

Chemical Analysis Report

SO-DIST-2022-09-15-02

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

Event Description: **2022 SMP : Charlotte Harbor**
Request ID: **RQ-2022-09-05-45**
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: Liang Lin, Environmental Administrator

Date Certified: 04-OCT-2022 16:35

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

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: MYAKA CUTOFF (WESTERN PORTION)

Collection Date/Time: 09/14/2022 11:20

Field ID: G3SD0073

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356777	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P419657	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P419966	
	SM 2540 D-2011	TSS	6	I	mg/L	P419852	
	SM 4500-F- C-2011	Fluoride	0.43		mg F/L	P419968	
2356779	EPA 350.1 Rev. 2.0	Ammonia-N	0.061		mg N/L	P419913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P419872	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P420066	
	EPA 365.1 Rev. 2.0	Total-P	0.29		mg P/L	P419835	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P419757	
2356793	EPA 8270E	Oxybenzone**	9.6	U	ng/L	P419712	
		Acetochlor	0.24	U	ng/L	P419712	
		Octinoxate**	19	U	ng/L	P419712	RPD
		Alachlor	0.24	U	ng/L	P419712	
		Avobenzone**	96	U	ng/L	P419712	
		Ametryn	0.57	U	ng/L	P419712	
		Atrazine	14		ng/L	P419712	
		PBDE-47**	3.8	U	ng/L	P419712	
		Atrazine Desethyl	1.4	U	ng/L	P419712	
		PBDE-99**	4.8	U	ng/L	P419712	MS
		Azinphos Methyl	1.9	U	ng/L	P419712	
		Tri-o-cresyl Phosphate**	5.7	U	ng/L	P419712	RPD
		Azoxystrobin	1.5	I	ng/L	P419712	
		Bromacil	7.1		ng/L	P419712	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	11	U	ng/L	P419712	MS
		Butylate	0.38	U	ng/L	P419712	
		Dechlorane Plus**	29	U	ng/L	P419712	
		Caffeine**	7.2	U	ng/L	P419712	
		Carbophenothion	0.19	U	ng/L	P419712	
		Carfentrazone Ethyl	0.096	U	ng/L	P419712	
		Chlorfenapyr	0.17	U	ng/L	P419712	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P419712	
		Chlorpyrifos Methyl	0.048	U	ng/L	P419712	
		Coumaphos	0.48	U	ng/L	P419712	MS
		Cyanazine	3.1	U	ng/L	P419712	
		Cyprodinil	0.096	U	ng/L	P419712	
		Demeton	1.4	U	ng/L	P419712	
		Diazinon	0.12	U	ng/L	P419712	
		Difenoconazole	0.57	U	ng/L	P419712	
		Dimethenamid	0.096	U	ng/L	P419712	
		Dimethomorph	0.17	U	ng/L	P419712	MS, RPD
		Disulfoton	0.48	U	ng/L	P419712	
		Dithiopyr	0.22	IV	ng/L	P419712	
		EPTC	1.2	U	ng/L	P419712	

Field ID: G3SD0073

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356793	EPA 8270E	Ethion	0.14	U	ng/L	P419712	
		Ethoprop	0.096	U	ng/L	P419712	
		Etridiazole	0.14	U	ng/L	P419712	
		Fenamiphos	0.48	U	ng/L	P419712	
		Fenbuconazole	0.25	I	ng/L	P419712	
		Fipronil	0.24	U	ng/L	P419712	
		Fipronil DesulfinyI**	0.20	I	ng/L	P419712	
		Fipronil Sulfide	0.14	U	ng/L	P419712	
		Fipronil Sulfone	0.23	I	ng/L	P419712	
		Fluazifop-P-butyl	0.096	U	ng/L	P419712	
		Fludioxonil	0.12	U	ng/L	P419712	
		Flumioxazin	1.7	U	ng/L	P419712	
		Flutolanil	0.37	I	ng/L	P419712	
		Fluxapyroxad	0.53		ng/L	P419712	
		Fonofos	0.19	U	ng/L	P419712	
		Hexazinone	28	J	ng/L	P419712	
		Imazalil	0.72	U	ng/L	P419712	
		Iprodione	0.57	U	ng/L	P419712	
		Loratadine**	0.096	U	ng/L	P419712	MS, RPD
		Malathion	0.33	U	ng/L	P419712	
		Metalaxyl	5.9		ng/L	P419712	
		Metolachlor	6.5		ng/L	P419712	
		Metribuzin	4.5	I	ng/L	P419712	
		Mevinphos	1.0	U	ng/L	P419712	
		Molinate	0.29	U	ng/L	P419712	
		Myclobutanil	0.24	U	ng/L	P419712	
		Naled	1.4	U	ng/L	P419712	
		Napropamide	0.38	U	ng/L	P419712	
		Norflurazon	13		ng/L	P419712	
		Oxadiazon	0.42	I	ng/L	P419712	
		Oxyfluorfen	0.14	U	ng/L	P419712	
		Parathion Ethyl	0.24	U	ng/L	P419712	
		Parathion Methyl	0.53	U	ng/L	P419712	
		Pendimethalin	0.96	U	ng/L	P419712	
		Phenytol**	3.3	U	ng/L	P419712	MS
		Phorate	0.50	U	ng/L	P419712	
		Prodiamine	0.17	U	ng/L	P419712	
		Prometon	0.86	U	ng/L	P419712	
		Prometryn	0.19	U	ng/L	P419712	
		Pronamide	0.14	U	ng/L	P419712	
		Propanil	0.12	U	ng/L	P419712	
		Propargite	1.4	UJ	ng/L	P419712	LCS, MS
		Propiconazole	0.52	I	ng/L	P419712	
		Pyraflufen Ethyl	0.24	U	ng/L	P419712	
		Pyridaben	0.43	U	ng/L	P419712	MS

Field ID: G3SD0073

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356793	EPA 8270E	Pyriproxyfen	0.12	U	ng/L	P419712	MS, RPD
		Simazine	5.4		ng/L	P419712	
		Stirophos	0.12	U	ng/L	P419712	
		Sulfentrazone	2.2		ng/L	P419712	
		Tebuconazole	0.48	U	ng/L	P419712	
		Terbufos	0.096	U	ng/L	P419712	
		Terbuthylazine	0.41	U	ng/L	P419712	
		Thiobencarb	0.57	U	ng/L	P419712	
		Triadimefon	0.24	U	ng/L	P419712	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: Estimated value for hexazinone due to internal standard recovery exceeding control limits. V - Due to the presence of dithiopyr in one of the Method Blanks and the sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: TRAILER PARK CANAL

Collection Date/Time: 09/14/2022 10:55

Field ID: G3SD0072

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356791	EPA 200.7 Rev. 4.4	Calcium	79.2		mg/L	P419672	
		Iron	440		ug/L	P419672	
		Magnesium	135		mg/L	P419672	
		Strontium	1.84E+03		ug/L	P419672	
		Tin	3.0	U	ug/L	P419672	
		Vanadium	2.7	I	ug/L	P419672	
		Zinc	5.0	U	ug/L	P419672	
	EPA 200.8 Rev. 5.4	Aluminum	274		ug/L	P419672	
		Antimony	0.15	I	ug/L	P419672	
		Arsenic	2.67		ug/L	P419672	
		Beryllium	0.028	I	ug/L	P419672	
		Cadmium	0.022	I	ug/L	P419672	
		Chromium	1.3	I	ug/L	P419672	
		Cobalt	0.106		ug/L	P419672	
		Copper	1.64		ug/L	P419672	
		Lead	0.30	I	ug/L	P419672	
		Manganese	17.5		ug/L	P419672	
		Molybdenum	2.09		ug/L	P419672	
		Nickel	0.71	I	ug/L	P419672	
		Selenium	0.20	U	ug/L	P419672	
		Silver	0.010	U	ug/L	P419672	
2356792	EPA 8270E	Oxybenzone**	9.7	U	ng/L	P419712	
		Acetochlor	0.24	U	ng/L	P419712	
		Octinoxate**	19	U	ng/L	P419712	RPD
		Alachlor	0.24	U	ng/L	P419712	
		Avobenzone**	97	U	ng/L	P419712	
		Ametryn	0.58	U	ng/L	P419712	
		Atrazine	16		ng/L	P419712	
		PBDE-47**	3.9	U	ng/L	P419712	
		Atrazine Desethyl	1.5	U	ng/L	P419712	
		PBDE-99**	4.9	U	ng/L	P419712	MS
		Azinphos Methyl	1.9	U	ng/L	P419712	
		Tri-o-cresyl Phosphate**	5.8	U	ng/L	P419712	RPD
		Azoxystrobin	1.0	I	ng/L	P419712	
		Bromacil	2.6		ng/L	P419712	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P419712	MS
		Butylate	0.39	U	ng/L	P419712	
		Dechlorane Plus**	29	U	ng/L	P419712	
		Caffeine**	7.5	I	ng/L	P419712	
		Carbophenothion	0.19	U	ng/L	P419712	
		Carfentrazone Ethyl	0.097	U	ng/L	P419712	
		Chlorfenapyr	0.17	U	ng/L	P419712	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P419712	

Field ID: G3SD0072

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356792	EPA 8270E	Chlorpyrifos Methyl	0.049	U	ng/L	P419712	
		Coumaphos	0.49	U	ng/L	P419712	MS
		Cyanazine	3.2	U	ng/L	P419712	
		Cyprodinil	0.097	U	ng/L	P419712	
		Demeton	1.5	U	ng/L	P419712	
		Diazinon	0.12	U	ng/L	P419712	
		Difenoconazole	0.58	U	ng/L	P419712	
		Dimethenamid	0.097	U	ng/L	P419712	
		Dimethomorph	0.17	U	ng/L	P419712	MS, RPD
		Disulfoton	0.49	U	ng/L	P419712	
		Dithiopyr	0.17	U	ng/L	P419712	
		EPTC	1.2	U	ng/L	P419712	
		Ethion	0.15	U	ng/L	P419712	
		Ethoprop	0.097	U	ng/L	P419712	
		Etridiazole	0.15	U	ng/L	P419712	
		Fenamiphos	0.49	U	ng/L	P419712	
		Fenbuconazole	0.14	I	ng/L	P419712	
		Fipronil	0.43	I	ng/L	P419712	
		Fipronil Desulfinyl**	0.33	I	ng/L	P419712	
		Fipronil Sulfide	0.15	U	ng/L	P419712	
		Fipronil Sulfone	0.56	I	ng/L	P419712	
		Fluazifop-P-butyl	0.097	U	ng/L	P419712	
		Fludioxonil	0.12	U	ng/L	P419712	
		Flumioxazin	1.7	U	ng/L	P419712	
		Flutolanil	0.37	I	ng/L	P419712	
		Fluxapyroxad	0.93		ng/L	P419712	
		Fonofos	0.19	U	ng/L	P419712	
		Hexazinone	18		ng/L	P419712	
		Imazalil	0.73	U	ng/L	P419712	
		Iprodione	0.58	U	ng/L	P419712	
		Loratadine**	0.097	U	ng/L	P419712	MS, RPD
		Malathion	0.34	U	ng/L	P419712	
		Metalaxyl	4.4		ng/L	P419712	
		Metolachlor	9.4		ng/L	P419712	
		Metribuzin	9.7		ng/L	P419712	
		Mevinphos	1.0	U	ng/L	P419712	
		Molinate	0.29	U	ng/L	P419712	
		Myclobutanil	0.24	U	ng/L	P419712	
		Naled	1.5	U	ng/L	P419712	
		Napropamide	0.39	U	ng/L	P419712	
		Norflurazon	5.1		ng/L	P419712	
		Oxadiazon	0.81	I	ng/L	P419712	
		Oxyfluorfen	0.15	U	ng/L	P419712	
		Parathion Ethyl	0.24	U	ng/L	P419712	
		Parathion Methyl	0.53	U	ng/L	P419712	

Field ID: G3SD0072

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356792	EPA 8270E	Pendimethalin	0.97	U	ng/L	P419712	
		Phenytain**	3.4	U	ng/L	P419712	MS
		Phorate	0.51	U	ng/L	P419712	
		Prodiamine	0.17	U	ng/L	P419712	
		Prometon	0.87	U	ng/L	P419712	
		Prometryn	0.19	U	ng/L	P419712	
		Pronamide	0.15	U	ng/L	P419712	
		Propanil	0.12	U	ng/L	P419712	
		Propargite	1.5	UJ	ng/L	P419712	LCS, MS
		Propiconazole	0.49	U	ng/L	P419712	
		Pyraflufen Ethyl	0.24	U	ng/L	P419712	
		Pyridaben	0.44	U	ng/L	P419712	MS
		Pyriproxyfen	0.12	U	ng/L	P419712	
		Simazine	6.1		ng/L	P419712	
		Stirophos	0.12	U	ng/L	P419712	MS, RPD
		Sulfentrazone	2.7		ng/L	P419712	
		Tebuconazole	0.82	I	ng/L	P419712	
		Terbufos	0.097	U	ng/L	P419712	
		Terbuthylazine	0.41	U	ng/L	P419712	
		Thiobencarb	0.58	U	ng/L	P419712	
		Triadimefon	0.24	U	ng/L	P419712	

Ref. Method and Comment:
 EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Tippecanoe Bay North

Collection Date/Time: 09/14/2022 12:05

Field ID: G3SD0218

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356778	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P419657	
	SM 2320 B-2011	Total Alkalinity	83	Q	mg CaCO3/L	P420275	
	SM 2540 D-2011	TSS	3	IA	mg/L	P419852	
	SM 4500-F- C-2011	Fluoride	0.32		mg F/L	P420214	MS
2356780	EPA 350.1 Rev. 2.0	Ammonia-N	0.092		mg N/L	P419913	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P419805	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039		mg N/L	P420067	
	EPA 365.1 Rev. 2.0	Total-P	0.26		mg P/L	P419835	
	SM 5310 B-2011	Organic Carbon	20		mg C/L	P419757	
2356794	EPA 8270E	Oxybenzone**	9.9	U	ng/L	P419712	
		Acetochlor	0.25	U	ng/L	P419712	
		Octinoxate**	20	U	ng/L	P419712	RPD
		Alachlor	0.25	U	ng/L	P419712	
		Avobenzone**	99	U	ng/L	P419712	
		Ametryn	0.59	U	ng/L	P419712	
		Atrazine	13		ng/L	P419712	
		PBDE-47**	4.0	U	ng/L	P419712	
		Atrazine Desethyl	1.5	U	ng/L	P419712	
		PBDE-99**	4.9	U	ng/L	P419712	MS
		Azinphos Methyl	2.0	U	ng/L	P419712	
		Tri-o-cresyl Phosphate**	5.9	U	ng/L	P419712	RPD
		Azoxystrobin	0.99	I	ng/L	P419712	
		Bromacil	2.8		ng/L	P419712	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P419712	MS
		Butylate	0.40	U	ng/L	P419712	
		Dechlorane Plus**	30	U	ng/L	P419712	
		Caffeine**	7.4	U	ng/L	P419712	
		Carbophenothion	0.20	U	ng/L	P419712	
		Carfentrazone Ethyl	0.099	U	ng/L	P419712	
		Chlorfenapyr	0.17	U	ng/L	P419712	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P419712	
		Chlorpyrifos Methyl	0.049	U	ng/L	P419712	
		Coumaphos	0.49	U	ng/L	P419712	MS
		Cyanazine	3.2	U	ng/L	P419712	
		Cyprodinil	0.099	U	ng/L	P419712	
		Demeton	1.5	U	ng/L	P419712	
		Diazinon	0.12	U	ng/L	P419712	
		Difenoconazole	0.59	U	ng/L	P419712	
		Dimethenamid	0.099	U	ng/L	P419712	
		Dimethomorph	0.17	U	ng/L	P419712	MS, RPD
		Disulfoton	0.49	U	ng/L	P419712	
		Dithiopyr	0.17	U	ng/L	P419712	
		EPTC	1.2	U	ng/L	P419712	

Field ID: G3SD0218

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356794	EPA 8270E	Ethion	0.15	U	ng/L	P419712	
		Ethoprop	0.099	U	ng/L	P419712	
		Etridiazole	0.15	U	ng/L	P419712	
		Fenamiphos	0.49	U	ng/L	P419712	
		Fenbuconazole	0.12	U	ng/L	P419712	
		Fipronil	0.25	U	ng/L	P419712	
		Fipronil Desulfinyll**	0.30	I	ng/L	P419712	
		Fipronil Sulfide	0.15	U	ng/L	P419712	
		Fipronil Sulfone	0.40	I	ng/L	P419712	
		Fluazifop-P-butyl	0.099	U	ng/L	P419712	
		Fludioxonil	0.12	U	ng/L	P419712	
		Flumioxazin	1.7	U	ng/L	P419712	
		Flutolanil	0.37	I	ng/L	P419712	
		Fluxapyroxad	1.0		ng/L	P419712	
		Fonofos	0.20	U	ng/L	P419712	
		Hexazinone	18		ng/L	P419712	
		Imazalil	0.74	U	ng/L	P419712	
		Iprodione	0.59	U	ng/L	P419712	
		Loratadine**	0.099	U	ng/L	P419712	MS, RPD
		Malathion	0.35	U	ng/L	P419712	
		Metalaxyl	4.1		ng/L	P419712	
		Metolachlor	7.3		ng/L	P419712	
		Metribuzin	10		ng/L	P419712	
		Mevinphos	1.0	U	ng/L	P419712	
		Molinate	0.30	U	ng/L	P419712	
		Myclobutanil	0.25	U	ng/L	P419712	
		Naled	1.5	U	ng/L	P419712	
		Napropamide	0.40	U	ng/L	P419712	
		Norflurazon	5.3		ng/L	P419712	
		Oxadiazon	0.76	I	ng/L	P419712	
		Oxyfluorfen	0.15	U	ng/L	P419712	
		Parathion Ethyl	0.25	U	ng/L	P419712	
		Parathion Methyl	0.54	U	ng/L	P419712	
		Pendimethalin	0.99	U	ng/L	P419712	
		Phenytol**	3.5	U	ng/L	P419712	MS
		Phorate	0.52	U	ng/L	P419712	
		Prodiamine	0.17	U	ng/L	P419712	
		Prometon	0.89	U	ng/L	P419712	
		Prometryn	0.20	U	ng/L	P419712	
		Pronamide	0.15	U	ng/L	P419712	
		Propanil	0.12	U	ng/L	P419712	
		Propargite	1.5	UJ	ng/L	P419712	LCS, MS
		Propiconazole	0.49	U	ng/L	P419712	
		Pyraflufen Ethyl	0.25	U	ng/L	P419712	
		Pyridaben	0.45	U	ng/L	P419712	MS

Field ID: G3SD0218

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356794	EPA 8270E	Pyriproxyfen	0.12	U	ng/L	P419712	MS, RPD
		Simazine	5.7		ng/L	P419712	
		Stirophos	0.12	U	ng/L	P419712	
		Sulfentrazone	3.9		ng/L	P419712	
		Tebuconazole	0.49	U	ng/L	P419712	
		Terbufos	0.099	U	ng/L	P419712	
		Terbuthylazine	0.42	U	ng/L	P419712	
		Thiobencarb	0.59	U	ng/L	P419712	
		Triadimefon	0.25	U	ng/L	P419712	

Ref. Method and Comment:
SM 2320 B-2011: The sample was analyzed out of holding time because of analytical difficulties.
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: 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: P419657

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419672

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419672

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419913

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419805

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419872

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P420066

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P420067

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419835

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

Reference Method: EPA 8270E

Batch ID: P419712

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P419712

Component	Result	Code	Units
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	0.18	U	ng/L
Dithiopyr	0.19	I	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
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	1.8	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P419712

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P419712

Component	Result	Code	Units
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
Stiophos	0.12	U	ng/L
Stiophos	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

Reference Method: SM 2320 B-2011

Batch ID: P419966

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

Reference Method: SM 2320 B-2011

Batch ID: P420275

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P419852

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419968

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P420214

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P419757

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: P419657

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

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P419672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.9		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Strontium	104		P	85 - 115
Tin	102		P	85 - 115
Vanadium	103		P	85 - 115
Zinc	99.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	107		P	85 - 115
Beryllium	98.6		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	101		P	85 - 115
Copper	104		P	85 - 115
Lead	94.8		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	104		P	85 - 115
Selenium	102		P	85 - 115
Silver	87.4		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P419913

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P419805

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P419872

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P420066

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P420067

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419835

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

Reference Method: EPA 8270E

Batch ID: P419712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	80.3		P	50 - 150
Acetochlor	97.5		P	70 - 121
Alachlor	93.5		P	68 - 119
Ametryn	83.3		P	64 - 139
Atrazine	98.2		P	76 - 120
Atrazine Desethyl	59.7		P	44 - 126
Avobenzone	76.0		P	76 - 212
Azinphos Methyl	138		P	43 - 192
Azoxystrobin	136		P	36 - 224
Bromacil	68.4		P	52 - 121
Butylate	58.5		P	28 - 91.0
Caffeine	78.0		P	50 - 134
Carbophenothion	90.3		P	56 - 129
Carfentrazone Ethyl	95.2		P	60 - 141
Chlorfenapyr	81.1		P	56 - 115
Chlorpyrifos Ethyl	91.4		P	60 - 118
Chlorpyrifos Methyl	98.4		P	68 - 119
Coumaphos	82.3		P	18 - 250
Cyanazine	87.6		P	61 - 250
Cyprodinil	92.5		P	55 - 145
Dechlorane Plus	95.1		P	50 - 150
Demeton	92.2		P	30 - 159
Diazinon	98.1		P	70 - 123
Difenoconazole	88.1		P	49 - 204
Dimethenamid	67.6		P	64 - 115
Dimethomorph	182		P	12 - 219
Disulfoton	98.2		P	44 - 125
Dithiopyr	86.1		P	64 - 115
EPTC	52.8		P	28 - 86.0
Ethion	36.1		P	33 - 125
Ethoprop	90.5		P	64 - 116
Etridiazole	58.0		P	34 - 91.0
Fenamiphos	96.6		P	12 - 127
Fenbuconazole	86.6		P	59 - 151

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P419712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil	89.1		P	67 - 129
Fipronil Desulfinyl	85.6		P	65 - 127
Fipronil Sulfide	67.9		P	61 - 116
Fipronil Sulfone	80.1		P	55 - 117
Fluazifop-P-butyl	86.3		P	62 - 127
Fludioxonil	82.8		P	62 - 128
Flumioxazin	106		P	33 - 250
Flutolanil	82.4		P	56 - 127
Fluxapyroxad	60.7		P	45 - 128
Fonofos	84.1		P	62 - 111
Hexazinone	87.4		P	46 - 139
Imazalil	89.9		P	38 - 142
Iprodione	90.5		P	47 - 135
Loratadine	180		P	10 - 244
Malathion	104		P	61 - 139
Metalaxyl	87.2		P	10 - 119
Metolachlor	93.3		P	65 - 118
Metribuzin	107		P	51 - 250
Mevinphos	70.8		P	53 - 121
Molinate	75.7		P	42 - 96.0
Myclobutanil	81.4		P	55 - 128
Naled	77.9		P	10 - 98.0
Napropamide	65.8		P	49 - 121
Norflurazon	74.3		P	61 - 126
Octinoxate	88.9		P	30 - 159
Oxadiazon	72.9		P	59 - 116
Oxybenzone	83.1		P	61 - 139
Oxyfluorfen	113		P	64 - 137
Parathion Ethyl	99.6		P	70 - 112
Parathion Methyl	115		P	76 - 133
PBDE-47	67.3		P	50 - 150
PBDE-99	76.0		P	50 - 150
Pendimethalin	83.7		P	52 - 117
Phenytoin	11.3		P	10 - 199
Phorate	77.3		P	48 - 121
Prodiamine	59.2		P	26 - 142
Prometon	68.0		P	43 - 123
Prometryn	84.5		P	66 - 127
Pronamide	101		P	75 - 121
Propanil	86.3		P	45 - 150
Propargite	41.1		F	42 - 208
Propiconazole	75.7		P	60 - 125
Pyraflufen Ethyl	75.2		P	70 - 138
Pyridaben	96.0		P	35 - 245
Pyriproxyfen	77.5		P	30 - 149
Simazine	89.2		P	72 - 125
Stirophos	43.1		P	29 - 164
Sulfentrazone	36.8		P	21 - 139
Tebuconazole	31.7		P	10 - 115
Terbufos	109		P	60 - 123
Terbuthylazine	94.4		P	72 - 115
Thiobencarb	91.7		P	31 - 139

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P419712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tri-o-cresyl Phosphate	82.3		P	50 - 150
Triadimefon	78.5		P	65 - 116

Reference Method: SM 2320 B-2011
Batch ID: P419966

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Reference Method: SM 2320 B-2011
Batch ID: P420275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P419968

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

Reference Method: SM 4500-F- C-2011
Batch ID: P420214

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

Reference Method: SM 5310 B-2011
Batch ID: P419757

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P419672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356187	Calcium	99.3		P	80 - 120
2356187	Iron	106	109	P/P	80 - 120
2356187	Magnesium	107	112	P/P	80 - 120
2356187	Strontium	104	107	P/P	80 - 120
2356187	Tin	103	106	P/P	80 - 120
2356187	Vanadium	105	109	P/P	80 - 120
2356187	Zinc	105	109	P/P	80 - 120
2356240	Calcium	101		P	80 - 120
2356240	Iron	104		P	80 - 120
2356240	Magnesium	104		P	80 - 120
2356240	Strontium	102		P	80 - 120
2356240	Tin	102		P	80 - 120
2356240	Vanadium	104		P	80 - 120
2356240	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356187	Aluminum	98.5	98.3	P/P	80 - 120
2356187	Antimony	103	102	P/P	80 - 120
2356187	Arsenic	105	105	P/P	80 - 120
2356187	Beryllium	97.1	95.9	P/P	80 - 120
2356187	Cadmium	99.2	98.3	P/P	80 - 120
2356187	Chromium	100	100	P/P	80 - 120
2356187	Cobalt	97.5	98.1	P/P	80 - 120
2356187	Copper	101	101	P/P	80 - 120
2356187	Lead	92.7	92.9	P/P	80 - 120
2356187	Manganese	98.9	99.0	P/P	80 - 120
2356187	Molybdenum	101	101	P/P	80 - 120
2356187	Nickel	101	102	P/P	80 - 120
2356187	Selenium	102	99.5	P/P	80 - 120
2356187	Silver	83.0	83.4	P/P	80 - 120
2356240	Aluminum	99.2		P	80 - 120
2356240	Antimony	103		P	80 - 120
2356240	Arsenic	104		P	80 - 120
2356240	Beryllium	98.0		P	80 - 120
2356240	Cadmium	98.2		P	80 - 120
2356240	Chromium	102		P	80 - 120
2356240	Cobalt	95.8		P	80 - 120
2356240	Copper	99.1		P	80 - 120
2356240	Lead	97.9		P	80 - 120
2356240	Manganese	99.3		P	80 - 120
2356240	Molybdenum	101		P	80 - 120
2356240	Nickel	98.9		P	80 - 120
2356240	Selenium	99.7		P	80 - 120
2356240	Silver	84.2		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P419913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356878	Ammonia-N	97.6	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419805

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356438	Kjeldahl Nitrogen	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356748	Kjeldahl Nitrogen	93.9	93.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420066

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356749	NO2NO3-N	95.9	96.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356876	NO2NO3-N	98.5	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419835

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356749	Total-P	103	106	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P419712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356916	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	43.8	58.5	F/P	50 - 150
2356916	Acetochlor	90.5	99.8	P/P	65 - 124
2356916	Alachlor	81.8	91.4	P/P	61 - 121
2356916	Ametryn	67.8	76.4	P/P	52 - 216
2356916	Atrazine	89.2	103	P/P	68 - 133
2356916	Atrazine Desethyl	56.3	69.1	P/P	15 - 160
2356916	Avobenzene	61.9	77.1	P/P	59 - 206
2356916	Azinphos Methyl	105	115	P/P	40 - 292
2356916	Azoxystrobin	98.5	139	P/P	12 - 242
2356916	Bromacil	79.1	94.0	P/P	54 - 167
2356916	Butylate	34.7	41.0	P/P	14 - 94.0
2356916	Caffeine	84.1	76.5	P/P	10 - 226
2356916	Carbophenothion	76.6	76.2	P/P	49 - 122
2356916	Carfentrazone Ethyl	81.4	76.9	P/P	53 - 138
2356916	Chlorfenapyr	64.0	64.6	P/P	50 - 150
2356916	Chlorpyrifos Ethyl	71.7	67.7	P/P	52 - 122

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P419712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356916	Chlorpyrifos Methyl	72.2	81.0	P/P	66 - 117
2356916	Coumaphos	39.0	32.8	F/F	50 - 220
2356916	Cyanazine	74.2	77.1	P/P	43 - 245
2356916	Cyprodinil	73.1	69.9	P/P	50 - 150
2356916	Dechlorane Plus	54.4	65.7	P/P	50 - 150
2356916	Demeton	89.4	106	P/P	43 - 188
2356916	Diazinon	90.4	102	P/P	69 - 131
2356916	Difenoconazole	100	87.6	P/P	34 - 231
2356916	Dimethenamid	71.2	69.5	P/P	55 - 118
2356916	Dimethomorph	109	189	P/F	50 - 150
2356916	Disulfoton	77.7	84.3	P/P	38 - 141
2356916	Dithiopyr	62.2	70.6	P/P	42 - 116
2356916	EPTC	33.1	41.1	P/P	18 - 85.0
2356916	Ethion	76.7	36.3	P/P	10 - 131
2356916	Ethoprop	80.9	87.5	P/P	65 - 129
2356916	Etridiazole	50.6	61.6	P/P	50 - 150
2356916	Fenamiphos	79.7	78.4	P/P	31 - 137
2356916	Fenbuconazole	78.8	83.8	P/P	57 - 160
2356916	Fipronil	86.7	87.9	P/P	62 - 132
2356916	Fipronil Desulfinyl	74.8	75.7	P/P	57 - 131
2356916	Fipronil Sulfide	65.9	72.1	P/P	15 - 138
2356916	Fipronil Sulfone	74.5	75.5	P/P	21 - 134
2356916	Fluazifop-P-butyl	78.4	75.6	P/P	54 - 133
2356916	Fludioxonil	76.4	73.9	P/P	58 - 127
2356916	Flumioxazin	120	117	P/P	33 - 300
2356916	Flutolanil	73.9	69.0	P/P	42 - 130
2356916	Fluxapyroxad	68.9	62.3	P/P	23 - 141
2356916	Fonofos	71.0	74.0	P/P	58 - 119
2356916	Hexazinone	97.2	103	P/P	68 - 172
2356916	Imazalil	100	90.4	P/P	48 - 283
2356916	Iprodione	81.9	80.6	P/P	38 - 140
2356916	Loratadine	103	176	P/F	50 - 150
2356916	Malathion	84.0	88.5	P/P	40 - 137
2356916	Metalaxyl	75.1	75.9	P/P	21 - 129
2356916	Metolachlor	80.8	84.8	P/P	55 - 122
2356916	Metribuzin	86.8	105	P/P	38 - 187
2356916	Mevinphos	63.2	72.3	P/P	54 - 134
2356916	Molinate	60.4	64.6	P/P	41 - 97.0
2356916	Myclobutanil	82.3	74.3	P/P	56 - 125
2356916	Naled	92.6	91.4	P/P	10 - 108
2356916	Napropamide	67.9	54.1	P/P	50 - 150
2356916	Norflurazon	91.7	94.1	P/P	32 - 122
2356916	Octinoxate	63.7	92.0	P/P	25 - 150
2356916	Oxadiazon	73.3	69.7	P/P	40 - 119
2356916	Oxybenzone	61.7	75.4	P/P	59 - 147
2356916	Oxyfluorfen	111	104	P/P	61 - 153
2356916	Parathion Ethyl	84.6	94.8	P/P	59 - 130
2356916	Parathion Methyl	93.0	121	P/P	65 - 155
2356916	PBDE-47	56.4	70.3	P/P	50 - 150
2356916	PBDE-99	44.4	55.1	F/P	50 - 150
2356916	Pendimethalin	75.4	81.6	P/P	49 - 138
2356916	Phenytol	28.7	25.0	F/F	50 - 200

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P419712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356916	Phorate	76.1	70.2	P/P	54 - 161
2356916	Prodiamine	56.0	69.2	P/P	33 - 161
2356916	Prometon	77.4	81.1	P/P	48 - 140
2356916	Prometryn	67.8	68.7	P/P	55 - 134
2356916	Pronamide	95.1	98.7	P/P	66 - 137
2356916	Propanil	83.2	86.4	P/P	50 - 150
2356916	Propargite	59.2	45.2	P/F	50 - 200
2356916	Propiconazole	60.5	64.1	P/P	36 - 150
2356916	Pyraflufen Ethyl	58.2	60.6	P/P	50 - 150
2356916	Pyridaben	55.2	40.9	P/F	50 - 200
2356916	Pyriproxyfen	67.6	68.3	P/P	10 - 165
2356916	Simazine	82.6	95.1	P/P	57 - 145
2356916	Stirophos	51.1	31.4	P/F	50 - 150
2356916	Sulfentrazone	77.2	82.9	P/P	34 - 140
2356916	Tebuconazole	45.8	30.3	P/P	10 - 127
2356916	Terbufos	91.2	101	P/P	59 - 138
2356916	Terbutylazine	88.0	99.1	P/P	68 - 119
2356916	Thiobencarb	76.3	85.5	P/P	50 - 150
2356916	Tri-o-cresyl Phosphate	60.2	84.9	P/P	50 - 150
2356916	Triadimefon	73.4	65.2	P/P	50 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P419968

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356392	Fluoride	95.7	97.9	P/P	94 - 104

Reference Method: SM 4500-F- C-2011

Batch ID: P420214

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357377	Fluoride	105	106	F/F	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P419757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356759	Organic Carbon	95.6	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P419657

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356471	Turbidity	1.69	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P419672

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356187	Calcium	3.39	Spike	P	0 - 20
2356187	Iron	2.41	Spike	P	0 - 20
2356187	Magnesium	2.79	Spike	P	0 - 20
2356187	Strontium	3.24	Spike	P	0 - 20
2356187	Tin	2.15	Spike	P	0 - 20
2356187	Vanadium	3.39	Spike	P	0 - 20
2356187	Zinc	3.15	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419672

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356187	Aluminum	0.203	Spike	P	0 - 20
2356187	Antimony	1.19	Spike	P	0 - 20
2356187	Arsenic	0.743	Spike	P	0 - 20
2356187	Beryllium	1.23	Spike	P	0 - 20
2356187	Cadmium	0.860	Spike	P	0 - 20
2356187	Chromium	0.144	Spike	P	0 - 20
2356187	Cobalt	0.618	Spike	P	0 - 20
2356187	Copper	0.470	Spike	P	0 - 20
2356187	Lead	0.185	Spike	P	0 - 20
2356187	Manganese	0.124	Spike	P	0 - 20
2356187	Molybdenum	0.00894	Spike	P	0 - 20
2356187	Nickel	1.02	Spike	P	0 - 20
2356187	Selenium	2.86	Spike	P	0 - 20
2356187	Silver	0.396	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P419913

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356878	Ammonia-N	0.576	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P419805

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356438	Kjeldahl Nitrogen	0.156	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356748	Kjeldahl Nitrogen	0.663	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420066

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356749	NO2NO3-N	1.04	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356876	NO2NO3-N	0.456	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419835

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356749	Total-P	2.26	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P419712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356916	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	28.6	Spike	P	0 - 30
2356916	Acetochlor	9.70	Spike	P	0 - 27
2356916	Alachlor	11.1	Spike	P	0 - 27
2356916	Ametryn	6.32	Spike	P	0 - 34
2356916	Atrazine	11.2	Spike	P	0 - 41
2356916	Atrazine Desethyl	20.3	Spike	P	0 - 38
2356916	Avobenzone	21.8	Spike	P	0 - 30
2356916	Azinphos Methyl	9.67	Spike	P	0 - 62
2356916	Azoxystrobin	28.5	Spike	P	0 - 32
2356916	Bromacil	9.57	Spike	P	0 - 30
2356916	Butylate	16.8	Spike	P	0 - 59
2356916	Caffeine	9.14	Spike	P	0 - 60
2356916	Carbophenothion	0.494	Spike	P	0 - 25
2356916	Carfentrazone Ethyl	5.59	Spike	P	0 - 26
2356916	Chlorfenapyr	0.890	Spike	P	0 - 30
2356916	Chlorpyrifos Ethyl	5.83	Spike	P	0 - 27
2356916	Chlorpyrifos Methyl	11.4	Spike	P	0 - 26
2356916	Coumaphos	17.5	Spike	P	0 - 30
2356916	Cyanazine	3.82	Spike	P	0 - 58
2356916	Cyprodinil	4.42	Spike	P	0 - 30
2356916	Dechlorane Plus	18.7	Spike	P	0 - 30
2356916	Demeton	17.2	Spike	P	0 - 25
2356916	Diazinon	12.3	Spike	P	0 - 29

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P419712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356916	Difenoconazole	13.5	Spike	P	0 - 25
2356916	Dimethenamid	2.37	Spike	P	0 - 30
2356916	Dimethomorph	54.0	Spike	F	0 - 30
2356916	Disulfoton	8.07	Spike	P	0 - 33
2356916	Dithiopyr	11.5	Spike	P	0 - 22
2356916	EPTC	21.6	Spike	P	0 - 38
2356916	Ethion	71.5	Spike	P	0 - 79
2356916	Ethoprop	7.85	Spike	P	0 - 23
2356916	Etridiazole	19.5	Spike	P	0 - 30
2356916	Fenamiphos	1.63	Spike	P	0 - 58
2356916	Fenbuconazole	6.19	Spike	P	0 - 37
2356916	Fipronil	1.43	Spike	P	0 - 33
2356916	Fipronil Desulfinyl	1.27	Spike	P	0 - 26
2356916	Fipronil Sulfide	9.09	Spike	P	0 - 37
2356916	Fipronil Sulfone	1.34	Spike	P	0 - 50
2356916	Fluazifop-P-butyl	3.54	Spike	P	0 - 24
2356916	Fludioxonil	3.23	Spike	P	0 - 26
2356916	Flumioxazin	3.28	Spike	P	0 - 37
2356916	Flutolanil	6.72	Spike	P	0 - 26
2356916	Fluxapyroxad	10.1	Spike	P	0 - 34
2356916	Fonofos	4.12	Spike	P	0 - 27
2356916	Hexazinone	6.19	Spike	P	0 - 36
2356916	Imazalil	10.4	Spike	P	0 - 65
2356916	Iprodione	1.62	Spike	P	0 - 33
2356916	Loratadine	52.5	Spike	F	0 - 30
2356916	Malathion	5.23	Spike	P	0 - 44
2356916	Metalaxyl	0.904	Spike	P	0 - 38
2356916	Metolachlor	4.83	Spike	P	0 - 36
2356916	Metribuzin	18.7	Spike	P	0 - 63
2356916	Mevinphos	13.5	Spike	P	0 - 26
2356916	Molinate	6.61	Spike	P	0 - 40
2356916	Myclobutanil	10.2	Spike	P	0 - 21
2356916	Naled	1.29	Spike	P	0 - 26
2356916	Napropamide	22.7	Spike	P	0 - 30
2356916	Norflurazon	1.50	Spike	P	0 - 24
2356916	Octinoxate	36.4	Spike	F	0 - 30
2356916	Oxadiazon	5.03	Spike	P	0 - 27
2356916	Oxybenzone	20.0	Spike	P	0 - 30
2356916	Oxyfluorfen	6.13	Spike	P	0 - 24
2356916	Parathion Ethyl	11.4	Spike	P	0 - 28
2356916	Parathion Methyl	25.9	Spike	P	0 - 27
2356916	PBDE-47	21.9	Spike	P	0 - 30
2356916	PBDE-99	21.4	Spike	P	0 - 30
2356916	Pendimethalin	7.83	Spike	P	0 - 31
2356916	Phenytoin	13.9	Spike	P	0 - 30
2356916	Phorate	7.99	Spike	P	0 - 27
2356916	Prodiamine	21.0	Spike	P	0 - 52
2356916	Prometon	4.73	Spike	P	0 - 31
2356916	Prometryn	1.31	Spike	P	0 - 28
2356916	Pronamide	3.72	Spike	P	0 - 26
2356916	Propanil	3.74	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P419712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356916	Propargite	26.9	Spike	P	0 - 30
2356916	Propiconazole	5.81	Spike	P	0 - 31
2356916	Pyraflufen Ethyl	4.20	Spike	P	0 - 30
2356916	Pyridaben	29.7	Spike	P	0 - 30
2356916	Pyriproxyfen	0.962	Spike	P	0 - 50
2356916	Simazine	14.0	Spike	P	0 - 29
2356916	Stirophos	47.8	Spike	F	0 - 30
2356916	Sulfentrazone	7.10	Spike	P	0 - 33
2356916	Tebuconazole	40.7	Spike	P	0 - 44
2356916	Terbufos	10.4	Spike	P	0 - 29
2356916	Terbuthylazine	11.8	Spike	P	0 - 27
2356916	Thiobencarb	11.4	Spike	P	0 - 30
2356916	Tri-o-cresyl Phosphate	34.0	Spike	F	0 - 30
2356916	Triadimefon	11.8	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P419966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356392	Total Alkalinity	0.286	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P420275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357236	Total Alkalinity	1.79	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P419968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356392	Fluoride	1.47	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P420214

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357377	Fluoride	0.519	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356759	Organic Carbon	0.879	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2356792
Field Sample ID: G3SD0072

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	55.3	P	20 - 200
EPA 8270E	Simazine-d10	120	P	71 - 140
EPA 8270E	Terbufos-d10	100	P	62 - 131
EPA 8270E	Terphenyl-d14	80.7	P	52 - 141

Lab Sample ID: 2356793
Field Sample ID: G3SD0073

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	45.3	P	20 - 200
EPA 8270E	Simazine-d10	101	P	71 - 140
EPA 8270E	Terbufos-d10	99.3	P	62 - 131
EPA 8270E	Terphenyl-d14	79.6	P	52 - 141

Lab Sample ID: 2356794
Field Sample ID: G3SD0218

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	55.8	P	20 - 200
EPA 8270E	Simazine-d10	113	P	71 - 140
EPA 8270E	Terbufos-d10	89.6	P	62 - 131
EPA 8270E	Terphenyl-d14	88.7	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114754

Included Lab Sample IDs: 2356777, 2356778

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

Reference Method: SM 5310 B-2011

Run ID: A114799

Included Lab Sample IDs: 2356779, 2356780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.1	96.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114816

Included Lab Sample IDs: 2356791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.6	100	P/P	90 - 110
Antimony	98.0	96.9	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Beryllium	98.6	102	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Chromium	101	103	P/P	90 - 110
Cobalt	96.0	99.4	P/P	90 - 110
Copper	102	104	P/P	90 - 110
Manganese	98.7	103	P/P	90 - 110
Molybdenum	97.5	97.4	P/P	90 - 110
Nickel	99.6	103	P/P	90 - 110
Selenium	99.1	99.0	P/P	90 - 110
Silver	96.1	96.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114830

Included Lab Sample IDs: 2356791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	97.6	93.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114854

Included Lab Sample IDs: 2356779, 2356780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114856

Included Lab Sample IDs: 2356780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.8	99.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114861

Included Lab Sample IDs: 2356779, 2356780

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

Reference Method: SM 2320 B-2011

Run ID: A114876

Included Lab Sample IDs: 2356777

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	98.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A114876

Included Lab Sample IDs: 2356777

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114892

Included Lab Sample IDs: 2356779

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.3	96.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114923

Included Lab Sample IDs: 2356779, 2356780

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	98.0	P/P	90 - 110
NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A114926

Included Lab Sample IDs: 2356792, 2356793, 2356794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.8		P	80 - 120
Alachlor	97.8		P	80 - 120
Ametryn	91.4		P	80 - 120
Atrazine	95.1		P	80 - 120
Atrazine Desethyl	91.3		P	80 - 120
Azinphos Methyl	101		P	80 - 120
Azoxystrobin	97.4		P	80 - 120
Bromacil	94.0		P	80 - 120
Butylate	98.4		P	80 - 120
Caffeine	99.3		P	80 - 120
Carbophenothion	96.6		P	80 - 120
Carfentrazone Ethyl	96.9		P	80 - 120
Chlorfenapyr	92.1		P	80 - 120
Chlorpyrifos Ethyl	94.6		P	80 - 120
Chlorpyrifos Methyl	94.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A114926

Included Lab Sample IDs: 2356792, 2356793, 2356794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Coumaphos	89.4		P	80 - 120
Cyanazine	91.8		P	80 - 120
Cyprodinil	96.6		P	80 - 120
Demeton	96.8		P	80 - 120
Diazinon	97.5		P	80 - 120
Difenoconazole	93.3		P	80 - 120
Dimethenamid	95.9		P	80 - 120
Dimethomorph	98.5		P	80 - 120
Disulfoton	92.6		P	80 - 120
Dithiopyr	92.1		P	80 - 120
EPTC	99.3		P	80 - 120
Ethion	99.2		P	80 - 120
Ethoprop	96.7		P	80 - 120
Etridiazole	96.2		P	80 - 120
Fenamiphos	97.3		P	80 - 120
Fenbuconazole	92.1		P	80 - 120
Fipronil	97.4		P	80 - 120
Fipronil Desulfinyl	95.5		P	80 - 120
Fipronil Sulfide	98.4		P	80 - 120
Fipronil Sulfone	93.9		P	80 - 120
Fluazifop-P-butyl	97.2		P	80 - 120
Fludioxonil	98.0		P	80 - 120
Flumioxazin	92.0		P	80 - 120
Flutolanil	97.2		P	80 - 120
Fluxapyroxad	93.4		P	80 - 120
Fonofos	97.5		P	80 - 120
Hexazinone	97.6		P	80 - 120
Imazalil	95.4		P	80 - 120
Iprodione	94.4		P	80 - 120
Loratadine	97.2		P	80 - 120
Malathion	94.3		P	80 - 120
Metaxyl	95.7		P	80 - 120
Metolachlor	99.0		P	80 - 120
Metribuzin	98.9		P	80 - 120
Mevinphos	90.0		P	80 - 120
Molinate	99.4		P	80 - 120
Myclobutanil	97.3		P	80 - 120
Naled	95.6		P	80 - 120
Napropamide	98.1		P	80 - 120
Norflurazon	91.1		P	80 - 120
Oxadiazon	96.7		P	80 - 120
Oxyfluorfen	99.2		P	80 - 120
Parathion Ethyl	99.0		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	104		P	80 - 120
Phenytoin	93.8		P	80 - 120
Phorate	97.7		P	80 - 120
Prodiamine	97.2		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	97.9		P	80 - 120
Pronamide	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A114926

Included Lab Sample IDs: 2356792, 2356793, 2356794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Propanil	102		P	80 - 120
Propargite	96.2		P	80 - 120
Propiconazole	93.6		P	80 - 120
Pyraflufen Ethyl	93.3		P	80 - 120
Pyridaben	96.0		P	80 - 120
Pyriproxyfen	97.9		P	80 - 120
Simazine	97.1		P	80 - 120
Stirophos	94.2		P	80 - 120
Sulfentrazone	86.6		P	80 - 120
Tebuconazole	96.2		P	80 - 120
Terbufos	98.8		P	80 - 120
Terbuthylazine	101		P	80 - 120
Thiobencarb	102		P	80 - 120
Triadimefon	95.4		P	80 - 120

Reference Method: SM 4500-F- C-2011

Run ID: A114980

Included Lab Sample IDs: 2356778

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

Reference Method: SM 2320 B-2011

Run ID: A115007

Included Lab Sample IDs: 2356778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.7	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A115017

Included Lab Sample IDs: 2356791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	103	P/P	90 - 110
Iron	102	103	P/P	90 - 110
Magnesium	100	102	P/P	90 - 110
Strontium	101	99.4	P/P	90 - 110
Tin	98.8	97.2	P/P	90 - 110
Vanadium	101	98.3	P/P	90 - 110
Zinc	98.9	97.0	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A115064

Included Lab Sample IDs: 2356792, 2356793, 2356794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	100		P	80 - 120
Avobenzone	98.0		P	80 - 120
Dechlorane Plus	101		P	80 - 120
Octinoxate	97.4		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A115064

Included Lab Sample IDs: 2356792, 2356793, 2356794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxybenzone	96.6		P	80 - 120
PBDE-47	97.0		P	80 - 120
PBDE-99	101		P	80 - 120
Tri-o-cresyl Phosphate	98.1		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity	101					1.69	
EPA 200.7 Rev. 4.4	Calcium	99.9	99.3	101				3.39
	Iron	105	106	109	104			2.41
	Magnesium	105	107	112	104			2.79
	Strontium	104	104	107	102			3.24
	Tin	102	103	106	102			2.15
	Vanadium	103	105	109	104			3.39
	Zinc	99.3	105	109	103			3.15
EPA 200.8 Rev. 5.4	Aluminum	103	98.5	98.3	99.2			0.203
	Antimony	104	103	102	103			1.19
	Arsenic	107	105	105	104			0.743
	Beryllium	98.6	97.1	95.9	98.0			1.23
	Cadmium	102	99.2	98.3	98.2			0.860
	Chromium	102	100	100	102			0.144
	Cobalt	101	98.1	95.8	97.5			0.618
	Copper	104	101	101	99.1			0.470
	Lead	94.8	97.9	92.7	92.9			0.185
	Manganese	101	98.9	99.0	99.3			0.124
	Molybdenum	102	101	101	101			0.0089
	Nickel	104	101	102	98.9			1.02
	Selenium	102	102	99.5	99.7			2.86
	Silver	87.4	83.0	83.4	84.2			0.396
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	97.6	98.6				0.576
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	103	103				0.156
	Kjeldahl Nitrogen	99.9	93.9	93.2				0.663
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	95.9	96.9				1.04
	NO2NO3-N	99.5	98.5	99.0				0.456
EPA 365.1 Rev. 2.0	Total-P	106	103	106				2.26
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	80.3	43.8	58.5				28.6
	Acetochlor	97.5	90.5	99.8				9.70
	Alachlor	93.5	81.8	91.4				11.1
	Ametryn	83.3	67.8	76.4				6.32
	Atrazine	98.2	89.2	103				11.2
	Atrazine Desethyl	59.7	56.3	69.1				20.3
	Avobenzone	76.0	61.9	77.1				21.8
	Azinphos Methyl	138	105	115				9.67
	Azoxystrobin	136	98.5	139				28.5
	Bromacil	68.4	79.1	94.0				9.57
	Butylate	58.5	34.7	41.0				16.8
	Caffeine	78.0	84.1	76.5				9.14
	Carbophenothion	90.3	76.6	76.2				0.494
	Carfentrazone Ethyl	95.2	81.4	76.9				5.59
	Chlorfenapyr	81.1	64.0	64.6				0.890
	Chlorpyrifos Ethyl	91.4	71.7	67.7				5.83
	Chlorpyrifos Methyl	98.4	72.2	81.0				11.4
	Coumaphos	82.3	39.0	32.8				17.5
	Cyanazine	87.6	74.2	77.1				3.82
	Cyprodinil	92.5	73.1	69.9				4.42
	Dechlorane Plus	95.1	54.4	65.7				18.7
	Demeton	92.2	89.4	106				17.2
	Diazinon	98.1	90.4	102				12.3
	Difenoconazole	88.1	100	87.6				13.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Dimethenamid	67.6	71.2	69.5		2.37
	Dimethomorph	182	109	189		54.0
	Disulfoton	98.2	77.7	84.3		8.07
	Dithiopyr	86.1	62.2	70.6		11.5
	EPTC	52.8	33.1	41.1		21.6
	Ethion	36.1	76.7	36.3		71.5
	Ethoprop	90.5	80.9	87.5		7.85
	Etridiazole	58.0	50.6	61.6		19.5
	Fenamiphos	96.6	79.7	78.4		1.63
	Fenbuconazole	86.6	78.8	83.8		6.19
	Fipronil	89.1	86.7	87.9		1.43
	Fipronil Desulfinyl	85.6	74.8	75.7		1.27
	Fipronil Sulfide	67.9	65.9	72.1		9.09
	Fipronil Sulfone	80.1	74.5	75.5		1.34
	Fluazifop-P-butyl	86.3	78.4	75.6		3.54
	Fludioxonil	82.8	76.4	73.9		3.23
	Flumioxazin	106	120	117		3.28
	Flutolanil	82.4	73.9	69.0		6.72
	Fluxapyroxad	60.7	68.9	62.3		10.1
	Fonofos	84.1	71.0	74.0		4.12
	Hexazinone	87.4	97.2	103		6.19
	Imazalil	89.9	100	90.4		10.4
	Iprodione	90.5	81.9	80.6		1.62
	Loratadine	180	103	176		52.5
	Malathion	104	84.0	88.5		5.23
	Metaxyl	87.2	75.1	75.9		0.904
	Metolachlor	93.3	80.8	84.8		4.83
	Metribuzin	107	86.8	105		18.7
	Mevinphos	70.8	63.2	72.3		13.5
	Molinate	75.7	64.6	60.4		6.61
	Myclobutanil	81.4	82.3	74.3		10.2
	Naled	77.9	92.6	91.4		1.29
	Napropamide	65.8	67.9	54.1		22.7
	Norflurazon	74.3	91.7	94.1		1.50
	Octinoxate	88.9	63.7	92.0		36.4
	Oxadiazon	72.9	73.3	69.7		5.03
	Oxybenzone	83.1	61.7	75.4		20.0
	Oxyfluorfen	113	111	104		6.13
	Parathion Ethyl	99.6	84.6	94.8		11.4
	Parathion Methyl	115	93.0	121		25.9
	PBDE-47	67.3	56.4	70.3		21.9
	PBDE-99	76.0	44.4	55.1		21.4
	Pendimethalin	83.7	75.4	81.6		7.83
	Phenytoin	11.3	28.7	25.0		13.9
	Phorate	77.3	76.1	70.2		7.99
	Prodiamine	59.2	56.0	69.2		21.0
	Prometon	68.0	77.4	81.1		4.73
	Prometryn	84.5	67.8	68.7		1.31
	Pronamide	101	95.1	98.7		3.72
	Propanil	86.3	83.2	86.4		3.74
	Propargite	41.1	59.2	45.2		26.9
	Propiconazole	75.7	60.5	64.1		5.81
	Pyraflufen Ethyl	75.2	58.2	60.6		4.20
	Pyridaben	96.0	55.2	40.9		29.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8270E	Pyriproxyfen	77.5	67.6	68.3		0.962
	Simazine	89.2	82.6	95.1		14.0
	Stirophos	43.1	51.1	31.4		47.8
	Sulfentrazone	36.8	77.2	82.9		7.10
	Tebuconazole	31.7	45.8	30.3		40.7
	Terbufos	109	91.2	101		10.4
	Terbutylazine	94.4	88.0	99.1		11.8
	Thiobencarb	91.7	76.3	85.5		11.4
	Tri-o-cresyl Phosphate	82.3	60.2	84.9		34.0
	Triadimefon	78.5	73.4	65.2		11.8
SM 2320 B-2011	Total Alkalinity	103				0.286
	Total Alkalinity	98.5				1.79
SM 4500-F- C-2011	Fluoride	100	95.7	97.9		1.47
	Fluoride	99.9	105	106		0.519
SM 5310 B-2011	Organic Carbon	95.6	95.6	97.0		0.879

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2356777, 2356778
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2356791
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2356791
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2356779, 2356780
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2356779, 2356780
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2356779, 2356780
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2356779, 2356780
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2356792, 2356793, 2356794
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2356792, 2356793, 2356794
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2356777, 2356778
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2356777, 2356778
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2356777, 2356778
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2356779, 2356780

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	09/15/2022			09/15/2022 14:20	Chandler E Cox	2356777
	09/15/2022			09/15/2022 14:21	Chandler E Cox	2356778
EPA 200.7 Rev. 4.4	09/15/2022	09/16/2022 09:15	Megan Whitefoot	09/28/2022 17:26	Betina Topolski	2356791
	09/15/2022	09/16/2022 09:15	Megan Whitefoot	09/28/2022 17:34	Betina Topolski	2356791
EPA 200.8 Rev. 5.4	09/15/2022	09/16/2022 09:15	Megan Whitefoot	09/19/2022 19:48	Emily M Philpot	2356791
	09/15/2022	09/16/2022 09:15	Megan Whitefoot	09/20/2022 14:35	Alexander Thompson	2356791
EPA 350.1 Rev. 2.0	09/15/2022			09/21/2022 12:44	Ping Hua	2356779
	09/15/2022			09/21/2022 12:46	Ping Hua	2356780
EPA 351.2 Rev. 2.0	09/15/2022	09/20/2022 11:51	Alexandra J Mattheus	09/21/2022 10:46	Alexandra J Mattheus	2356780
	09/15/2022	09/21/2022 13:07	Samantha L Bates	09/22/2022 11:35	Samantha L Bates	2356779
EPA 353.2 Rev. 2.0	09/15/2022			09/23/2022 17:02	Judith K. Clark	2356779
	09/15/2022			09/23/2022 17:16	Judith K. Clark	2356780
EPA 365.1 Rev. 2.0	09/15/2022	09/21/2022 08:40	Adam P Silver	09/21/2022 14:30	Simonne.V. Calhoun	2356779
	09/15/2022	09/21/2022 08:40	Adam P Silver	09/21/2022 14:31	Simonne.V. Calhoun	2356780
EPA 8270E	09/15/2022	09/19/2022 08:00	Fe-Val Siddell	09/22/2022 17:19	Michael Poppell	2356792
	09/15/2022	09/19/2022 08:00	Fe-Val Siddell	09/22/2022 17:46	Michael Poppell	2356793
	09/15/2022	09/19/2022 08:00	Fe-Val Siddell	09/22/2022 18:12	Michael Poppell	2356794
	09/15/2022	09/19/2022 08:00	Fe-Val Siddell	09/29/2022 19:17	Lipi Saha	2356792
	09/15/2022	09/19/2022 08:00	Fe-Val Siddell	09/29/2022 19:37	Lipi Saha	2356793
	09/15/2022	09/19/2022 08:00	Fe-Val Siddell	09/29/2022 19:56	Lipi Saha	2356794
SM 2320 B-2011	09/15/2022			09/22/2022 01:30	Dale L. Simmons	2356777
	09/15/2022			09/28/2022 18:03	Adam P Silver	2356778
SM 2540 D-2011	09/15/2022			09/16/2022 15:56	Yijie Li	2356777, 2356778
SM 4500-F- C-2011	09/15/2022			09/21/2022 23:29	Dale L. Simmons	2356777
	09/15/2022			09/27/2022 23:39	Adam P Silver	2356778
SM 5310 B-2011	09/15/2022			09/17/2022 02:09	Khloe J Berg	2356779
	09/15/2022			09/17/2022 02:24	Khloe J Berg	2356780