipronil Sulfide	7.13	Spike	P	0 - 30
2364007	Fipronil Sulfone	11.2	Spike	P	0 - 33
2364007	Fluazifop-P-butyl	9.96	Spike	P	0 - 38
2364007	Fludioxonil	1.47	Spike	P	0 - 29
2364007	Flumioxazin	11.5	Spike	P	0 - 51
2364007	Flutolanil	1.81	Spike	P	0 - 25
2364007	Fluxapyroxad	11.9	Spike	P	0 - 45
2364007	Fonofos	7.83	Spike	P	0 - 27
2364007	Hexazinone	9.98	Spike	P	0 - 30
2364007	Imazalil	40.0	Spike	P	0 - 100
2364007	Iprodione	15.2	Spike	P	0 - 33
2364007	Loratadine	1.44	Spike	P	0 - 56
2364007	Malathion	0.206	Spike	P	0 - 37
2364007	Metalaxyl	3.85	Spike	P	0 - 40
2364007	Metolachlor	1.95	Spike	P	0 - 29
2364007	Metribuzin	5.20	Spike	P	0 - 45
2364007	Mevinphos	7.58	Spike	P	0 - 29
2364007	Molinate	3.09	Spike	P	0 - 33
2364007	Myclobutanil	0.179	Spike	P	0 - 26
2364007	Naled	4.23	Spike	P	0 - 37
2364007	Napropamide	5.74	Spike	P	0 - 44
2364007	Norflurazon	8.44	Spike	P	0 - 30
2364007	Octinoxate	12.3	Spike	P	0 - 45
2364007	Oxadiazon	0.429	Spike	P	0 - 28
2364007	Oxybenzone	4.24	Spike	P	0 - 46
2364007	Oxyfluorfen	4.28	Spike	P	0 - 28
2364007	Parathion Ethyl	6.15	Spike	P	0 - 31
2364007	Parathion Methyl	6.54	Spike	P	0 - 29
2364007	PBDE-47	4.30	Spike	P	0 - 36
2364007	PBDE-99	3.70	Spike	P	0 - 40
2364007	Pendimethalin	15.4	Spike	P	0 - 33

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P421323

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364007	Phenytoin	23.5	Spike	P	0 - 100
2364007	Phorate	9.90	Spike	P	0 - 36
2364007	Prodiamine	12.6	Spike	P	0 - 71
2364007	Prometon	12.2	Spike	P	0 - 36
2364007	Prometryn	3.86	Spike	P	0 - 28
2364007	Pronamide	0.463	Spike	P	0 - 24
2364007	Propanil	0.656	Spike	P	0 - 28
2364007	Propargite	30.6	Spike	P	0 - 43
2364007	Propiconazole	8.08	Spike	P	0 - 33
2364007	Pyraflufen Ethyl	7.13	Spike	P	0 - 29
2364007	Pyridaben	1.52	Spike	P	0 - 30
2364007	Pyriproxyfen	13.8	Spike	P	0 - 79
2364007	Simazine	7.59	Spike	P	0 - 29
2364007	Stirophos	21.5	Spike	P	0 - 61
2364007	Sulfentrazone	1.42	Spike	P	0 - 33
2364007	Tebuconazole	41.9	Spike	P	0 - 69
2364007	Terbufos	2.85	Spike	P	0 - 29
2364007	Terbutylazine	12.9	Spike	P	0 - 32
2364007	Thiobencarb	0.150	Spike	P	0 - 26
2364007	Tri-o-cresyl Phosphate	5.08	Spike	P	0 - 33
2364007	Triadimefon	0.308	Spike	P	0 - 28

Reference Method: SM 2320 B-2011

Batch ID: P421458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364001	Total Alkalinity	0.988	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011

Batch ID: P421463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2364001	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P421636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2363291	Organic Carbon	1.33	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2364007
Field Sample ID: G3SD0191

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	47.7	P	20 - 200
EPA 8270E	Simazine-d10	94.4	P	62 - 142
EPA 8270E	Terbufos-d10	84.4	P	58 - 132
EPA 8270E	Terphenyl-d14	98.3	P	52 - 137

Lab Sample ID: 2364008
Field Sample ID: G3SD0194

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	41.3	P	20 - 200
EPA 8270E	Simazine-d10	71.8	P	62 - 142
EPA 8270E	Terbufos-d10	61.1	P	58 - 132
EPA 8270E	Terphenyl-d14	70.7	P	52 - 137

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115436

Included Lab Sample IDs: 2364001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A115538

Included Lab Sample IDs: 2364001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	95.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A115538

Included Lab Sample IDs: 2364001

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115562

Included Lab Sample IDs: 2364002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.6	98.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A115590

Included Lab Sample IDs: 2364007, 2364008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	94.9		P	80 - 120
Avobenzone	95.4		P	80 - 120
Dechlorane Plus	97.8		P	80 - 120
Octinoxate	96.3		P	80 - 120
Oxybenzone	95.9		P	80 - 120
PBDE-47	98.5		P	80 - 120
PBDE-99	99.2		P	80 - 120
Tri-o-cresyl Phosphate	99.9		P	80 - 120

Reference Method: SM 5310 B-2011

Run ID: A115617

Included Lab Sample IDs: 2364002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115618

Included Lab Sample IDs: 2364002

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A115631

Included Lab Sample IDs: 2364007, 2364008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.7		P	80 - 120
Alachlor	98.0		P	80 - 120
Ametryn	90.3		P	80 - 120
Atrazine	97.8		P	80 - 120
Atrazine Desethyl	90.2		P	80 - 120
Azinphos Methyl	106		P	80 - 120
Azoxystrobin	104		P	80 - 120
Bromacil	99.4		P	80 - 120
Butylate	95.2		P	80 - 120
Caffeine	116		P	80 - 120
Carbophenothion	87.9		P	80 - 120
Carfentrazone Ethyl	92.8		P	80 - 120
Chlorfenapyr	95.3		P	80 - 120
Chlorpyrifos Ethyl	96.2		P	80 - 120
Chlorpyrifos Methyl	84.4		P	80 - 120
Coumaphos	83.9		P	80 - 120
Cyanazine	87.9		P	80 - 120
Cyprodinil	83.3		P	80 - 120
Demeton	90.9		P	80 - 120
Diazinon	91.5		P	80 - 120
Difenoconazole	105		P	80 - 120
Dimethenamid	98.3		P	80 - 120
Dimethomorph	105		P	80 - 120
Disulfoton	80.3		P	80 - 120
Dithiopyr	93.2		P	80 - 120
EPTC	95.9		P	80 - 120
Ethion	91.7		P	80 - 120
Ethoprop	92.4		P	80 - 120
Etridiazole	98.1		P	80 - 120
Fenamiphos	95.7		P	80 - 120
Fenbuconazole	95.0		P	80 - 120
Fipronil	87.0		P	80 - 120
Fipronil Desulfinyl	92.5		P	80 - 120
Fipronil Sulfide	81.7		P	80 - 120
Fipronil Sulfone	87.8		P	80 - 120
Fluazifop-P-butyl	95.0		P	80 - 120
Fludioxonil	98.8		P	80 - 120
Flumioxazin	81.4		P	80 - 120
Flutolanil	99.8		P	80 - 120
Fluxapyroxad	81.9		P	80 - 120
Fonofos	85.2		P	80 - 120
Hexazinone	104		P	80 - 120
Imazalil	103		P	80 - 120
Iprodione	82.3		P	80 - 120
Loratadine	109		P	80 - 120
Malathion	91.6		P	80 - 120
Metalaxyl	90.6		P	80 - 120
Metolachlor	102		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	90.9		P	80 - 120
Molinate	96.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A115631

Included Lab Sample IDs: 2364007, 2364008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Myclobutanil	98.4		P	80 - 120
Naled	93.5		P	80 - 120
Napropamide	85.4		P	80 - 120
Norflurazon	89.6		P	80 - 120
Oxadiazon	108		P	80 - 120
Oxyfluorfen	90.9		P	80 - 120
Parathion Ethyl	107		P	80 - 120
Parathion Methyl	108		P	80 - 120
Pendimethalin	99.5		P	80 - 120
Phenytoin	93.6		P	80 - 120
Phorate	80.9		P	80 - 120
Prodiamine	89.3		P	80 - 120
Prometon	95.6		P	80 - 120
Prometryn	86.8		P	80 - 120
Pronamide	99.4		P	80 - 120
Propanil	101		P	80 - 120
Propargite	99.7		P	80 - 120
Propiconazole	89.7		P	80 - 120
Pyraflufen Ethyl	89.0		P	80 - 120
Pyridaben	87.5		P	80 - 120
Pyriproxyfen	104		P	80 - 120
Simazine	94.1		P	80 - 120
Stiophos	86.3		P	80 - 120
Sulfentrazone	84.7		P	80 - 120
Tebuconazole	84.5		P	80 - 120
Terbufos	85.1		P	80 - 120
Terbutylazine	84.7		P	80 - 120
Thiobencarb	110		P	80 - 120
Triadimefon	95.1		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A115637

Included Lab Sample IDs: 2364002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115654

Included Lab Sample IDs: 2364002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A115665

Included Lab Sample IDs: 2364007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlorpyrifos Methyl	96.9		P	80 - 120

Quality Assurance Report

Calibration Verification

* 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	99.1				3.43	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4	101	101			0.351
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	92.7	95.0			2.03
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	101	103	104			0.364
EPA 365.1 Rev. 2.0	Total-P	103	103	104			1.40
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	99.9	92.6	98.3			5.97
	Acetochlor	91.4	90.0	84.9			5.83
	Alachlor	86.4	83.1	94.0			12.3
	Ametryn	91.9	99.8	110			9.85
	Atrazine	99.8					11.4
	Atrazine Desethyl	67.4	67.3	62.2			8.02
	Avobenzone	107	99.7	111			10.7
	Azinphos Methyl	145	110	107			2.80
	Azoxystrobin	113	127	118			6.20
	Bromacil	89.4	88.8	86.4			2.70
	Butylate	72.4	54.1	57.2			5.58
	Caffeine	79.8					1.01
	Carbophenothion	88.7	76.3	66.4			13.8
	Carfentrazone Ethyl	95.6	81.5	75.0			8.28
	Chlorfenapyr	80.7	56.5	53.5			5.52
	Chlorpyrifos Ethyl	92.5	60.2	72.2			18.2
	Chlorpyrifos Methyl	78.4	84.6	92.2			8.56
	Coumaphos	108	68.3	57.2			17.7
	Cyanazine	93.1	96.7	82.8			15.6
	Cyprodinil	77.9	59.5	59.3			0.341
	Dechlorane Plus	84.3	73.2	83.5			13.2
	Demeton	82.9	97.0	93.9			3.26
	Diazinon	92.6	93.8	89.3			4.95
	Difenoconazole	101	91.2	83.0			9.38
	Dimethenamid	72.5	76.5	69.6			9.38
	Dimethomorph	134	146	140			4.58
	Disulfoton	73.0	79.7	72.7			9.13
	Dithiopyr	84.3	71.1	74.8			5.08
	EPTC	57.1	45.8	40.5			12.2
	Ethion	65.8	70.8	48.3			37.8
	Ethoprop	90.7	98.1	87.6			11.3
	Etridiazole	65.0	67.3	65.6			2.66
	Fenamiphos	98.2	47.9	57.4			18.1
	Fenbuconazole	100	83.1	72.0			14.3
	Fipronil	76.8	48.9	70.0			24.5
	Fipronil Desulfinyl	80.3	66.6	84.1			14.6
	Fipronil Sulfide	60.1	13.1	16.7			7.13
	Fipronil Sulfone	65.1					11.2
	Fluazifop-P-butyl	94.5	77.6	70.3			9.96
	Fludioxonil	88.5	78.7	77.6			1.47
	Flumioxazin	147	112	100			11.5
	Flutolanil	91.7	69.1	70.7			1.81
	Fluxapyroxad	68.2	64.5	52.8			11.9
	Fonofos	72.4	59.2	64.1			7.83
	Hexazinone	101	117	105			9.98
	Imazalil	86.8	65.0	97.5			40.0
	Iprodione	92.2	78.4	67.3			15.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Loratadine	143	140	142		1.44
	Malathion	103	84.6	84.4		0.206
	Metalaxyl	80.0	77.8	74.8		3.85
	Metolachlor	90.9	83.7	82.0		1.95
	Metribuzin	91.8	115	109		5.20
	Mevinphos	83.3	86.8	80.4		7.58
	Molinate	73.1	62.2	64.2		3.09
	Myclobutanil	86.9	89.4	89.2		0.179
	Naled	72.6				4.23
	Napropamide	78.0	62.5	59.1		5.74
	Norflurazon	80.8	72.0	66.2		8.44
	Octinoxate	148	118	104		12.3
	Oxadiazon	73.5	57.1	57.6		0.429
	Oxybenzone	96.1	81.4	84.9		4.24
	Oxyfluorfen	117	110	115		4.28
	Parathion Ethyl	103	95.7	90.0		6.15
	Parathion Methyl	115	120	113		6.54
	PBDE-47	116	96.6	101		4.30
	PBDE-99	92.5	81.7	84.7		3.70
	Pendimethalin	88.0	76.6	65.7		15.4
	Phenytoin	41.2	41.2	32.5		23.5
	Phorate	76.1	65.3	59.1		9.90
	Prodiamine	50.7	49.1	43.3		12.6
	Prometon	55.8	96.3	85.3		12.2
	Prometryn	61.5	61.9	64.3		3.86
	Pronamide	106	103	104		0.463
	Propanil	118	125	124		0.656
	Propargite	68.2	71.0	52.2		30.6
	Propiconazole	81.5	76.9	70.9		8.08
	Pyraflufen Ethyl	76.2	63.9	59.5		7.13
	Pyridaben	106	76.5	77.7		1.52
	Pyriproxyfen	104	91.3	79.6		13.8
	Simazine	81.5	99.6	88.3		7.59
	Stirophos	65.7	61.2	49.3		21.5
	Sulfentrazon	76.2				1.42
	Tebuconazole	48.2	55.7	36.4		41.9
	Terbufos	95.8	85.6	83.2		2.85
	Terbuthylazine	82.8	94.2	82.8		12.9
	Thiobencarb	93.4	83.3	83.2		0.150
	Tri-o-cresyl Phosphate	103	81.1	85.4		5.08
	Triadimefon	80.9	80.5	80.3		0.308
SM 2320 B-2011	Total Alkalinity	101			0.988	
SM 2540 D-2015	TSS	93.1				
SM 4500-F- C-2011	Fluoride	98.3	99.6	99.6		0.0
SM 5310 B-2011	Organic Carbon	98.1	92.1	93.5		1.33

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2364001
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2364002
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2364002
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2364002

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2364002
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2364007, 2364008
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2364007, 2364008
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2364001
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2364001
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2364001
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2364002

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	10/20/2022			10/20/2022 14:18	Chandler E Cox	2364001
EPA 350.1 Rev. 2.0	10/20/2022			10/31/2022 13:50	Ping Hua	2364002
EPA 351.2 Rev. 2.0	10/20/2022	10/27/2022 11:24	Alexandra J Mattheus	10/28/2022 13:02	Alexandra J Mattheus	2364002
EPA 353.2 Rev. 2.0	10/20/2022			11/01/2022 09:34	Beverly Y. Sanders	2364002
EPA 365.1 Rev. 2.0	10/20/2022	10/26/2022 15:16	Adam P Silver	10/27/2022 09:30	James L Waggeberby	2364002
EPA 8270E	10/20/2022	10/25/2022 08:30	Rasheda Ghaffari	10/26/2022 20:39	Michael Poppell	2364007
	10/20/2022	10/25/2022 08:30	Rasheda Ghaffari	10/26/2022 21:05	Michael Poppell	2364008
	10/20/2022	10/25/2022 08:30	Rasheda Ghaffari	10/27/2022 20:09	Lipi Saha	2364007
	10/20/2022	10/25/2022 08:30	Rasheda Ghaffari	10/27/2022 20:29	Lipi Saha	2364008
	10/20/2022	10/25/2022 08:30	Rasheda Ghaffari	11/01/2022 00:13	Michael Poppell	2364007
SM 2320 B-2011	10/20/2022			10/26/2022 06:38	Adam P Silver	2364001
SM 2540 D-2015	10/20/2022			10/21/2022 17:06	Yijie Li	2364001
SM 4500-F- C-2011	10/20/2022			10/26/2022 04:09	Adam P Silver	2364001
SM 5310 B-2011	10/20/2022			10/28/2022 01:31	Khloe J Berg	2364002