

Chemical Analysis Report

SO-DIST-2022-11-30-02

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

Event Description: **2022 SMP : Charlotte Harbor**
Request ID: **RQ-2022-11-21-16**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 19-DEC-2022 10:34



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: MYAKKA CUTOFF (WESTERN PORTION)

Collection Date/Time: 11/29/2022 09:20

Field ID: g3sd0073

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371821	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P422942	
	SM 2320 B-2011	Total Alkalinity	86		mg CaCO3/L	P423430	
	SM 2540 D-2015	TSS	5	I	mg/L	P423167	
	SM 4500-F- C-2011	Fluoride	0.75		mg F/L	P423578	
2371823	EPA 350.1 Rev. 2.0	Ammonia-N	0.076		mg N/L	P423374	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P423021	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P423018	
	EPA 365.1 Rev. 2.0	Total-P	0.28		mg P/L	P423032	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P423123	
2371833	EPA 8270E	Oxybenzone**	9.6	U	ng/L	P423105	
		Acetochlor	0.24	U	ng/L	P423105	
		Octinoxate**	19	U	ng/L	P423105	
		Alachlor	0.24	U	ng/L	P423105	
		Avobenzone**	96	U	ng/L	P423105	
		Ametryn	0.58	U	ng/L	P423105	
		Atrazine	61		ng/L	P423105	
		PBDE-47**	3.8	U	ng/L	P423105	
		Atrazine Desethyl	1.4	U	ng/L	P423105	
		PBDE-99**	4.8	U	ng/L	P423105	
		Azinphos Methyl	1.9	U	ng/L	P423105	
		Tri-o-cresyl Phosphate**	5.8	U	ng/L	P423105	
		Azoxystrobin	0.79	I	ng/L	P423105	
		Bromacil	20		ng/L	P423105	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P423105	
		Butylate	0.38	U	ng/L	P423105	
		Dechlorane Plus**	29	U	ng/L	P423105	
		Caffeine**	7.2	U	ng/L	P423105	
		Carbophenothion	0.19	U	ng/L	P423105	
		Carfentrazone Ethyl	0.096	U	ng/L	P423105	
		Chlorfenapyr	0.17	U	ng/L	P423105	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P423105	
		Chlorpyrifos Methyl	0.048	U	ng/L	P423105	
		Coumaphos	0.48	U	ng/L	P423105	
		Cyanazine	3.1	U	ng/L	P423105	
		Cyprodinil	0.096	U	ng/L	P423105	
		Demeton	1.4	U	ng/L	P423105	
		Diazinon	0.12	U	ng/L	P423105	
		Difenoconazole	0.58	U	ng/L	P423105	
		Dimethenamid	0.096	U	ng/L	P423105	
		Dimethomorph	0.17	U	ng/L	P423105	
		Disulfoton	0.48	U	ng/L	P423105	
		Dithiopyr	0.60	U	ng/L	P423105	
		EPTC	1.2	U	ng/L	P423105	

Field ID: g3sd0073

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371833	EPA 8270E	Ethion	0.14	U	ng/L	P423105	
		Ethoprop	0.096	U	ng/L	P423105	
		Etridiazole	0.14	U	ng/L	P423105	
		Fenamiphos	0.48	U	ng/L	P423105	
		Fenbuconazole	0.30	I	ng/L	P423105	
		Fipronil	0.24	U	ng/L	P423105	
		Fipronil Desulfinyl**	0.12	U	ng/L	P423105	
		Fipronil Sulfide	0.14	U	ng/L	P423105	
		Fipronil Sulfone	0.14	U	ng/L	P423105	
		Fluazifop-P-butyl	0.096	U	ng/L	P423105	
		Fludioxonil	0.12	U	ng/L	P423105	
		Flumioxazin	4.3	U	ng/L	P423105	
		Flutolanil	0.25	I	ng/L	P423105	
		Fluxapyroxad	0.35	I	ng/L	P423105	
		Fonofos	0.19	U	ng/L	P423105	
		Hexazinone	9.7		ng/L	P423105	
		Imazalil	0.72	U	ng/L	P423105	
		Iprodione	0.58	UJ	ng/L	P423105	LCS, MS
		Loratadine**	0.34	U	ng/L	P423105	
		Malathion	0.34	U	ng/L	P423105	
		Metalaxyl	10		ng/L	P423105	
		Metolachlor	31		ng/L	P423105	
		Metribuzin	1.4	U	ng/L	P423105	
		Mevinphos	1.0	U	ng/L	P423105	
		Molinate	0.29	U	ng/L	P423105	
		Myclobutanil	0.24	U	ng/L	P423105	
		Naled	1.4	UJ	ng/L	P423105	LCS
		Napropamide	0.38	U	ng/L	P423105	
		Norflurazon	30		ng/L	P423105	
		Oxadiazon	0.61	I	ng/L	P423105	
		Oxyfluorfen	0.14	U	ng/L	P423105	
		Parathion Ethyl	0.24	U	ng/L	P423105	
		Parathion Methyl	0.53	U	ng/L	P423105	
		Pendimethalin	0.96	U	ng/L	P423105	
		Phenytol**	3.4	U	ng/L	P423105	
		Phorate	0.50	U	ng/L	P423105	
		Prodiamine	0.17	U	ng/L	P423105	
		Prometon	0.86	U	ng/L	P423105	
		Prometryn	0.19	U	ng/L	P423105	
		Pronamide	0.14	U	ng/L	P423105	
		Propanil	0.12	U	ng/L	P423105	
		Propargite	1.4	U	ng/L	P423105	
		Propiconazole	0.48	U	ng/L	P423105	
		Pyraflufen Ethyl	0.24	U	ng/L	P423105	
		Pyridaben	0.43	U	ng/L	P423105	

Field ID: g3sd0073

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371833	EPA 8270E	Pyriproxyfen	0.12	U	ng/L	P423105	
		Simazine	4.4		ng/L	P423105	
		Stirophos	0.12	U	ng/L	P423105	
		Sulfentrazone	3.9		ng/L	P423105	
		Tebuconazole	0.71	I	ng/L	P423105	
		Terbufos	0.096	U	ng/L	P423105	
		Terbutylazine	0.41	U	ng/L	P423105	
		Thiobencarb	0.58	U	ng/L	P423105	
		Triadimefon	0.24	U	ng/L	P423105	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: MS accuracy for atrazine and simazine 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: Tippecanoe Bay North

Collection Date/Time: 11/29/2022 09:45

Field ID: G3SD0218

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371822	EPA 180.1 Rev. 2.0	Turbidity	0.95	I	NTU	P422942	
	SM 2320 B-2011	Total Alkalinity	91		mg CaCO3/L	P423430	
	SM 2540 D-2015	TSS	4	I	mg/L	P423167	
	SM 4500-F- C-2011	Fluoride	0.68		mg F/L	P423578	
2371824	EPA 350.1 Rev. 2.0	Ammonia-N	0.043		mg N/L	P423374	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.63		mg N/L	P423021	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P423018	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P423032	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P423123	
2371834	EPA 8270E	Oxybenzone**	9.7	U	ng/L	P423105	
		Acetochlor	0.24	U	ng/L	P423105	
		Octinoxate**	19	U	ng/L	P423105	
		Alachlor	0.24	U	ng/L	P423105	
		Avobenzone**	97	U	ng/L	P423105	
		Ametryn	0.58	U	ng/L	P423105	
		Atrazine	22		ng/L	P423105	
		PBDE-47**	3.9	U	ng/L	P423105	
		Atrazine Desethyl	1.5	U	ng/L	P423105	
		PBDE-99**	4.8	U	ng/L	P423105	
		Azinphos Methyl	1.9	U	ng/L	P423105	
		Tri-o-cresyl Phosphate**	5.8	U	ng/L	P423105	
		Azoxystrobin	0.89	I	ng/L	P423105	
		Bromacil	11		ng/L	P423105	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P423105	
		Butylate	0.39	U	ng/L	P423105	
		Dechlorane Plus**	29	U	ng/L	P423105	
		Caffeine**	7.3	U	ng/L	P423105	
		Carbophenothion	0.19	U	ng/L	P423105	
		Carfentrazone Ethyl	0.097	U	ng/L	P423105	
		Chlorfenapyr	0.17	U	ng/L	P423105	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P423105	
		Chlorpyrifos Methyl	0.048	U	ng/L	P423105	
		Coumaphos	0.48	U	ng/L	P423105	
		Cyanazine	3.1	U	ng/L	P423105	
		Cyprodinil	0.097	U	ng/L	P423105	
		Demeton	1.5	U	ng/L	P423105	
		Diazinon	0.12	U	ng/L	P423105	
		Difenoconazole	0.58	U	ng/L	P423105	
		Dimethenamid	0.097	U	ng/L	P423105	
		Dimethomorph	0.17	U	ng/L	P423105	
		Disulfoton	0.48	U	ng/L	P423105	
		Dithiopyr	0.61	U	ng/L	P423105	
		EPTC	1.2	U	ng/L	P423105	

Field ID: G3SD0218

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371834	EPA 8270E	Ethion	0.15	U	ng/L	P423105	
		Ethoprop	0.097	U	ng/L	P423105	
		Etridiazole	0.15	U	ng/L	P423105	
		Fenamiphos	0.48	U	ng/L	P423105	
		Fenbuconazole	0.16	I	ng/L	P423105	
		Fipronil	0.24	U	ng/L	P423105	
		Fipronil DesulfinyI**	0.12	I	ng/L	P423105	
		Fipronil Sulfide	0.15	U	ng/L	P423105	
		Fipronil Sulfone	0.23	I	ng/L	P423105	
		Fluazifop-P-butyl	0.097	U	ng/L	P423105	
		Fludioxonil	0.12	U	ng/L	P423105	
		Flumioxazin	4.4	U	ng/L	P423105	
		Flutolanil	0.48		ng/L	P423105	
		Fluxapyroxad	0.75		ng/L	P423105	
		Fonofos	0.19	U	ng/L	P423105	
		Hexazinone	7.5		ng/L	P423105	
		Imazalil	0.73	U	ng/L	P423105	
		Iprodione	0.58	UJ	ng/L	P423105	LCS, MS
		Loratadine**	0.34	U	ng/L	P423105	
		Malathion	0.34	U	ng/L	P423105	
		Metalaxyl	5.5		ng/L	P423105	
		Metolachlor	12		ng/L	P423105	
		Metribuzin	1.5	U	ng/L	P423105	
		Mevinphos	1.0	U	ng/L	P423105	
		Molinate	0.29	U	ng/L	P423105	
		Myclobutanil	0.24	U	ng/L	P423105	
		Naled	1.5	UJ	ng/L	P423105	LCS
		Napropamide	0.39	U	ng/L	P423105	
		Norflurazon	17		ng/L	P423105	
		Oxadiazon	0.48	I	ng/L	P423105	
		Oxyfluorfen	0.15	U	ng/L	P423105	
		Parathion Ethyl	0.24	U	ng/L	P423105	
		Parathion Methyl	0.53	U	ng/L	P423105	
		Pendimethalin	0.97	U	ng/L	P423105	
		Phenytain**	3.4	U	ng/L	P423105	
		Phorate	0.51	U	ng/L	P423105	
		Prodiamine	0.17	U	ng/L	P423105	
		Prometon	0.87	U	ng/L	P423105	
		Prometryn	0.19	U	ng/L	P423105	
		Pronamide	0.15	U	ng/L	P423105	
		Propanil	0.12	U	ng/L	P423105	
		Propargite	1.5	U	ng/L	P423105	
		Propiconazole	0.48	U	ng/L	P423105	
		Pyraflufen Ethyl	0.24	U	ng/L	P423105	
		Pyridaben	0.44	U	ng/L	P423105	

Field ID: G3SD0218

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371834	EPA 8270E	Pyriproxyfen	0.12	U	ng/L	P423105	
		Simazine	4.3		ng/L	P423105	
		Stirophos	0.12	U	ng/L	P423105	
		Sulfentrazone	3.3		ng/L	P423105	
		Tebuconazole	1.1	I	ng/L	P423105	
		Terbufos	0.097	U	ng/L	P423105	
		Terbutylazine	0.41	U	ng/L	P423105	
		Thiobencarb	0.58	U	ng/L	P423105	
		Triadimefon	0.24	U	ng/L	P423105	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: MS accuracy for atrazine and simazine 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: P422942

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423374

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423021

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423018

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423032

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

Reference Method: EPA 8270E
Batch ID: P423105

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: P423105

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: P423105

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: P423105

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: P423430

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

Reference Method: SM 2540 D-2015
Batch ID: P423167

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P423578

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P423123

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: P422942

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423374

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423021

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423018

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423032

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	105		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P423105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	93.2		P	42 - 162
Acetochlor	99.1		P	69 - 123
Alachlor	95.9		P	65 - 118
Ametryn	109		P	58 - 141
Atrazine	99.4		P	73 - 118
Atrazine Desethyl	58.9		P	32 - 125
Avobenzone	114		P	40 - 203
Azinphos Methyl	150		P	36 - 197
Azoxystrobin	100		P	58 - 226
Bromacil	91.4		P	48 - 120
Butylate	56.4		P	27 - 85.0
Caffeine	79.0		P	40 - 137
Carbophenothion	113		P	54 - 132
Carfentrazone Ethyl	110		P	60 - 142
Chlorfenapyr	89.6		P	53 - 117
Chlorpyrifos Ethyl	92.2		P	59 - 116
Chlorpyrifos Methyl	107		P	66 - 119
Coumaphos	125		P	11 - 234
Cyanazine	108		P	61 - 248
Cyprodinil	100		P	50 - 147
Dechlorane Plus	135		P	47 - 182
Demeton	113		P	30 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P423105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Diazinon	103		P	67 - 126
Difenoconazole	124		P	38 - 205
Dimethenamid	80.3		P	57 - 111
Dimethomorph	98.5		P	16 - 212
Disulfoton	104		P	46 - 126
Dithiopyr	103		P	62 - 115
EPTC	55.2		P	28 - 80.0
Ethion	92.3		P	24 - 122
Ethoprop	104		P	62 - 113
Etridiazole	62.6		P	28 - 92.0
Fenamiphos	95.2		P	57 - 128
Fenbuconazole	112		P	52 - 155
Fipronil	90.7		P	63 - 130
Fipronil Desulfinyl	108		P	61 - 130
Fipronil Sulfide	81.4		P	56 - 117
Fipronil Sulfone	84.9		P	52 - 118
Fluazifop-P-butyl	97.5		P	61 - 128
Fludioxonil	105		P	59 - 129
Flumioxazin	116		P	30 - 250
Flutolanil	87.9		P	53 - 127
Fluxapyroxad	107		P	42 - 132
Fonofos	102		P	61 - 110
Hexazinone	100		P	46 - 139
Imazalil	81.1		P	40 - 139
Iprodione	194		F	40 - 146
Loratadine	107		P	10 - 224
Malathion	119		P	61 - 135
Metalaxyl	95.0		P	58 - 121
Metolachlor	92.6		P	64 - 118
Metribuzin	90.9		P	45 - 245
Mevinphos	115		P	49 - 118
Molinate	77.4		P	42 - 92.0
Myclobutanil	93.7		P	55 - 127
Naled	167		F	10 - 114
Napropamide	97.1		P	39 - 121
Norflurazon	108		P	55 - 129
Octinoxate	72.7		P	26 - 166
Oxadiazon	92.4		P	54 - 115
Oxybenzone	64.6		P	49 - 135
Oxyfluorfen	101		P	64 - 139
Parathion Ethyl	93.2		P	70 - 111
Parathion Methyl	101		P	76 - 136
PBDE-47	78.6		P	41 - 148
PBDE-99	86.3		P	38 - 147
Pendimethalin	82.6		P	52 - 118
Phenytol	86.2		P	10 - 162
Phorate	101		P	40 - 122
Prodiamine	62.2		P	26 - 141
Prometon	78.3		P	54 - 122
Prometryn	88.7		P	61 - 128
Pronamide	105		P	72 - 121
Propanil	87.3		P	45 - 144

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P423105

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Propargite	155		P	10 - 199
Propiconazole	96.4		P	56 - 127
Pyraflufen Ethyl	105		P	56 - 140
Pyridaben	113		P	26 - 211
Pyriproxyfen	125		P	33 - 194
Simazine	93.6		P	67 - 121
Stirophos	96.8		P	20 - 142
Sulfentrazone	107		P	21 - 144
Tebuconazole	101		P	10 - 122
Terbufos	125		P	60 - 129
Terbuthylazine	98.8		P	69 - 113
Thiobencarb	82.5		P	51 - 120
Tri-o-cresyl Phosphate	75.6		P	49 - 150
Triadimefon	91.9		P	56 - 114

Reference Method: SM 2320 B-2011

Batch ID: P423430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	94 - 106

Reference Method: SM 2540 D-2015

Batch ID: P423167

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.6		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P423578

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P423123

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423374

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372106	Ammonia-N	99.0	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423021

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371617	Kjeldahl Nitrogen	104	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371447	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423032

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372106	Total-P	98.5	102	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P423105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371814	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	93.2	89.3	P/P	26 - 165
2371814	Acetochlor	91.9	81.7	P/P	67 - 124
2371814	Alachlor	89.0	77.9	P/P	60 - 120
2371814	Ametryn	111	91.0	P/P	54 - 216
2371814	Atrazine Desethyl	56.3	55.9	P/P	15 - 122
2371814	Avobenzone	113	105	P/P	37 - 178
2371814	Azinphos Methyl	129	121	P/P	40 - 292
2371814	Azoxystrobin	99.2	91.5	P/P	35 - 220
2371814	Bromacil	97.8	79.9	P/P	45 - 127
2371814	Butylate	57.0	48.6	P/P	20 - 83.0
2371814	Caffeine	77.2	86.3	P/P	10 - 194
2371814	Carbophenothion	103	91.2	P/P	57 - 127
2371814	Carfentrazone Ethyl	107	95.0	P/P	51 - 141
2371814	Chlorfenapyr	85.5	72.9	P/P	46 - 111
2371814	Chlorpyrifos Ethyl	82.4	77.6	P/P	52 - 120
2371814	Chlorpyrifos Methyl	105	90.0	P/P	63 - 119
2371814	Coumaphos	115	107	P/P	10 - 228
2371814	Cyanazine	104	95.7	P/P	59 - 241
2371814	Cyprodinil	101	89.2	P/P	47 - 146
2371814	Dechlorane Plus	104	99.6	P/P	50 - 150
2371814	Demeton	104	104	P/P	40 - 136
2371814	Diazinon	98.1	82.0	P/P	69 - 132
2371814	Difenoconazole	128	113	P/P	57 - 258
2371814	Dimethenamid	77.0	66.9	P/P	54 - 110
2371814	Dimethomorph	102	89.6	P/P	28 - 210
2371814	Disulfoton	108	99.8	P/P	43 - 133
2371814	Dithiopyr	101	87.4	P/P	39 - 116
2371814	EPTC	53.1	45.1	P/P	20 - 78.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P423105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371814	Ethion	89.2	76.3	P/P	17 - 119
2371814	Ethoprop	110	94.9	P/P	66 - 120
2371814	Etridiazole	58.7	50.8	P/P	28 - 96.0
2371814	Fenamiphos	75.2	67.4	P/P	41 - 126
2371814	Fenbuconazole	115	96.5	P/P	42 - 169
2371814	Fipronil	103	91.7	P/P	61 - 132
2371814	Fipronil Desulfinyl	105	90.5	P/P	56 - 132
2371814	Fipronil Sulfide	87.2	69.1	P/P	48 - 119
2371814	Fipronil Sulfone	97.5	75.2	P/P	42 - 131
2371814	Fluazifop-P-butyl	98.0	82.3	P/P	53 - 131
2371814	Fludioxonil	94.0	89.7	P/P	56 - 127
2371814	Flumioxazin	145	125	P/P	19 - 300
2371814	Flutolanil	77.2	69.3	P/P	41 - 127
2371814	Fluxapyroxad	104	93.2	P/P	42 - 172
2371814	Fonofos	98.3	79.2	P/P	59 - 113
2371814	Hexazinone	101	89.4	P/P	66 - 122
2371814	Imazalil	74.8	61.7	P/P	21 - 283
2371814	Iprodione	194	169	F/F	43 - 150
2371814	Loratadine	112	96.0	P/P	23 - 201
2371814	Malathion	122	102	P/P	58 - 136
2371814	Metalaxyl	96.8	78.1	P/P	55 - 120
2371814	Metolachlor	90.7	82.0	P/P	57 - 121
2371814	Metribuzin	91.6	82.9	P/P	58 - 294
2371814	Mevinphos	124	109	P/P	50 - 126
2371814	Molinate	83.0	68.1	P/P	42 - 93.0
2371814	Myclobutanil	93.7	84.6	P/P	55 - 125
2371814	Naled	179	157	P/P	18 - 200
2371814	Napropamide	88.3	71.7	P/P	39 - 110
2371814	Norflurazon	103	94.4	P/P	48 - 128
2371814	Octinoxate	70.5	65.5	P/P	21 - 159
2371814	Oxadiazon	85.7	67.9	P/P	43 - 112
2371814	Oxybenzone	71.2	58.4	P/P	41 - 142
2371814	Oxyfluorfen	90.4	85.3	P/P	64 - 153
2371814	Parathion Ethyl	82.1	76.6	P/P	69 - 114
2371814	Parathion Methyl	112	90.7	P/P	79 - 139
2371814	PBDE-47	74.7	70.4	P/P	27 - 144
2371814	PBDE-99	79.7	76.6	P/P	18 - 150
2371814	Pendimethalin	88.6	74.4	P/P	50 - 139
2371814	Phenytoin	91.8	87.5	P/P	10 - 146
2371814	Phorate	98.6	79.0	P/P	54 - 161
2371814	Prodiamine	81.3	64.8	P/P	30 - 161
2371814	Prometon	72.0	72.6	P/P	45 - 134
2371814	Prometryn	86.3	73.7	P/P	45 - 137
2371814	Pronamide	99.4	92.9	P/P	65 - 133
2371814	Propanil	89.0	74.5	P/P	49 - 142
2371814	Propargite	144	125	P/P	10 - 203
2371814	Propiconazole	88.1	76.7	P/P	38 - 146
2371814	Pyraflufen Ethyl	102	89.0	P/P	34 - 153
2371814	Pyridaben	118	93.0	P/P	12 - 192
2371814	Pyriproxyfen	110	96.4	P/P	33 - 180
2371814	Stirophos	102	80.8	P/P	10 - 128
2371814	Sulfentrazone	122	97.7	P/P	53 - 186

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P423105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371814	Tebuconazole	94.3	86.5	P/P	10 - 133
2371814	Terbufos	113	102	P/P	65 - 139
2371814	Terbuthylazine	94.7	79.9	P/P	66 - 117
2371814	Thiobencarb	76.2	71.2	P/P	51 - 119
2371814	Tri-o-cresyl Phosphate	70.2	66.6	P/P	31 - 144
2371814	Triadimefon	98.5	89.0	P/P	48 - 119

Reference Method: SM 4500-F- C-2011

Batch ID: P423578

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2374709	Fluoride	99.2	99.9	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P423123

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372102	Organic Carbon	87.7	90.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371692	Turbidity	1.61	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423374

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372106	Ammonia-N	2.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P423021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371617	Kjeldahl Nitrogen	2.23	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P423018

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371447	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P423032

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372106	Total-P	3.52	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P423105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371814	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	4.18	Spike	P	0 - 37
2371814	Acetochlor	11.8	Spike	P	0 - 28
2371814	Alachlor	13.4	Spike	P	0 - 30
2371814	Ametryn	12.7	Spike	P	0 - 32
2371814	Atrazine	12.0	Spike	P	0 - 41
2371814	Atrazine Desethyl	0.467	Spike	P	0 - 36
2371814	Avobenzone	7.44	Spike	P	0 - 36
2371814	Azinphos Methyl	6.73	Spike	P	0 - 75
2371814	Azoxystrobin	8.00	Spike	P	0 - 39
2371814	Bromacil	20.1	Spike	P	0 - 33
2371814	Butylate	15.9	Spike	P	0 - 44
2371814	Caffeine	11.1	Spike	P	0 - 74
2371814	Carbophenothion	12.2	Spike	P	0 - 25
2371814	Carfentrazone Ethyl	11.5	Spike	P	0 - 27
2371814	Chlorfenapyr	15.9	Spike	P	0 - 24
2371814	Chlorpyrifos Ethyl	6.05	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P423105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371814	Chlorpyrifos Methyl	15.8	Spike	P	0 - 26
2371814	Coumaphos	6.56	Spike	P	0 - 28
2371814	Cyanazine	8.52	Spike	P	0 - 48
2371814	Cyprodinil	11.9	Spike	P	0 - 29
2371814	Dechlorane Plus	4.09	Spike	P	0 - 30
2371814	Demeton	0.218	Spike	P	0 - 33
2371814	Diazinon	17.9	Spike	P	0 - 29
2371814	Difenoconazole	12.3	Spike	P	0 - 34
2371814	Dimethenamid	14.0	Spike	P	0 - 39
2371814	Dimethomorph	12.8	Spike	P	0 - 51
2371814	Disulfoton	8.30	Spike	P	0 - 30
2371814	Dithiopyr	15.0	Spike	P	0 - 26
2371814	EPTC	16.2	Spike	P	0 - 43
2371814	Ethion	15.6	Spike	P	0 - 79
2371814	Ethoprop	14.4	Spike	P	0 - 29
2371814	Etridiazole	14.4	Spike	P	0 - 33
2371814	Fenamiphos	10.9	Spike	P	0 - 40
2371814	Fenbuconazole	17.3	Spike	P	0 - 74
2371814	Fipronil	11.6	Spike	P	0 - 29
2371814	Fipronil Desulfinyl	13.1	Spike	P	0 - 32
2371814	Fipronil Sulfide	12.6	Spike	P	0 - 30
2371814	Fipronil Sulfone	14.9	Spike	P	0 - 33
2371814	Fluazifop-P-butyl	17.5	Spike	P	0 - 38
2371814	Fludioxonil	4.69	Spike	P	0 - 29
2371814	Flumioxazin	15.4	Spike	P	0 - 51
2371814	Flutolanil	10.9	Spike	P	0 - 25
2371814	Fluxapyroxad	10.6	Spike	P	0 - 45
2371814	Fonofos	21.6	Spike	P	0 - 27
2371814	Hexazinone	12.0	Spike	P	0 - 30
2371814	Imazalil	19.1	Spike	P	0 - 100
2371814	Iprodione	13.3	Spike	P	0 - 33
2371814	Loratadine	15.1	Spike	P	0 - 56
2371814	Malathion	17.8	Spike	P	0 - 37
2371814	Metalaxyl	21.4	Spike	P	0 - 40
2371814	Metolachlor	10.1	Spike	P	0 - 29
2371814	Metribuzin	9.90	Spike	P	0 - 45
2371814	Mevinphos	12.5	Spike	P	0 - 29
2371814	Molinate	19.8	Spike	P	0 - 33
2371814	Myclobutanil	10.2	Spike	P	0 - 26
2371814	Naled	13.3	Spike	P	0 - 37
2371814	Napropamide	20.8	Spike	P	0 - 44
2371814	Norflurazon	8.41	Spike	P	0 - 30
2371814	Octinoxate	7.24	Spike	P	0 - 45
2371814	Oxadiazon	18.4	Spike	P	0 - 28
2371814	Oxybenzone	19.8	Spike	P	0 - 46
2371814	Oxyfluorfen	5.77	Spike	P	0 - 28
2371814	Parathion Ethyl	6.97	Spike	P	0 - 31
2371814	Parathion Methyl	21.3	Spike	P	0 - 29
2371814	PBDE-47	5.92	Spike	P	0 - 36
2371814	PBDE-99	3.99	Spike	P	0 - 40
2371814	Pendimethalin	17.4	Spike	P	0 - 33

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P423105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371814	Phenytoin	4.78	Spike	P	0 - 100
2371814	Phorate	22.1	Spike	P	0 - 36
2371814	Prodiamine	22.6	Spike	P	0 - 71
2371814	Prometon	0.791	Spike	P	0 - 36
2371814	Prometryn	15.8	Spike	P	0 - 28
2371814	Pronamide	6.78	Spike	P	0 - 24
2371814	Propanil	17.7	Spike	P	0 - 28
2371814	Propargite	14.0	Spike	P	0 - 43
2371814	Propiconazole	10.4	Spike	P	0 - 33
2371814	Pyraflufen Ethyl	13.4	Spike	P	0 - 29
2371814	Pyridaben	23.5	Spike	P	0 - 30
2371814	Pyriproxyfen	12.7	Spike	P	0 - 79
2371814	Simazine	7.71	Spike	P	0 - 29
2371814	Stirophos	22.9	Spike	P	0 - 61
2371814	Sulfentrazone	14.2	Spike	P	0 - 33
2371814	Tebuconazole	8.17	Spike	P	0 - 69
2371814	Terbufos	9.67	Spike	P	0 - 29
2371814	Terbuthylazine	17.0	Spike	P	0 - 32
2371814	Thiobencarb	6.77	Spike	P	0 - 26
2371814	Tri-o-cresyl Phosphate	5.14	Spike	P	0 - 33
2371814	Triadimefon	10.2	Spike	P	0 - 28

Reference Method: SM 2320 B-2011
Batch ID: P423430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372105	Total Alkalinity	0.0847	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P423578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2374709	Fluoride	0.470	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P423123

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2372102	Organic Carbon	2.48	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2371833
Field Sample ID: g3sd0073

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	53.9	P	20 - 200
EPA 8270E	Simazine-d10	98.1	P	62 - 142
EPA 8270E	Terbufos-d10	93.3	P	58 - 132
EPA 8270E	Terphenyl-d14	73.0	P	52 - 137

Lab Sample ID: 2371834
Field Sample ID: G3SD0218

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	56.7	P	20 - 200
EPA 8270E	Simazine-d10	99.4	P	62 - 142
EPA 8270E	Terbufos-d10	113	P	58 - 132
EPA 8270E	Terphenyl-d14	68.2	P	52 - 137

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116196

Included Lab Sample IDs: 2371821, 2371822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116225

Included Lab Sample IDs: 2371823, 2371824

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116255

Included Lab Sample IDs: 2371823, 2371824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.7	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116263

Included Lab Sample IDs: 2371823, 2371824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.2	97.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A116271

Included Lab Sample IDs: 2371823, 2371824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.2	92.4	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A116294

Included Lab Sample IDs: 2371833, 2371834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	97.5		P	80 - 120
Avobenzene	97.6		P	80 - 120
Dechlorane Plus	104		P	80 - 120
Octinoxate	91.2		P	80 - 120
Oxybenzone	89.5		P	80 - 120
PBDE-47	90.6		P	80 - 120
PBDE-99	102		P	80 - 120
Tri-o-cresyl Phosphate	93.5		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116358

Included Lab Sample IDs: 2371823, 2371824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A116382

Included Lab Sample IDs: 2371833, 2371834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.2		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	91.3		P	80 - 120
Atrazine	99.4		P	80 - 120
Atrazine Desethyl	99.5		P	80 - 120
Azinphos Methyl	111		P	80 - 120
Azoxystrobin	98.0		P	80 - 120
Bromacil	96.6		P	80 - 120
Butylate	104		P	80 - 120
Caffeine	101		P	80 - 120
Carbophenothion	96.9		P	80 - 120
Carfentrazone Ethyl	115		P	80 - 120
Chlorfenapyr	102		P	80 - 120
Chlorpyrifos Ethyl	113		P	80 - 120
Chlorpyrifos Methyl	97.1		P	80 - 120
Coumaphos	87.2		P	80 - 120
Cyanazine	117		P	80 - 120
Cyprodinil	93.7		P	80 - 120
Demeton	96.1		P	80 - 120
Diazinon	102		P	80 - 120
Difenoconazole	91.8		P	80 - 120
Dimethenamid	98.3		P	80 - 120
Dimethomorph	100		P	80 - 120
Disulfoton	96.0		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	106		P	80 - 120
Ethion	110		P	80 - 120
Ethoprop	88.2		P	80 - 120
Etridiazole	101		P	80 - 120
Fenamiphos	117		P	80 - 120
Fenbuconazole	92.2		P	80 - 120
Fipronil	98.2		P	80 - 120
Fipronil Desulfinyl	106		P	80 - 120
Fipronil Sulfide	94.6		P	80 - 120
Fipronil Sulfone	100		P	80 - 120
Fluazifop-P-butyl	100		P	80 - 120
Fludioxonil	99.6		P	80 - 120
Flumioxazin	88.6		P	80 - 120
Flutolanil	109		P	80 - 120
Fluxapyroxad	111		P	80 - 120
Fonofos	94.0		P	80 - 120
Hexazinone	104		P	80 - 120
Imazalil	97.7		P	80 - 120
Iprodione	117		P	80 - 120
Loratadine	90.9		P	80 - 120
Malathion	92.0		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	96.6		P	80 - 120
Metribuzin	96.5		P	80 - 120
Mevinphos	107		P	80 - 120
Molinate	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A116382

Included Lab Sample IDs: 2371833, 2371834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Myclobutanil	95.7		P	80 - 120
Naled	109		P	80 - 120
Napropamide	105		P	80 - 120
Norflurazon	95.4		P	80 - 120
Oxadiazon	98.0		P	80 - 120
Oxyfluorfen	96.1		P	80 - 120
Parathion Ethyl	96.8		P	80 - 120
Parathion Methyl	91.9		P	80 - 120
Pendimethalin	93.2		P	80 - 120
Phenytol	98.3		P	80 - 120
Phorate	92.8		P	80 - 120
Prodiamine	107		P	80 - 120
Prometon	97.5		P	80 - 120
Prometryn	106		P	80 - 120
Pronamide	95.6		P	80 - 120
Propanil	94.3		P	80 - 120
Propargite	96.5		P	80 - 120
Propiconazole	109		P	80 - 120
Pyraflufen Ethyl	118		P	80 - 120
Pyridaben	84.6		P	80 - 120
Pyriproxyfen	93.8		P	80 - 120
Simazine	96.5		P	80 - 120
Stirophos	108		P	80 - 120
Sulfentrazone	93.4		P	80 - 120
Tebuconazole	110		P	80 - 120
Terbufos	97.7		P	80 - 120
Terbuthylazine	101		P	80 - 120
Thiobencarb	110		P	80 - 120
Triadimefon	114		P	80 - 120

Reference Method: EPA 8270E

Run ID: A116386

Included Lab Sample IDs: 2371833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	94.3		P	80 - 120

Reference Method: SM 2320 B-2011

Run ID: A116396

Included Lab Sample IDs: 2371821, 2371822

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	91.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116456

Included Lab Sample IDs: 2371821, 2371822

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

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	99.4				1.61	
EPA 350.1 Rev. 2.0	Ammonia-N	94.2	99.0	102			2.46
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	104	102			2.23
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	106	106			0.473
EPA 365.1 Rev. 2.0	Total-P	105	98.5	102			3.52
EPA 8270E	2-Ethylhexyl	93.2	93.2	89.3			4.18
	2,3,4,5-tetrabromobenzoate (EHTBB)						
	Acetochlor	99.1	91.9	81.7			11.8
	Alachlor	95.9	89.0	77.9			13.4
	Ametryn	109	111	91.0			12.7
	Atrazine	99.4					12.0
	Atrazine Desethyl	58.9	56.3	55.9			0.467
	Avobenzone	114	113	105			7.44
	Azinphos Methyl	150	129	121			6.73
	Azoxystrobin	100	99.2	91.5			8.00
	Bromacil	91.4	97.8	79.9			20.1
	Butylate	56.4	57.0	48.6			15.9
	Caffeine	79.0	77.2	86.3			11.1
	Carbophenothion	113	103	91.2			12.2
	Carfentrazone Ethyl	110	107	95.0			11.5
	Chlorfenapyr	89.6	85.5	72.9			15.9
	Chlorpyrifos Ethyl	92.2	82.4	77.6			6.05
	Chlorpyrifos Methyl	107	105	90.0			15.8
	Coumaphos	125	115	107			6.56
	Cyanazine	108	104	95.7			8.52
	Cyprodinil	100	101	89.2			11.9
	Dechlorane Plus	135	104	99.6			4.09
	Demeton	113	104	104			0.218
	Diazinon	103	98.1	82.0			17.9
	Difenoconazole	124	128	113			12.3
	Dimethenamid	80.3	77.0	66.9			14.0
	Dimethomorph	98.5	102	89.6			12.8
	Disulfoton	104	108	99.8			8.30
	Dithiopyr	103	101	87.4			15.0
	EPTC	55.2	53.1	45.1			16.2
	Ethion	92.3	89.2	76.3			15.6
	Ethoprop	104	110	94.9			14.4
	Etridiazole	62.6	58.7	50.8			14.4
	Fenamiphos	95.2	75.2	67.4			10.9
	Fenbuconazole	112	115	96.5			17.3
	Fipronil	90.7	103	91.7			11.6
	Fipronil Desulfinyl	108	105	90.5			13.1
	Fipronil Sulfide	81.4	87.2	69.1			12.6
	Fipronil Sulfone	84.9	97.5	75.2			14.9
	Fluazifop-P-butyl	97.5	98.0	82.3			17.5
	Fludioxonil	105	94.0	89.7			4.69
	Flumioxazin	116	145	125			15.4
	Flutolanil	87.9	77.2	69.3			10.9
	Fluxapyroxad	107	104	93.2			10.6
	Fonofos	102	98.3	79.2			21.6
	Hexazinone	100	101	89.4			12.0
	Imazalil	81.1	74.8	61.7			19.1
	Iprodione	194	194	169			13.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Loratadine	107	112	96.0		15.1
	Malathion	119	122	102		17.8
	Metalaxyl	95.0	96.8	78.1		21.4
	Metolachlor	92.6	90.7	82.0		10.1
	Metribuzin	90.9	91.6	82.9		9.90
	Mevinphos	115	124	109		12.5
	Molinate	77.4	83.0	68.1		19.8
	Myclobutanil	93.7	93.7	84.6		10.2
	Naled	167	179	157		13.3
	Napropamide	97.1	88.3	71.7		20.8
	Norflurazon	108	103	94.4		8.41
	Octinoxate	72.7	70.5	65.5		7.24
	Oxadiazon	92.4	85.7	67.9		18.4
	Oxybenzone	64.6	71.2	58.4		19.8
	Oxyfluorfen	101	90.4	85.3		5.77
	Parathion Ethyl	93.2	82.1	76.6		6.97
	Parathion Methyl	101	112	90.7		21.3
	PBDE-47	78.6	74.7	70.4		5.92
	PBDE-99	86.3	79.7	76.6		3.99
	Pendimethalin	82.6	88.6	74.4		17.4
	Phenytol	86.2	91.8	87.5		4.78
	Phorate	101	98.6	79.0		22.1
	Prodiamine	62.2	81.3	64.8		22.6
	Prometon	78.3	72.0	72.6		0.791
	Prometryn	88.7	86.3	73.7		15.8
	Pronamide	105	99.4	92.9		6.78
	Propanil	87.3	89.0	74.5		17.7
	Propargite	155	144	125		14.0
	Propiconazole	96.4	88.1	76.7		10.4
	Pyraflufen Ethyl	105	102	89.0		13.4
	Pyridaben	113	118	93.0		23.5
	Pyriproxyfen	125	110	96.4		12.7
	Simazine	93.6				7.71
	Stirophos	96.8	102	80.8		22.9
	Sulfentrazone	107	122	97.7		14.2
	Tebuconazole	101	94.3	86.5		8.17
	Terbufos	125	113	102		9.67
	Terbuthylazine	98.8	94.7	79.9		17.0
	Thiobencarb	82.5	76.2	71.2		6.77
	Tri-o-cresyl Phosphate	75.6	70.2	66.6		5.14
	Triadimefon	91.9	98.5	89.0		10.2
SM 2320 B-2011	Total Alkalinity	96.6			0.0847	
SM 2540 D-2015	TSS	93.6				
SM 4500-F- C-2011	Fluoride	103	99.2	99.9		0.470
SM 5310 B-2011	Organic Carbon	97.6	87.7	90.2		2.48

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2371821, 2371822
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2371823, 2371824
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2371823, 2371824
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2371823, 2371824

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2371823, 2371824
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2371833, 2371834
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2371833, 2371834
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2371821, 2371822
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2371821, 2371822
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2371821, 2371822
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2371823, 2371824

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	11/30/2022			11/30/2022 14:16	Anna M. Plaviak	2371821
	11/30/2022			11/30/2022 14:18	Anna M. Plaviak	2371822
EPA 350.1 Rev. 2.0	11/30/2022			12/09/2022 11:15	Ping Hua	2371823
	11/30/2022			12/09/2022 11:16	Ping Hua	2371824
EPA 351.2 Rev. 2.0	11/30/2022	12/02/2022 13:20	Simonne.V. Calhoun	12/05/2022 14:56	Judith K. Clark	2371823
	11/30/2022	12/02/2022 13:20	Simonne.V. Calhoun	12/05/2022 14:57	Judith K. Clark	2371824
EPA 353.2 Rev. 2.0	11/30/2022			12/02/2022 09:38	Beverly Y. Sanders	2371823
	11/30/2022			12/02/2022 09:39	Beverly Y. Sanders	2371824
EPA 365.1 Rev. 2.0	11/30/2022	12/02/2022 09:51	Adam P Silver	12/05/2022 11:14	James L Waggerby	2371823
	11/30/2022	12/02/2022 09:51	Adam P Silver	12/05/2022 11:15	James L Waggerby	2371824
EPA 8270E	11/30/2022	12/05/2022 08:00	Fe-Val Siddell	12/06/2022 21:26	Michael Poppell	2371833
	11/30/2022	12/05/2022 08:00	Fe-Val Siddell	12/06/2022 21:56	Michael Poppell	2371834
	11/30/2022	12/05/2022 08:00	Fe-Val Siddell	12/07/2022 00:24	Arthur Maknenko	2371833
	11/30/2022	12/05/2022 08:00	Fe-Val Siddell	12/07/2022 00:49	Arthur Maknenko	2371834
	11/30/2022	12/05/2022 08:00	Fe-Val Siddell	12/11/2022 03:05	Michael Poppell	2371833
SM 2320 B-2011	11/30/2022			12/13/2022 00:37	Dale L. Simmons	2371821
	11/30/2022			12/13/2022 00:48	Dale L. Simmons	2371822
SM 2540 D-2015	11/30/2022			12/01/2022 15:43	Yijie Li	2371821, 2371822
SM 4500-F- C-2011	11/30/2022			12/14/2022 22:27	Dale L. Simmons	2371821
	11/30/2022			12/14/2022 22:32	Dale L. Simmons	2371822
SM 5310 B-2011	11/30/2022			12/05/2022 21:38	Elise M. Gillis	2371823
	11/30/2022			12/05/2022 21:58	Elise M. Gillis	2371824