Chemical Analysis Report

SO-DIST-2022-11-17-01

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

Event Description: **2022 SMP : Everglades**
Request ID: **RQ-2022-11-14-61**
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
Attn: William Mullen

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 07-DEC-2022 10:42

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: 8069-ENRE5 **Collection Date/Time: 11/16/2022 12:12**

Field ID: g5sd0036 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2370174	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P422520	
	SM 2320 B-2011	Total Alkalinity	135		mg CaCO3/L	P422781	
	SM 2540 D-2015	TSS	3	U	mg/L	P422708	
	SM 4500-F- C-2011	Fluoride	1.2		mg F/L	P422785	
2370176	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P422913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P422629	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P422864	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P422536	
	SM 5310 B-2011	Organic Carbon	4.3		mg C/L	P422790	
2370184	EPA 8270E	Oxybenzone**	9.6	U	ng/L	P422534	
		Acetochlor	0.24	U	ng/L	P422534	
		Octinoxate**	19	U	ng/L	P422534	
		Alachlor	0.24	U	ng/L	P422534	
		Avobenzone**	96	U	ng/L	P422534	
		Ametryn	0.58	U	ng/L	P422534	
		Atrazine	2.1		ng/L	P422534	
		PBDE-47**	3.9	U	ng/L	P422534	
		Atrazine Desethyl	1.4	U	ng/L	P422534	
		PBDE-99**	4.8	U	ng/L	P422534	
		Azinphos Methyl	1.9	U	ng/L	P422534	
		Tri-o-cresyl Phosphate**	5.8	U	ng/L	P422534	
		Azoxystrobin	0.48	U	ng/L	P422534	
		Bromacil	0.48	U	ng/L	P422534	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P422534	
		Butylate	0.39	U	ng/L	P422534	
		Dechlorane Plus**	29	U	ng/L	P422534	
		Caffeine**	7.2	U	ng/L	P422534	
		Carbophenothion	0.19	U	ng/L	P422534	
		Carfentrazone Ethyl	0.096	U	ng/L	P422534	
		Chlorfenapyr	0.17	U	ng/L	P422534	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P422534	MS
		Chlorpyrifos Methyl	0.048	U	ng/L	P422534	
		Coumaphos	0.48	U	ng/L	P422534	
		Cyanazine	3.1	U	ng/L	P422534	
		Cyprodinil	0.096	U	ng/L	P422534	
		Demeton	1.4	U	ng/L	P422534	
		Diazinon	0.12	U	ng/L	P422534	
		Difenoconazole	0.58	U	ng/L	P422534	
		Dimethenamid	0.096	U	ng/L	P422534	
		Dimethomorph	0.17	U	ng/L	P422534	
		Disulfoton	0.48	U	ng/L	P422534	
		Dithiopyr	0.60	U	ng/L	P422534	
		EPTC	1.2	U	ng/L	P422534	

Field ID: g5sd0036 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2370184	EPA 8270E	Ethion	0.14	U	ng/L	P422534	
		Ethoprop	0.096	U	ng/L	P422534	
		Etridiazole	0.14	U	ng/L	P422534	
		Fenamiphos	0.48	U	ng/L	P422534	
		Fenbuconazole	0.12	U	ng/L	P422534	
		Fipronil	0.24	U	ng/L	P422534	
		Fipronil Desulfinyl**	0.12	U	ng/L	P422534	
		Fipronil Sulfide	0.14	U	ng/L	P422534	MS
		Fipronil Sulfone	0.14	U	ng/L	P422534	
		Fluazifop-P-butyl	0.096	U	ng/L	P422534	
		Fludioxonil	0.12	U	ng/L	P422534	
		Flumioxazin	4.3	U	ng/L	P422534	
		Flutolanil	0.096	U	ng/L	P422534	
		Fluxapyroxad	0.096	U	ng/L	P422534	
		Fonofos	0.19	U	ng/L	P422534	MS
		Hexazinone	1.2	I	ng/L	P422534	
		Imazalil	0.72	U	ng/L	P422534	
		Iprodione	0.58	UJ	ng/L	P422534	CCV
		Loratadine**	0.34	U	ng/L	P422534	
		Malathion	0.34	U	ng/L	P422534	
		Metalaxyl	0.72	U	ng/L	P422534	
		Metolachlor	0.34	U	ng/L	P422534	
		Metribuzin	1.4	U	ng/L	P422534	
		Mevinphos	1.0	U	ng/L	P422534	
		Molinate	0.29	U	ng/L	P422534	
		Myclobutanil	0.24	U	ng/L	P422534	
		Naled	1.4	U	ng/L	P422534	
		Napropamide	0.39	U	ng/L	P422534	
		Norflurazon	0.48	U	ng/L	P422534	
		Oxadiazon	0.29	U	ng/L	P422534	
		Oxyfluorfen	0.14	U	ng/L	P422534	
		Parathion Ethyl	0.24	UJ	ng/L	P422534	LCS
		Parathion Methyl	0.53	U	ng/L	P422534	
		Pendimethalin	0.96	U	ng/L	P422534	
		Phenytoin**	3.4	U	ng/L	P422534	
		Phorate	0.51	U	ng/L	P422534	
		Prodiamine	0.17	U	ng/L	P422534	
		Prometon	0.87	U	ng/L	P422534	
		Prometryn	0.19	U	ng/L	P422534	
		Pronamide	0.14	U	ng/L	P422534	
		Propanil	0.12	U	ng/L	P422534	
		Propargite	1.4	U	ng/L	P422534	
		Propiconazole	0.48	U	ng/L	P422534	
		Pyraflufen Ethyl	0.24	U	ng/L	P422534	
		Pyridaben	0.43	U	ng/L	P422534	MS

Field ID: g5sd0036 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2370184	EPA 8270E	Pyriproxyfen	0.12	U	ng/L	P422534	
		Simazine	0.48	U	ng/L	P422534	
		Stirophos	0.12	U	ng/L	P422534	
		Sulfentrazone	0.48	U	ng/L	P422534	
		Tebuconazole	0.48	U	ng/L	P422534	
		Terbufos	0.096	U	ng/L	P422534	
		Terbuthylazine	0.41	U	ng/L	P422534	
		Thiobencarb	0.58	U	ng/L	P422534	
		Triadimefon	0.24	U	ng/L	P422534	

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 oxadiazon, fipronil sulfone, and atrazine 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: 8067 ENRE 9 Near First Bay **Collection Date/Time: 11/16/2022 13:10**

Field ID: G5SD0107 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2370175	EPA 180.1 Rev. 2.0	Turbidity	7.4		NTU	P422520	
	SM 2320 B-2011	Total Alkalinity	138		mg CaCO3/L	P422781	
	SM 2540 D-2015	TSS	10	I	mg/L	P422708	
	SM 4500-F- C-2011	Fluoride	0.65		mg F/L	P422785	
2370177	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P423043	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P422629	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.031		mg N/L	P422864	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P422572	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P422790	
2370185	EPA 8270E	Oxybenzone**	10	U	ng/L	P422534	
		Acetochlor	0.25	U	ng/L	P422534	
		Octinoxate**	20	U	ng/L	P422534	
		Alachlor	0.25	U	ng/L	P422534	
		Avobenzone**	100	U	ng/L	P422534	
		Ametryn	0.60	U	ng/L	P422534	
		Atrazine	1.5		ng/L	P422534	
		PBDE-47**	4.0	U	ng/L	P422534	
		Atrazine Desethyl	1.5	U	ng/L	P422534	
		PBDE-99**	5.0	U	ng/L	P422534	
		Azinphos Methyl	2.0	U	ng/L	P422534	
		Tri-o-cresyl Phosphate**	6.0	U	ng/L	P422534	
		Azoxystrobin	0.50	U	ng/L	P422534	
		Bromacil	0.50	U	ng/L	P422534	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P422534	
		Butylate	0.40	U	ng/L	P422534	
		Dechlorane Plus**	30	U	ng/L	P422534	
		Caffeine**	7.5	U	ng/L	P422534	
		Carbophenothion	0.20	U	ng/L	P422534	
		Carfentrazone Ethyl	0.10	U	ng/L	P422534	
		Chlorfenapyr	0.17	U	ng/L	P422534	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P422534	MS
		Chlorpyrifos Methyl	0.050	U	ng/L	P422534	
		Coumaphos	0.50	U	ng/L	P422534	
		Cyanazine	3.2	U	ng/L	P422534	
		Cyprodinil	0.10	U	ng/L	P422534	
		Demeton	1.5	U	ng/L	P422534	
		Diazinon	0.12	U	ng/L	P422534	
		Difenoconazole	0.60	U	ng/L	P422534	
		Dimethenamid	0.10	U	ng/L	P422534	
		Dimethomorph	0.17	U	ng/L	P422534	
		Disulfoton	0.50	U	ng/L	P422534	
		Dithiopyr	0.62	U	ng/L	P422534	
		EPTC	1.2	U	ng/L	P422534	

Field ID: G5SD0107 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2370185	EPA 8270E	Ethion	0.15	U	ng/L	P422534	
		Ethoprop	0.10	U	ng/L	P422534	
		Etridiazole	0.15	U	ng/L	P422534	
		Fenamiphos	0.50	U	ng/L	P422534	
		Fenbuconazole	0.12	U	ng/L	P422534	
		Fipronil	0.25	U	ng/L	P422534	
		Fipronil Desulfinyl**	0.12	U	ng/L	P422534	
		Fipronil Sulfide	0.15	U	ng/L	P422534	MS
		Fipronil Sulfone	0.15	U	ng/L	P422534	
		Fluazifop-P-butyl	0.10	U	ng/L	P422534	
		Fludioxonil	0.12	U	ng/L	P422534	
		Flumioxazin	4.5	U	ng/L	P422534	
		Flutolanil	0.10	U	ng/L	P422534	
		Fluxapyroxad	0.10	U	ng/L	P422534	
		Fonofos	0.20	U	ng/L	P422534	MS
		Hexazinone	2.8		ng/L	P422534	
		Imazalil	0.75	U	ng/L	P422534	
		Iprodione	0.60	UJ	ng/L	P422534	CCV
		Loratadine**	0.35	U	ng/L	P422534	
		Malathion	0.35	U	ng/L	P422534	
		Metalaxyl	0.75	U	ng/L	P422534	
		Metolachlor	0.35	U	ng/L	P422534	
		Metribuzin	1.5	U	ng/L	P422534	
		Mevinphos	1.0	U	ng/L	P422534	
		Molinate	0.30	U	ng/L	P422534	
		Myclobutanil	0.25	U	ng/L	P422534	
		Naled	1.5	U	ng/L	P422534	
		Napropamide	0.40	U	ng/L	P422534	
		Norflurazon	0.50	U	ng/L	P422534	
		Oxadiazon	0.30	U	ng/L	P422534	
		Oxyfluorfen	0.15	U	ng/L	P422534	
		Parathion Ethyl	0.25	UJ	ng/L	P422534	LCS
		Parathion Methyl	0.55	U	ng/L	P422534	
		Pendimethalin	1.0	U	ng/L	P422534	
		Phenytoin**	3.5	U	ng/L	P422534	
		Phorate	0.52	U	ng/L	P422534	
		Prodiamine	0.17	U	ng/L	P422534	
		Prometon	0.90	U	ng/L	P422534	
		Prometryn	0.20	U	ng/L	P422534	
		Pronamide	0.15	U	ng/L	P422534	
		Propanil	0.12	U	ng/L	P422534	
		Propargite	1.5	U	ng/L	P422534	
		Propiconazole	0.50	U	ng/L	P422534	
		Pyraflufen Ethyl	0.25	U	ng/L	P422534	
		Pyridaben	0.45	U	ng/L	P422534	MS

Field ID: G5SD0107 Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2370185	EPA 8270E	Pyriproxyfen	0.12	U	ng/L	P422534	
		Simazine	0.50	U	ng/L	P422534	
		Stirophos	0.12	U	ng/L	P422534	
		Sulfentrazone	0.50	U	ng/L	P422534	
		Tebuconazole	0.50	U	ng/L	P422534	
		Terbufos	0.10	U	ng/L	P422534	
		Terbuthylazine	0.42	U	ng/L	P422534	
		Thiobencarb	0.60	U	ng/L	P422534	
		Triadimefon	0.25	U	ng/L	P422534	

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 oxadiazon, fipronil sulfone, and atrazine 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: P422520

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422913

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423043

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422629

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422864

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422536

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422572

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

Reference Method: EPA 8270E
Batch ID: P422534

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422534

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422534

Component	Result	Code	Units
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
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422534

Component	Result	Code	Units
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L
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
Phenytoin	3.5	U	ng/L
Phenytoin	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P422534

Component	Result	Code	Units
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L
Terbuthylazine	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

Reference Method: SM 2320 B-2011
Batch ID: P422781

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 D-2015
Batch ID: P422708

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422785

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P422790

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: P422520

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422913

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423043

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422629

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422864

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422536

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422572

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

Reference Method: EPA 8270E
Batch ID: P422534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	73.1		P	42 - 162
Acetochlor	121		P	69 - 123
Alachlor	97.9		P	65 - 118
Ametryn	136		P	58 - 141
Atrazine	113		P	73 - 118
Atrazine Desethyl	71.2		P	32 - 125
Avobenzone	104		P	40 - 203
Azinphos Methyl	132		P	36 - 197
Azoxystrobin	125		P	58 - 226
Bromacil	117		P	48 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P422534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Butylate	57.1		P	27 - 85.0
Caffeine	91.6		P	40 - 137
Carbophenothion	124		P	54 - 132
Carfentrazone Ethyl	92.6		P	60 - 142
Chlorfenapyr	96.7		P	53 - 117
Chlorpyrifos Ethyl	64.8		P	59 - 116
Chlorpyrifos Methyl	115		P	66 - 119
Coumaphos	203		P	11 - 234
Cyanazine	126		P	61 - 248
Cyprodinil	141		P	50 - 147
Dechlorane Plus	95.7		P	47 - 182
Demeton	95.7		P	30 - 138
Diazinon	119		P	67 - 126
Difenoconazole	185		P	38 - 205
Dimethenamid	95.0		P	57 - 111
Dimethomorph	145		P	16 - 212
Disulfoton	106		P	46 - 126
Dithiopyr	93.1		P	62 - 115
EPTC	51.4		P	28 - 80.0
Ethion	53.5		P	24 - 122
Ethoprop	97.8		P	62 - 113
Etridiazole	67.0		P	28 - 92.0
Fenamiphos	83.0		P	57 - 128
Fenbuconazole	94.4		P	52 - 155
Fipronil	97.7		P	63 - 130
Fipronil Desulfinyl	101		P	61 - 130
Fipronil Sulfide	104		P	56 - 117
Fipronil Sulfone	70.5		P	52 - 118
Fluazifop-P-butyl	107		P	61 - 128
Fludioxonil	117		P	59 - 129
Flumioxazin	152		P	30 - 250
Flutolanil	77.2		P	53 - 127
Fluxapyroxad	97.4		P	42 - 132
Fonofos	108		P	61 - 110
Hexazinone	110		P	46 - 139
Imazalil	108		P	40 - 139
Iprodione	118		P	40 - 146
Loratadine	198		P	10 - 224
Malathion	119		P	61 - 135
Metalaxyl	103		P	58 - 121
Metolachlor	106		P	64 - 118
Metribuzin	107		P	45 - 245
Mevinphos	93.7		P	49 - 118
Molinate	78.7		P	42 - 92.0
Myclobutanil	126		P	55 - 127
Naled	79.7		P	10 - 114
Napropamide	98.9		P	39 - 121
Norflurazon	128		P	55 - 129
Octinoxate	66.8		P	26 - 166
Oxadiazon	108		P	54 - 115
Oxybenzone	69.5		P	49 - 135
Oxyfluorfen	130		P	64 - 139

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P422534

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Ethyl	118		F	70 - 111
Parathion Methyl	126		P	76 - 136
PBDE-47	72.3		P	41 - 148
PBDE-99	74.7		P	38 - 147
Pendimethalin	104		P	52 - 118
Phenytoin	57.9		P	10 - 162
Phorate	85.7		P	40 - 122
Prodiamine	100		P	26 - 141
Prometon	94.9		P	54 - 122
Prometryn	78.1		P	61 - 128
Pronamide	107		P	72 - 121
Propanil	105		P	45 - 144
Propargite	191		P	10 - 199
Propiconazole	88.3		P	56 - 127
Pyraflufen Ethyl	81.7		P	56 - 140
Pyridaben	209		P	26 - 211
Pyriproxyfen	167		P	33 - 194
Simazine	103		P	67 - 121
Stirophos	108		P	20 - 142
Sulfentrazone	86.1		P	21 - 144
Tebuconazole	87.3		P	10 - 122
Terbufos	126		P	60 - 129
Terbuthylazine	110		P	69 - 113
Thiobencarb	55.9		P	51 - 120
Tri-o-cresyl Phosphate	69.9		P	49 - 150
Triadimefon	108		P	56 - 114

Reference Method: SM 2320 B-2011
Batch ID: P422781

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.7		P	94 - 106

Reference Method: SM 2540 D-2015
Batch ID: P422708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P422785

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367750	Ammonia-N	98.8	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423043

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370379	Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422629

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370385	Kjeldahl Nitrogen	93.7	97.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422864

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370177	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370176	Total-P	95.8	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370379	Total-P	99.4	99.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P422534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370073	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	79.9	91.0	P/P	26 - 165
2370073	Acetochlor	88.6	95.2	P/P	67 - 124
2370073	Alachlor	76.9	86.3	P/P	60 - 120
2370073	Ametryn	135	149	P/P	54 - 216
2370073	Atrazine Desethyl	22.2	54.9	P/P	15 - 122
2370073	Avobenzone	107	115	P/P	37 - 178
2370073	Azinphos Methyl	97.0	96.1	P/P	40 - 292
2370073	Azoxystrobin	104	106	P/P	35 - 220
2370073	Bromacil	116	125	P/P	45 - 127
2370073	Butylate	77.9	72.9	P/P	20 - 83.0
2370073	Caffeine	80.4	91.2	P/P	10 - 194
2370073	Carbophenothion	110	102	P/P	57 - 127
2370073	Carfentrazone Ethyl	70.8	64.0	P/P	51 - 141
2370073	Chlorfenapyr	77.7	79.8	P/P	46 - 111
2370073	Chlorpyrifos Ethyl	51.4	53.5	F/P	52 - 120
2370073	Chlorpyrifos Methyl	87.1	89.7	P/P	63 - 119

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P422534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370073	Coumaphos	160	168	P/P	10 - 228
2370073	Cyanazine	92.6	116	P/P	59 - 241
2370073	Cyprodinil	113	117	P/P	47 - 146
2370073	Dechlorane Plus	77.5	86.6	P/P	50 - 150
2370073	Demeton	109	107	P/P	40 - 136
2370073	Diazinon	98.9	93.3	P/P	69 - 132
2370073	Difenoconazole	152	154	P/P	57 - 258
2370073	Dimethenamid	73.7	75.7	P/P	54 - 110
2370073	Dimethomorph	111	124	P/P	28 - 210
2370073	Disulfoton	90.1	87.4	P/P	43 - 133
2370073	Dithiopyr	77.5	86.3	P/P	39 - 116
2370073	EPTC	67.0	66.9	P/P	20 - 78.0
2370073	Ethion	44.2	51.2	P/P	17 - 119
2370073	Ethoprop	104	104	P/P	66 - 120
2370073	Etridiazole	71.8	63.4	P/P	28 - 96.0
2370073	Fenamiphos	59.4	63.0	P/P	41 - 126
2370073	Fenbuconazole	69.8	75.9	P/P	42 - 169
2370073	Fipronil	77.6	84.7	P/P	61 - 132
2370073	Fipronil Desulfinyl	60.9	83.2	P/P	56 - 132
2370073	Fipronil Sulfide	104	126	P/F	48 - 119
2370073	Fluazifop-P-butyl	124	128	P/P	53 - 131
2370073	Fludioxonil	92.4	95.4	P/P	56 - 127
2370073	Flumioxazin	158	158	P/P	19 - 300
2370073	Flutolanil	54.1	62.2	P/P	41 - 127
2370073	Fluxapyroxad	84.5	89.3	P/P	42 - 172
2370073	Fonofos	131	122	F/F	59 - 113
2370073	Hexazinone	99.1	103	P/P	66 - 122
2370073	Imazalil	118	104	P/P	21 - 283
2370073	Iprodione	106	121	P/P	43 - 150
2370073	Loratadine	164	160	P/P	23 - 201
2370073	Malathion	95.0	101	P/P	58 - 136
2370073	Metalaxyl	106	115	P/P	55 - 120
2370073	Metolachlor	78.6	83.0	P/P	57 - 121
2370073	Metribuzin	91.3	98.7	P/P	58 - 294
2370073	Mevinphos	109	113	P/P	50 - 126
2370073	Molinate	90.7	92.4	P/P	42 - 93.0
2370073	Myclobutanil	99.7	110	P/P	55 - 125
2370073	Naled	72.4	91.7	P/P	18 - 200
2370073	Napropamide	87.2	92.8	P/P	39 - 110
2370073	Norflurazon	102	109	P/P	48 - 128
2370073	Octinoxate	75.2	89.3	P/P	21 - 159
2370073	Oxybenzone	74.4	90.3	P/P	41 - 142
2370073	Oxyfluorfen	106	105	P/P	64 - 153
2370073	Parathion Ethyl	104	108	P/P	69 - 114
2370073	Parathion Methyl	119	123	P/P	79 - 139
2370073	PBDE-47	74.0	86.2	P/P	27 - 144
2370073	PBDE-99	75.6	85.1	P/P	18 - 150
2370073	Pendimethalin	90.8	90.9	P/P	50 - 139
2370073	Phenytoin	86.8	99.7	P/P	10 - 146
2370073	Phorate	73.2	73.5	P/P	54 - 161
2370073	Prodiamine	113	112	P/P	30 - 161
2370073	Prometon	67.8	74.1	P/P	45 - 134

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P422534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370073	Prometryn	62.4	73.0	P/P	45 - 137
2370073	Pronamide	79.2	78.1	P/P	65 - 133
2370073	Propanil	88.1	90.7	P/P	49 - 142
2370073	Propargite	161	171	P/P	10 - 203
2370073	Propiconazole	42.1	58.1	P/P	38 - 146
2370073	Pyraflufen Ethyl	60.5	66.7	P/P	34 - 153
2370073	Pyridaben	205	172	F/P	12 - 192
2370073	Pyriproxyfen	132	118	P/P	33 - 180
2370073	Simazine	107	110	P/P	51 - 157
2370073	Stirophos	80.4	97.2	P/P	10 - 128
2370073	Sulfentrazone	177	164	P/P	53 - 186
2370073	Tebuconazole	64.0	75.1	P/P	10 - 133
2370073	Terbufos	113	104	P/P	65 - 139
2370073	Terbuthylazine	117	114	P/P	66 - 117
2370073	Thiobencarb	57.6	67.7	P/P	51 - 119
2370073	Tri-o-cresyl Phosphate	76.5	86.7	P/P	31 - 144
2370073	Triadimefon	115	119	P/P	48 - 119

Reference Method: SM 4500-F- C-2011
Batch ID: P422785

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369631	Fluoride	97.3	98.7	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370843	Organic Carbon	96.2	97.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370586	Turbidity	2.62	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367750	Ammonia-N	0.735	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423043

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370379	Ammonia-N	0.980	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422629

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370385	Kjeldahl Nitrogen	3.57	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370177	NO2NO3-N	0.839	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370176	Total-P	2.70	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370379	Total-P	0.376	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P422534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370073	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12.9	Spike	P	0 - 37
2370073	Acetochlor	7.14	Spike	P	0 - 28

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P422534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370073	Alachlor	11.6	Spike	P	0 - 30
2370073	Ametryn	9.22	Spike	P	0 - 32
2370073	Atrazine	5.82	Spike	P	0 - 41
2370073	Atrazine Desethyl	28.5	Spike	P	0 - 36
2370073	Avobenzone	7.30	Spike	P	0 - 36
2370073	Azinphos Methyl	0.946	Spike	P	0 - 75
2370073	Azoxystrobin	0.843	Spike	P	0 - 39
2370073	Bromacil	7.92	Spike	P	0 - 33
2370073	Butylate	6.60	Spike	P	0 - 44
2370073	Caffeine	11.9	Spike	P	0 - 74
2370073	Carbophenothion	7.20	Spike	P	0 - 25
2370073	Carfentrazone Ethyl	10.2	Spike	P	0 - 27
2370073	Chlorfenapyr	2.70	Spike	P	0 - 24
2370073	Chlorpyrifos Ethyl	4.12	Spike	P	0 - 26
2370073	Chlorpyrifos Methyl	2.95	Spike	P	0 - 26
2370073	Coumaphos	4.74	Spike	P	0 - 28
2370073	Cyanazine	22.2	Spike	P	0 - 48
2370073	Cyprodinil	3.53	Spike	P	0 - 29
2370073	Dechlorane Plus	11.1	Spike	P	0 - 30
2370073	Demeton	2.17	Spike	P	0 - 33
2370073	Diazinon	5.88	Spike	P	0 - 29
2370073	Difenoconazole	1.53	Spike	P	0 - 34
2370073	Dimethenamid	2.70	Spike	P	0 - 39
2370073	Dimethomorph	10.9	Spike	P	0 - 51
2370073	Disulfoton	3.02	Spike	P	0 - 30
2370073	Dithiopyr	10.8	Spike	P	0 - 26
2370073	EPTC	0.221	Spike	P	0 - 43
2370073	Ethion	14.6	Spike	P	0 - 79
2370073	Ethoprop	0.00481	Spike	P	0 - 29
2370073	Etridiazole	12.4	Spike	P	0 - 33
2370073	Fenamiphos	5.88	Spike	P	0 - 40
2370073	Fenbuconazole	8.40	Spike	P	0 - 74
2370073	Fipronil	6.28	Spike	P	0 - 29
2370073	Fipronil Desulfinyl	17.4	Spike	P	0 - 32
2370073	Fipronil Sulfide	12.3	Spike	P	0 - 30
2370073	Fipronil Sulfone	19.0	Spike	P	0 - 33
2370073	Fluazifop-P-butyl	3.45	Spike	P	0 - 38
2370073	Fludioxonil	3.22	Spike	P	0 - 29
2370073	Flumioxazin	0.329	Spike	P	0 - 51
2370073	Flutolanil	13.8	Spike	P	0 - 25
2370073	Fluxapyroxad	5.47	Spike	P	0 - 45
2370073	Fonofos	6.98	Spike	P	0 - 27
2370073	Hexazinone	3.98	Spike	P	0 - 30
2370073	Imazalil	12.2	Spike	P	0 - 100
2370073	Iprodione	13.1	Spike	P	0 - 33
2370073	Loratadine	2.38	Spike	P	0 - 56
2370073	Malathion	6.41	Spike	P	0 - 37
2370073	Metalaxyl	7.70	Spike	P	0 - 40
2370073	Metolachlor	5.45	Spike	P	0 - 29
2370073	Metribuzin	7.83	Spike	P	0 - 45
2370073	Mevinphos	3.99	Spike	P	0 - 29

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P422534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370073	Molinate	1.85	Spike	P	0 - 33
2370073	Myclobutanil	7.95	Spike	P	0 - 26
2370073	Naled	23.6	Spike	P	0 - 37
2370073	Napropamide	6.22	Spike	P	0 - 44
2370073	Norflurazon	6.19	Spike	P	0 - 30
2370073	Octinoxate	17.1	Spike	P	0 - 45
2370073	Oxadiazon	0.786	Spike	P	0 - 28
2370073	Oxybenzone	19.2	Spike	P	0 - 46
2370073	Oxyfluorfen	0.876	Spike	P	0 - 28
2370073	Parathion Ethyl	3.68	Spike	P	0 - 31
2370073	Parathion Methyl	3.77	Spike	P	0 - 29
2370073	PBDE-47	15.2	Spike	P	0 - 36
2370073	PBDE-99	11.8	Spike	P	0 - 40
2370073	Pendimethalin	0.153	Spike	P	0 - 33
2370073	Phenytoin	13.9	Spike	P	0 - 100
2370073	Phorate	0.416	Spike	P	0 - 36
2370073	Prodiamine	0.894	Spike	P	0 - 71
2370073	Prometon	8.95	Spike	P	0 - 36
2370073	Prometryn	15.7	Spike	P	0 - 28
2370073	Pronamide	1.39	Spike	P	0 - 24
2370073	Propanil	2.88	Spike	P	0 - 28
2370073	Propargite	5.84	Spike	P	0 - 43
2370073	Propiconazole	12.7	Spike	P	0 - 33
2370073	Pyraflufen Ethyl	9.70	Spike	P	0 - 29
2370073	Pyridaben	15.8	Spike	P	0 - 30
2370073	Pyriproxyfen	10.9	Spike	P	0 - 79
2370073	Simazine	1.78	Spike	P	0 - 29
2370073	Stirophos	18.9	Spike	P	0 - 61
2370073	Sulfentrazone	4.64	Spike	P	0 - 33
2370073	Tebuconazole	14.5	Spike	P	0 - 69
2370073	Terbufos	8.67	Spike	P	0 - 29
2370073	Terbuthylazine	2.52	Spike	P	0 - 32
2370073	Thiobencarb	16.1	Spike	P	0 - 26
2370073	Tri-o-cresyl Phosphate	12.4	Spike	P	0 - 33
2370073	Triadimefon	3.36	Spike	P	0 - 28

Reference Method: SM 2320 B-2011
Batch ID: P422781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369631	Total Alkalinity	0.819	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P422785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369631	Fluoride	0.992	Spike	P	0 - 1.6

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P422790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370843	Organic Carbon	0.945	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2370184
Field Sample ID: g5sd0036

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	85.9	P	20 - 200
EPA 8270E	Simazine-d10	107	P	62 - 142
EPA 8270E	Terbufos-d10	96.7	P	58 - 132
EPA 8270E	Terphenyl-d14	81.8	P	52 - 137

Lab Sample ID: 2370185
Field Sample ID: G5SD0107

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	96.8	P	20 - 200
EPA 8270E	Simazine-d10	105	P	62 - 142
EPA 8270E	Terbufos-d10	109	P	58 - 132
EPA 8270E	Terphenyl-d14	82.1	P	52 - 137

Quality Assurance Report
Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A116002
Included Lab Sample IDs: 2370174, 2370175

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A116076
Included Lab Sample IDs: 2370176, 2370177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	100	P/P	90 - 110
Total-P	99.0	98.8	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A116124
Included Lab Sample IDs: 2370184, 2370185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	90.8		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	105		P	80 - 120
Atrazine Desethyl	88.0		P	80 - 120
Azinphos Methyl	102		P	80 - 120
Azoxystrobin	99.3		P	80 - 120
Bromacil	109		P	80 - 120
Butylate	91.8		P	80 - 120
Caffeine	98.7		P	80 - 120
Carbophenothion	104		P	80 - 120
Carfentrazone Ethyl	92.7		P	80 - 120
Chlorfenapyr	106		P	80 - 120
Chlorpyrifos Ethyl	99.6		P	80 - 120
Chlorpyrifos Methyl	99.8		P	80 - 120
Coumaphos	107		P	80 - 120
Cyanazine	95.9		P	80 - 120
Cyprodinil	106		P	80 - 120
Demeton	102		P	80 - 120
Diazinon	104		P	80 - 120
Difenoconazole	108		P	80 - 120
Dimethenamid	98.8		P	80 - 120
Dimethomorph	98.9		P	80 - 120
Disulfoton	103		P	80 - 120
Dithiopyr	88.9		P	80 - 120
EPTC	101		P	80 - 120
Ethion	89.9		P	80 - 120
Ethoprop	105		P	80 - 120
Etridiazole	108		P	80 - 120
Fenamiphos	88.8		P	80 - 120
Fenbuconazole	98.9		P	80 - 120
Fipronil	93.6		P	80 - 120
Fipronil Desulfinyl	95.3		P	80 - 120
Fipronil Sulfide	94.6		P	80 - 120
Fipronil Sulfone	83.3		P	80 - 120
Fluazifop-P-butyl	93.2		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A116124
Included Lab Sample IDs: 2370184, 2370185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fludioxonil	107		P	80 - 120
Flumioxazin	109		P	80 - 120
Flutolanil	87.9		P	80 - 120
Fluxapyroxad	80.3		P	80 - 120
Fonofos	96.9		P	80 - 120
Hexazinone	99.3		P	80 - 120
Imazalil	95.7		P	80 - 120
Iprodione	77.5*		F	80 - 120
Loratadine	108		P	80 - 120
Malathion	99.5		P	80 - 120
Metalaxyl	94.8		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	92.8		P	80 - 120
Mevinphos	104		P	80 - 120
Molinate	102		P	80 - 120
Myclobutanil	107		P	80 - 120
Naled	92.4		P	80 - 120
Napropamide	87.1		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	101		P	80 - 120
Oxyfluorfen	95.3		P	80 - 120
Parathion Ethyl	109		P	80 - 120
Parathion Methyl	103		P	80 - 120
Pendimethalin	103		P	80 - 120
Phenytoin	102		P	80 - 120
Phorate	104		P	80 - 120
Prodiamine	95.7		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	86.5		P	80 - 120
Pronamide	96.8		P	80 - 120
Propanil	93.7		P	80 - 120
Propargite	100		P	80 - 120
Propiconazole	93.0		P	80 - 120
Pyraflufen Ethyl	84.8		P	80 - 120
Pyridaben	114		P	80 - 120
Pyriproxyfen	116		P	80 - 120
Simazine	99.4		P	80 - 120
Stirophos	96.8		P	80 - 120
Sulfentrazone	82.6		P	80 - 120
Tebuconazole	84.6		P	80 - 120
Terbufos	97.9		P	80 - 120
Terbuthylazine	99.3		P	80 - 120
Thiobencarb	95.2		P	80 - 120
Triadimefon	113		P	80 - 120

Reference Method: EPA 8270E
Run ID: A116130
Included Lab Sample IDs: 2370184, 2370185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	97.8		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A116130
Included Lab Sample IDs: 2370184, 2370185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	98.8		P	80 - 120
Dechlorane Plus	101		P	80 - 120
Octinoxate	101		P	80 - 120
Oxybenzone	104		P	80 - 120
PBDE-47	98.0		P	80 - 120
PBDE-99	98.6		P	80 - 120
Tri-o-cresyl Phosphate	101		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A116138
Included Lab Sample IDs: 2370174, 2370175

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.1	96.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A116138
Included Lab Sample IDs: 2370174, 2370175

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

Reference Method: SM 5310 B-2011
Run ID: A116142
Included Lab Sample IDs: 2370176, 2370177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A116158
Included Lab Sample IDs: 2370176, 2370177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.7	94.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A116167
Included Lab Sample IDs: 2370176, 2370177

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A116189
Included Lab Sample IDs: 2370176

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A116231
Included Lab Sample IDs: 2370177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.7	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity	99.0				2.62	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	98.8	99.8			0.735
	Ammonia-N	99.4	104	103			0.980
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.5	93.7	97.4			3.57
EPA 353.2 Rev. 2.0	NO2NO3-N	103	103	104			0.839
EPA 365.1 Rev. 2.0	Total-P	104	95.8	98.4			2.70
	Total-P	104	99.4	99.8			0.376
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	73.1	79.9	91.0			12.9
	Acetochlor	121	88.6	95.2			7.14
	Alachlor	97.9	76.9	86.3			11.6
	Ametryn	136	135	149			9.22
	Atrazine	113					5.82
	Atrazine Desethyl	71.2	22.2	54.9			28.5
	Avobenzone	104	107	115			7.30
	Azinphos Methyl	132	97.0	96.1			0.946
	Azoxystrobin	125	104	106			0.843
	Bromacil	117	116	125			7.92
	Butylate	57.1	77.9	72.9			6.60
	Caffeine	91.6	80.4	91.2			11.9
	Carbophenothion	124	110	102			7.20
	Carfentrazone Ethyl	92.6	70.8	64.0			10.2
	Chlorfenapyr	96.7	77.7	79.8			2.70
	Chlorpyrifos Ethyl	64.8	51.4	53.5			4.12
	Chlorpyrifos Methyl	115	87.1	89.7			2.95
	Coumaphos	203	160	168			4.74
	Cyanazine	126	92.6	116			22.2
	Cyprodinil	141	113	117			3.53
	Dechlorane Plus	95.7	77.5	86.6			11.1
	Demeton	95.7	109	107			2.17
	Diazinon	119	98.9	93.3			5.88
	Difenoconazole	185	152	154			1.53
	Dimethenamid	95.0	73.7	75.7			2.70
	Dimethomorph	145	111	124			10.9
	Disulfoton	106	90.1	87.4			3.02
	Dithiopyr	93.1	77.5	86.3			10.8
	EPTC	51.4	67.0	66.9			0.221
	Ethion	53.5	44.2	51.2			14.6
	Ethoprop	97.8	104	104			0.0048
	Etridiazole	67.0	71.8	63.4			12.4
	Fenamiphos	83.0	59.4	63.0			5.88
	Fenbuconazole	94.4	69.8	75.9			8.40
	Fipronil	97.7	77.6	84.7			6.28
	Fipronil Desulfinyl	101	60.9	83.2			17.4
	Fipronil Sulfide	104	104	126			12.3
	Fipronil Sulfone	70.5					19.0
	Fluazifop-P-butyl	107	124	128			3.45
	Fludioxonil	117	92.4	95.4			3.22
	Flumioxazin	152	158	158			0.329
	Flutolanil	77.2	54.1	62.2			13.8
	Fluxapyroxad	97.4	84.5	89.3			5.47
	Fonofos	108	131	122			6.98
	Hexazinone	110	99.1	103			3.98

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Imazalil	108	118	104			12.2
	Iprodione	118	106	121			13.1
	Loratadine	198	164	160			2.38
	Malathion	119	95.0	101			6.41
	Metalaxyl	103	106	115			7.70
	Metolachlor	106	78.6	83.0			5.45
	Metribuzin	107	91.3	98.7			7.83
	Mevinphos	93.7	109	113			3.99
	Molinate	78.7	90.7	92.4			1.85
	Myclobutanil	126	99.7	110			7.95
	Naled	79.7	72.4	91.7			23.6
	Napropamide	98.9	87.2	92.8			6.22
	Norflurazon	128	102	109			6.19
	Octinoxate	66.8	75.2	89.3			17.1
	Oxadiazon	108					0.786
	Oxybenzone	69.5	74.4	90.3			19.2
	Oxyfluorfen	130	106	105			0.876
	Parathion Ethyl	118	104	108			3.68
	Parathion Methyl	126	119	123			3.77
	PBDE-47	72.3	74.0	86.2			15.2
	PBDE-99	74.7	75.6	85.1			11.8
	Pendimethalin	104	90.8	90.9			0.153
	Phenytoin	57.9	86.8	99.7			13.9
	Phorate	85.7	73.2	73.5			0.416
	Prodiamine	100	113	112			0.894
	Prometon	94.9	67.8	74.1			8.95
	Prometryn	78.1	62.4	73.0			15.7
	Pronamide	107	79.2	78.1			1.39
	Propanil	105	88.1	90.7			2.88
	Propargite	191	161	171			5.84
	Propiconazole	88.3	42.1	58.1			12.7
	Pyraflufen Ethyl	81.7	60.5	66.7			9.70
	Pyridaben	209	205	172			15.8
	Pyriproxyfen	167	132	118			10.9
	Simazine	103	107	110			1.78
	Stirophos	108	80.4	97.2			18.9
	Sulfentrazone	86.1	177	164			4.64
	Tebuconazole	87.3	64.0	75.1			14.5
	Terbufos	126	113	104			8.67
	Terbuthylazine	110	117	114			2.52
	Thiobencarb	55.9	57.6	67.7			16.1
	Tri-o-cresyl Phosphate	69.9	76.5	86.7			12.4
	Triadimefon	108	115	119			3.36
SM 2320 B-2011	Total Alkalinity	98.7				0.819	
SM 2540 D-2015	TSS	91.1					
SM 4500-F- C-2011	Fluoride	100	97.3	98.7			0.992
SM 5310 B-2011	Organic Carbon	96.4	96.2	97.4			0.945

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2370174, 2370175
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2370176, 2370177

Reference Method Descriptions

Method	Description	Associated Samples
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2370176, 2370177
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2370176, 2370177
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2370176, 2370177
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2370184, 2370185
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2370184, 2370185
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2370174, 2370175
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2370174, 2370175
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2370174, 2370175
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2370176, 2370177

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	11/17/2022			11/17/2022 14:55	Anna M. Plaviak	2370174, 2370175
EPA 350.1 Rev. 2.0	11/17/2022			11/29/2022 13:05	Ping Hua	2370176
	11/17/2022			12/02/2022 12:17	Ping Hua	2370177
EPA 351.2 Rev. 2.0	11/17/2022	11/21/2022 13:28	Alexandra J Mattheus	11/28/2022 15:57	Judith K. Clark	2370176
	11/17/2022	11/21/2022 13:28	Alexandra J Mattheus	11/28/2022 15:59	Judith K. Clark	2370177
EPA 353.2 Rev. 2.0	11/17/2022			11/29/2022 09:39	Beverly Y. Sanders	2370177
	11/17/2022			11/29/2022 09:46	Beverly Y. Sanders	2370176
EPA 365.1 Rev. 2.0	11/17/2022	11/18/2022 07:29	Adam P Silver	11/21/2022 14:26	James L Waggerby	2370176
	11/17/2022	11/18/2022 07:29	Adam P Silver	11/21/2022 15:16	James L Waggerby	2370177
EPA 8270E	11/17/2022	11/21/2022 08:00	Fe-Val Siddell	11/21/2022 20:56	Michael Poppell	2370184
	11/17/2022	11/21/2022 08:00	Fe-Val Siddell	11/21/2022 21:24	Michael Poppell	2370185
	11/17/2022	11/21/2022 08:00	Fe-Val Siddell	11/22/2022 17:01	Arthur Maknenko	2370184
	11/17/2022	11/21/2022 08:00	Fe-Val Siddell	11/22/2022 17:20	Arthur Maknenko	2370185
SM 2320 B-2011	11/17/2022			11/23/2022 11:00	Dale L. Simmons	2370174
	11/17/2022			11/23/2022 11:13	Dale L. Simmons	2370175
SM 2540 D-2015	11/17/2022			11/18/2022 16:39	Yijie Li	2370174, 2370175
SM 4500-F- C-2011	11/17/2022			11/23/2022 10:11	Dale L. Simmons	2370174
	11/17/2022			11/23/2022 10:16	Dale L. Simmons	2370175
SM 5310 B-2011	11/17/2022			11/23/2022 05:09	Touraj Touran	2370176
	11/17/2022			11/23/2022 05:40	Touraj Touran	2370177