

Chemical Analysis Report

NE-DIST-2022-04-01-01

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

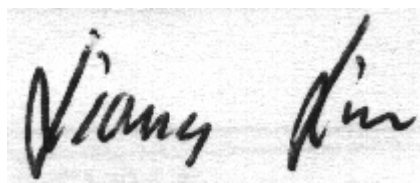
Event Description: **St.Augustine**
Request ID: **RQ-2022-03-28-15**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 28-APR-2022 13:26

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: Oyster CR @ Dixie Hwy

Collection Date/Time: 03/31/2022 10:30

Field ID: 27010056

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316140	EPA 180.1 Rev. 2.0	Turbidity	6.6		NTU	P411879	
	SM 2320 B-2011	Total Alkalinity	159		mg CaCO3/L	P412137	
	SM 2540 D-2011	TSS	6	I	mg/L	P412023	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P412140	
2316141	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P412083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P411916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.080		mg N/L	P411951	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P411942	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P412109	

Ref. Method and Comment:

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

Sample Location: San Sebastian River at Shipyards

Collection Date/Time: 03/31/2022 11:45

Field ID: G5NE0603

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316134	EPA 180.1 Rev. 2.0	Turbidity	11	A	NTU	P411879	
	SM 2320 B-2011	Total Alkalinity	115		mg CaCO3/L	P412056	
	SM 2540 D-2011	TSS	22		mg/L	P412023	
	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P412058	
2316137	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P411977	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P411916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P411951	
	EPA 365.1 Rev. 2.0	Total-P	0.070		mg P/L	P411942	
	SM 5310 B-2011	Organic Carbon	6.1		mg C/L	P412109	
2316162	EPA 200.7 Rev. 4.4	Calcium	370		mg/L	P412052	
		Iron	340	I	ug/L	P412052	
		Magnesium	1.20E+03		mg/L	P412052	
		Strontium	6.78E+03		ug/L	P412052	
	EPA 200.8 Rev. 5.4	Tin	150	U	ug/L	P412052	
		Vanadium	8.0	U	ug/L	P412052	
		Zinc	20	U	ug/L	P412052	
		Aluminum	237		ug/L	P412052	
		Antimony	0.20	U	ug/L	P412052	
		Arsenic	2.68		ug/L	P412052	
		Beryllium	0.045	I	ug/L	P412052	
		Cadmium	0.080	U	ug/L	P412052	
		Chromium	1.6	U	ug/L	P412052	
		Cobalt	0.21	I	ug/L	P412052	
		Copper	1.6	U	ug/L	P412052	
		Lead	2.0	U	ug/L	P412052	
		Manganese	19.8		ug/L	P412052	
		Molybdenum	10.9		ug/L	P412052	
		Nickel	2.0	U	ug/L	P412052	
		Selenium	0.80	U	ug/L	P412052	
		Silver	0.040	U	ug/L	P412052	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium and strontium are unavailable because of high analyte concentration in the QC sample. Precision data and spike recoveries for tin are unavailable because sample matrix interference necessitated a high dilution.

Sample Location: San Sebastian at Marina North of SR312

Collection Date/Time: 03/31/2022 11:05

Field ID: G5NE0604

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316135	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P411879	
	SM 2320 B-2011	Total Alkalinity	117		mg CaCO3/L	P412056	
	SM 2540 D-2011	TSS	14		mg/L	P412023	
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P412058	
2316138	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P412083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33	I	mg N/L	P411916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P411951	
	EPA 365.1 Rev. 2.0	Total-P	0.048		mg P/L	P411942	
	SM 5310 B-2011	Organic Carbon	4.7		mg C/L	P412109	
2316163	EPA 200.7 Rev. 4.4	Calcium	384		mg/L	P412052	
		Iron	160	I	ug/L	P412052	
		Magnesium	1.23E+03		mg/L	P412052	
		Strontium	7.06E+03		ug/L	P412052	
		Tin	150	U	ug/L	P412052	
		Vanadium	8.0	U	ug/L	P412052	
		Zinc	20	U	ug/L	P412052	
	EPA 200.8 Rev. 5.4	Aluminum	168		ug/L	P412052	
		Antimony	0.20	U	ug/L	P412052	
		Arsenic	2.49		ug/L	P412052	
		Beryllium	0.040	U	ug/L	P412052	
		Cadmium	0.080	U	ug/L	P412052	
		Chromium	1.6	U	ug/L	P412052	
		Cobalt	0.24	I	ug/L	P412052	
		Copper	1.6	U	ug/L	P412052	
		Lead	2.0	U	ug/L	P412052	
		Manganese	13.8		ug/L	P412052	
		Molybdenum	11.7		ug/L	P412052	
		Nickel	2.0	U	ug/L	P412052	
		Selenium	0.80	U	ug/L	P412052	
		Silver	0.040	U	ug/L	P412052	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium and strontium are unavailable because of high analyte concentration in the QC sample. Precision data and spike recoveries for tin are unavailable because sample matrix interference necessitated a high dilution.

Sample Location: Mill Creek at Powerline Bridge

Collection Date/Time: 03/31/2022 13:30

Field ID: G2NE1216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316158	EPA 8321B	Aldicarb	0.020	U	ug/L	P411857	
		Aldicarb Sulfone	0.0020	U	ug/L	P411857	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P411857	
		Carbaryl	0.0020	U	ug/L	P411857	
		Carbofuran	0.0020	U	ug/L	P411857	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P411857	
		Methiocarb	0.0020	U	ug/L	P411857	
		Methomyl	0.0020	U	ug/L	P411857	
		Oxamyl	0.0020	U	ug/L	P411857	
		Propoxur	0.0020	U	ug/L	P411857	
2316159		2,4-D	0.032		ug/L	P411856	
		Acesulfame K	0.10	U	ug/L	P411836	
		2,4,5-T	0.0040	U	ug/L	P411856	
		AMPA	0.79		ug/L	P411836	
		Acetaminophen	0.0080	U	ug/L	P411856	
		Acetamiprid	0.0020	U	ug/L	P411856	
		Endothall	0.25	U	ug/L	P411836	
		Glufosinate	0.10	U	ug/L	P411836	
		Glyphosate	0.72		ug/L	P411836	
		Afidopyropen	0.0020	U	ug/L	P411856	
		Bentazon	0.099		ug/L	P411856	
		Sucralose	11		ug/L	P411836	
		Benzovindiflupyr	0.0020	U	ug/L	P411856	
		Carbamazepine	0.012		ug/L	P411856	
		Clothianidin	0.0079	I	ug/L	P411856	
		Dinotefuran	0.0063	I	ug/L	P411856	
		Diuron	0.0079	I	ug/L	P411856	
		Fenuron	0.016	U	ug/L	P411856	
		Fluridone	0.17		ug/L	P411856	
		Imazapyr	0.12		ug/L	P411856	
		Hydrocodone	0.0020	U	ug/L	P411856	
		Ibuprofen	0.020	U	ug/L	P411856	
		Imidacloprid	0.028		ug/L	P411856	
		Linuron	0.0040	U	ug/L	P411856	
		Mandestrobin	0.0020	U	ug/L	P411856	
		MCPP	0.0020	U	ug/L	P411856	
		Naproxen	0.0080	U	ug/L	P411856	
		Primidone	0.056		ug/L	P411856	RPD
		Pyraclostrobin	0.0020	U	ug/L	P411856	
		Silvex	0.0040	U	ug/L	P411856	
		Thiamethoxam	0.0020	U	ug/L	P411856	
		Tolfenpyrad	0.0020	U	ug/L	P411856	
		Triclopyr	0.0040	U	ug/L	P411856	
2316160	EPA 8270E	Aldrin	0.67	U	ng/L	P411882	

Field ID: G2NE1216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316160	EPA 8270E	Alpha-BHC	0.10	U	ng/L	P411882	
		Alpha-Chlordane	0.21	U	ng/L	P411882	
		Beta-BHC	0.10	U	ng/L	P411882	MS
		Beta-Cyfluthrin**	1.3	U	ng/L	P411882	
		Bifenthrin**	0.51	U	ng/L	P411882	
		Chlorothalonil	1.3	I	ng/L	P411882	MS
		Cis-Nonachlor**	0.21	U	ng/L	P411882	
		Cypermethrin	1.5	U	ng/L	P411882	
		Dacthal**	0.15	U	ng/L	P411882	
		DDD-p,p'	0.26	U	ng/L	P411882	
		DDE-p,p'	0.21	U	ng/L	P411882	
		DDT-p,p'	0.26	U	ng/L	P411882	
		Delta-BHC	0.41	U	ng/L	P411882	MS
		Deltamethrin**	1.3	U	ng/L	P411882	RPD
		Dichlobenil**	0.26	U	ng/L	P411882	
		Dicofol	1.3	U	ng/L	P411882	
		Dieldrin	0.41	U	ng/L	P411882	
		Endosulfan I	0.41	U	ng/L	P411882	
		Endosulfan II	0.41	U	ng/L	P411882	
		Endosulfan Sulfate	0.31	U	ng/L	P411882	
		Endrin	0.41	U	ng/L	P411882	
		Endrin Aldehyde	0.77	U	ng/L	P411882	
		Endrin Ketone	0.41	U	ng/L	P411882	
		Esfenvalerate**	0.77	U	ng/L	P411882	
		Ethalfuralin**	0.15	U	ng/L	P411882	
		Fenpropathrin**	0.26	U	ng/L	P411882	
		Gamma-BHC	0.13	U	ng/L	P411882	
		Gamma-Chlordane	0.21	U	ng/L	P411882	
		Heptachlor	0.21	U	ng/L	P411882	
		Heptachlor Epoxide	0.26	U	ng/L	P411882	
		Hexachlorobenzene**	1.0	U	ng/L	P411882	
		Kepone**	5.1	U	ng/L	P411882	
		Lambda-Cyhalothrin**	0.77	U	ng/L	P411882	
		Methoprene**	0.77	U	ng/L	P411882	
		Methoxychlor	0.31	U	ng/L	P411882	
		MGK-264**	0.21	U	ng/L	P411882	
		Mirex	0.72	U	ng/L	P411882	
		Oxychlordane**	0.31	U	ng/L	P411882	
		Permethrin	1.6	U	ng/L	P411882	
		Phenothrin**	0.92	U	ng/L	P411882	
		Piperonyl Butoxide**	0.20	I	ng/L	P411882	MS
		Prallethrin**	2.1	U	ng/L	P411882	
		Tau-Fluvalinate**	0.26	U	ng/L	P411882	
		Tetramethrin**	0.77	U	ng/L	P411882	
		Trans-Nonachlor**	0.21	U	ng/L	P411882	

Field ID: G2NE1216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316160	EPA 8270E	Triclosan Methyl**	0.15	U	ng/L	P411882	
		Trifluralin	0.21	U	ng/L	P411882	
	EPA 8276	Chlordane	2.6	U	ng/L	P411882	
		Toxaphene	15	U	ng/L	P411882	
2316161	EPA 8270E	Acetochlor	0.26	U	ng/L	P411884	
		Alachlor	0.26	U	ng/L	P411884	
		Ametryn	0.63	U	ng/L	P411884	
		Atrazine	260		ng/L	P411884	
		Atrazine Desethyl	21		ng/L	P411884	
		Azinphos Methyl	2.1	U	ng/L	P411884	
		Azoxystrobin**	6.2		ng/L	P411884	
		Bromacil	0.52	U	ng/L	P411884	
		Butylate	0.42	U	ng/L	P411884	
		Caffeine**	43		ng/L	P411884	
		Carbophenothion	0.21	U	ng/L	P411884	
		Carfentrazone Ethyl**	0.10	U	ng/L	P411884	
		Chlorfenapyr**	0.18	U	ng/L	P411884	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P411884	
		Chlorpyrifos Methyl	0.052	U	ng/L	P411884	
		Coumaphos**	0.52	U	ng/L	P411884	
		Cyanazine	3.4	U	ng/L	P411884	
		Cyprodinil**	0.10	U	ng/L	P411884	
		Demeton	1.6	U	ng/L	P411884	
		Diazinon	0.13	U	ng/L	P411884	
		Difenoconazole**	0.63	U	ng/L	P411884	
		Dimethenamid**	0.10	U	ng/L	P411884	
		Dimethomorph**	0.18	U	ng/L	P411884	MS
		Disulfoton	0.52	U	ng/L	P411884	
		Dithiopyr**	0.55	I	ng/L	P411884	
		EPTC	1.3	U	ng/L	P411884	
		Ethion	0.16	U	ng/L	P411884	
		Ethoprop	0.10	U	ng/L	P411884	
		Etridiazole**	0.16	U	ng/L	P411884	
		Fenamiphos	0.52	U	ng/L	P411884	
		Fenbuconazole**	0.13	U	ng/L	P411884	
		Fipronil	0.84	I	ng/L	P411884	
		Fipronil Desulfinyl**	3.3		ng/L	P411884	
		Fipronil Sulfide	1.7		ng/L	P411884	
		Fipronil Sulfone	4.5		ng/L	P411884	
		Fluazifop-P-butyl**	0.10	U	ng/L	P411884	
		Fludioxonil**	0.13	U	ng/L	P411884	
		Flumioxazin**	1.8	U	ng/L	P411884	
		Flutolanil**	0.20	I	ng/L	P411884	
		Fluxapyroxad**	0.93		ng/L	P411884	
		Fonofos	0.21	U	ng/L	P411884	

Field ID: G2NE1216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316161	EPA 8270E	Hexazinone	0.52	U	ng/L	P411884	
		Imazalil**	0.79	U	ng/L	P411884	
		Iprodione**	0.91	I	ng/L	P411884	
		Loratadine**	0.10	U	ng/L	P411884	MS
		Malathion	0.37	U	ng/L	P411884	
		Metalaxyl	0.79	U	ng/L	P411884	
		Metolachlor	7.4		ng/L	P411884	
		Metribuzin	2.6	U	ng/L	P411884	
		Mevinphos	1.1	U	ng/L	P411884	
		Molinate	0.31	U	ng/L	P411884	
		Myclobutanil**	3.3		ng/L	P411884	
		Naled**	1.6	U	ng/L	P411884	
		Napropamide**	0.42	U	ng/L	P411884	
		Norflurazon	0.52	U	ng/L	P411884	
		Oxadiazon	7.8	Q	ng/L	P412269	
		Oxyfluorfen**	0.16	U	ng/L	P411884	
		Parathion Ethyl	0.26	U	ng/L	P411884	
		Parathion Methyl	0.58	U	ng/L	P411884	
		Pendimethalin	1.0	U	ng/L	P411884	
		Phenytoin**	3.7	UJ	ng/L	P411884	LCS, MS
		Phorate	0.55	U	ng/L	P411884	
		Prodiamine**	0.61	I	ng/L	P411884	RPD
		Prometon	0.94	U	ng/L	P411884	
		Prometryn	0.21	U	ng/L	P411884	
		Pronamide**	0.16	U	ng/L	P411884	
		Propanil**	0.13	U	ng/L	P411884	
		Propargite**	1.6	U	ng/L	P411884	
		Propiconazole**	4.9		ng/L	P411884	
		Pyraflufen Ethyl**	0.26	U	ng/L	P411884	
		Pyridaben**	0.47	U	ng/L	P411884	
		Pyriproxyfen**	0.13	U	ng/L	P411884	
		Simazine	48		ng/L	P411884	
		Stirophos**	0.13	U	ng/L	P411884	MS
		Sulfentrazone**	25		ng/L	P411884	
		Tebuconazole**	12		ng/L	P411884	
		Terbufos	0.10	U	ng/L	P411884	
		Terbuthylazine	0.45	U	ng/L	P411884	
		Thiobencarb**	0.63	U	ng/L	P411884	
		Triadimefon**	0.26	U	ng/L	P411884	
2316165	EPA 200.7 Rev. 4.4	Calcium	40.8		mg/L	P412008	
		Iron	450		ug/L	P412008	
		Magnesium	11.2		mg/L	P412008	
		Potassium	4.3		mg/L	P412008	
		Sodium	40.5		mg/L	P412008	
		Strontium	794		ug/L	P412008	

Field ID: G2NE1216

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316165	EPA 200.7 Rev. 4.4	Tin	3.0	U	ug/L	P412008	
		Titanium	23.7		ug/L	P412008	
		Vanadium	2.0	U	ug/L	P412008	
		Zinc	5.0	U	ug/L	P412008	
	EPA 200.8 Rev. 5.4	Aluminum	233		ug/L	P412008	
		Antimony	0.11	I	ug/L	P412008	
		Arsenic	0.77		ug/L	P412008	
		Barium	22.3		ug/L	P412008	
		Beryllium	0.017	I	ug/L	P412008	
		Boron**	57.4		ug/L	P412008	
		Cadmium	0.020	U	ug/L	P412008	
		Chromium	0.49	I	ug/L	P412008	
		Cobalt	0.104		ug/L	P412008	
		Copper	4.24		ug/L	P412008	
		Lead	0.28	I	ug/L	P412008	
		Manganese	21.9		ug/L	P412008	
		Molybdenum	0.32	I	ug/L	P412008	
		Nickel	0.50	U	ug/L	P412008	
		Selenium	0.20	U	ug/L	P412008	
		Silver	0.010	U	ug/L	P412008	
		Thallium	0.10	U	ug/L	P412008	
	SM 2340 B-2011	Hardness	148		mg/L	P412008	

Ref. Method and Comment:

EPA 8270E: Sample expired for preparation for oxadiazon due to need for re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: San Sebastian River @ Hidden Harbor Marina Collection Date/Time: 03/31/2022 12:10

Field ID: 27010088

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2316136	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P411879	
	SM 2320 B-2011	Total Alkalinity	117		mg CaCO3/L	P412056	
	SM 2540 D-2011	TSS	28		mg/L	P412023	
	SM 4500-F- C-2011	Fluoride	0.95		mg F/L	P412058	
2316139	EPA 350.1 Rev. 2.0	Ammonia-N	0.059		mg N/L	P412083	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P411916	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.044		mg N/L	P411951	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P411942	
	SM 5310 B-2011	Organic Carbon	8.2		mg C/L	P412109	
2316164	EPA 200.7 Rev. 4.4	Calcium	338		mg/L	P412052	
		Iron	390	I	ug/L	P412052	
		Magnesium	1.07E+03		mg/L	P412052	
		Strontium	6.04E+03		ug/L	P412052	
		Tin	150	U	ug/L	P412052	
		Vanadium	8.0	U	ug/L	P412052	
		Zinc	20	U	ug/L	P412052	
	EPA 200.8 Rev. 5.4	Aluminum	265		ug/L	P412052	
		Antimony	0.20	U	ug/L	P412052	
		Arsenic	2.76		ug/L	P412052	
		Beryllium	0.048	I	ug/L	P412052	
		Cadmium	0.080	U	ug/L	P412052	
		Chromium	1.6	U	ug/L	P412052	
		Cobalt	0.33		ug/L	P412052	
		Copper	2.4	I	ug/L	P412052	
		Lead	0.99	I	ug/L	P412052	
		Manganese	28.1		ug/L	P412052	
		Molybdenum	9.8		ug/L	P412052	
		Nickel	2.0	U	ug/L	P412052	
		Selenium	0.80	U	ug/L	P412052	
		Silver	0.040	U	ug/L	P412052	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium and strontium are unavailable because of high analyte concentration in the QC sample. Precision data and spike recoveries for tin are unavailable because sample matrix interference necessitated a high dilution.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411879

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412008

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412052

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: P412008

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	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
Thallium	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412052

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: P411977

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412083

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411916

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411951

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411942

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

Reference Method: EPA 8270E
Batch ID: P411882

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P411882

Component	Result	Code	Units
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P411882

Component	Result	Code	Units
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8270E

Batch ID: P411884

Component	Result	Code	Units
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P411884

Component	Result	Code	Units
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
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
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	U	ng/L
Dithiopyr	0.18	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P411884

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P411884

Component	Result	Code	Units
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
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiatone	0.18	U	ng/L
Prodiatone	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Stirophos	0.12	U	ng/L
Stirophos	0.12	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P412269

Component	Result	Code	Units
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L

Reference Method: EPA 8276
Batch ID: P411882

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: P411836

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P411856

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P411856

Component	Result	Code	Units
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P411857

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P412056

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

Reference Method: SM 2320 B-2011
Batch ID: P412137

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

Reference Method: SM 2540 D-2011
Batch ID: P412023

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412058

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412109

Component	Result	Code	Units
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Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P412109

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: P411879

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.9		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412008

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	110		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	107		P	85 - 115
Sodium	108		P	85 - 115
Strontium	103		P	85 - 115
Tin	102		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	94.8		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	104		P	85 - 115
Strontium	107		P	85 - 115
Tin	110		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412008

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	100		P	85 - 115
Barium	104		P	85 - 115
Beryllium	99.7		P	85 - 115
Boron	106		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	97.6		P	85 - 115
Cobalt	101		P	85 - 115
Copper	98.4		P	85 - 115
Lead	99.5		P	85 - 115
Manganese	98.2		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	99.0		P	85 - 115
Selenium	98.1		P	85 - 115
Silver	104		P	85 - 115
Thallium	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.3		P	85 - 115
Antimony	99.4		P	85 - 115
Arsenic	98.2		P	85 - 115
Beryllium	91.3		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	96.4		P	85 - 115
Cobalt	98.3		P	85 - 115
Copper	94.2		P	85 - 115
Lead	98.2		P	85 - 115
Manganese	98.0		P	85 - 115
Molybdenum	98.0		P	85 - 115
Nickel	95.9		P	85 - 115
Selenium	96.1		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411977

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412083

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411951

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411942

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

Reference Method: EPA 8270E
Batch ID: P411882

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	50.7		P	10 - 93.0
Alpha-BHC	89.7		P	75 - 106
Alpha-Chlordane	73.5		P	50 - 109

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P411882

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-BHC	115		P	36 - 138
Beta-Cyfluthrin	84.2		P	23 - 167
Bifenthrin	61.6		P	11 - 123
Chlorothalonil	170		P	27 - 190
Cis-Nonachlor	70.1		P	40 - 111
Cypermethrin	89.5		P	25 - 155
Dacthal	92.6		P	72 - 119
DDD-p,p'	74.1		P	47 - 108
DDE-p,p'	70.6		P	48 - 107
DDT-p,p'	70.5		P	49 - 111
Delta-BHC	123		P	54 - 138
Deltamethrin	85.7		P	22 - 189
Dichlobenil	85.2		P	32 - 113
Dicofol	69.2		P	50 - 108
Dieldrin	77.4		P	56 - 110
Endosulfan I	79.2		P	60 - 105
Endosulfan II	84.2		P	50 - 120
Endosulfan Sulfate	96.4		P	55 - 121
Endrin	79.2		P	31 - 119
Endrin Aldehyde	90.5		P	36 - 116
Endrin Ketone	102		P	69 - 177
Esfenvalerate	80.3		P	10 - 179
Ethalfuralin	70.6		P	49 - 99.0
Fenpropathrin	74.8		P	35 - 119
Gamma-BHC	91.8		P	69 - 120
Gamma-Chlordane	68.7		P	45 - 107
Heptachlor	62.2		P	41 - 100
Heptachlor Epoxide	84.7		P	58 - 106
Hexachlorobenzene	66.3		P	39 - 100
Kepone	88.0		P	10 - 191
Lambda-Cyhalothrin	76.2		P	21 - 206
Methoprene	62.5		P	10 - 129
Methoxychlor	84.9		P	61 - 111
MGK-264	83.7		P	20 - 123
Mirex	55.8		P	10 - 182
Oxychlordane	70.5		P	39 - 110
Permethrin	78.7		P	26 - 152
Phenothrin	54.0		P	10 - 109
Piperonyl Butoxide	107		P	19 - 147
Prallethrin	70.8		P	14 - 109
Tau-Fluvalinate	74.4		P	16 - 134
Tetramethrin	85.3		P	10 - 125
Trans-Nonachlor	67.1		P	45 - 107
Triclosan Methyl	77.5		P	60 - 110
Trifluralin	71.2		P	44 - 101

Reference Method: EPA 8270E

Batch ID: P411884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	94.8		P	70 - 121
Alachlor	85.4		P	68 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P411884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ametryn	88.3		P	64 - 139
Atrazine	97.1		P	76 - 120
Atrazine Desethyl	51.8		P	44 - 126
Azinphos Methyl	87.3		P	43 - 192
Azoxystrobin	115		P	36 - 224
Bromacil	65.4		P	52 - 121
Butylate	49.7		P	28 - 91.0
Caffeine	96.8		P	50 - 134
Carbophenothion	69.0		P	56 - 129
Carfentrazone Ethyl	70.3		P	60 - 141
Chlorfenapyr	60.0		P	56 - 115
Chlorpyrifos Ethyl	83.7		P	60 - 118
Chlorpyrifos Methyl	85.5		P	68 - 119
Coumaphos	68.3		P	18 - 250
Cyanazine	63.4		P	61 - 250
Cyprodinil	78.9		P	55 - 145
Demeton	67.2		P	30 - 159
Diazinon	84.2		P	70 - 123
Difenoconazole	77.8		P	49 - 204
Dimethenamid	73.0		P	64 - 115
Dimethomorph	176		P	12 - 219
Disulfoton	74.3		P	44 - 125
Dithiopyr	83.9		P	64 - 115
EPTC	44.5		P	28 - 86.0
Ethion	44.4		P	33 - 125
Ethoprop	90.9		P	64 - 116
Etridiazole	55.3		P	34 - 91.0
Fenamiphos	59.0		P	12 - 127
Fenbuconazole	92.7		P	59 - 151
Fipronil	98.2		P	67 - 129
Fipronil Desulfinyl	89.8		P	65 - 127
Fipronil Sulfide	102		P	61 - 116
Fipronil Sulfone	86.3		P	55 - 117
Fluazifop-P-butyl	95.9		P	62 - 127
Fludioxonil	66.1		P	62 - 128
Flumioxazin	112		P	33 - 250
Flutolanil	61.1		P	56 - 127
Fluxapyroxad	53.1		P	45 - 128
Fonofos	85.1		P	62 - 111
Hexazinone	86.1		P	46 - 139
Imazalil	42.0		P	38 - 142
Iprodione	73.1		P	47 - 135
Loratadine	188		P	10 - 244
Malathion	91.4		P	61 - 139
Metalaxyl	85.5		P	10 - 119
Metolachlor	88.1		P	65 - 118
Metribuzin	86.6		P	51 - 250
Mevinphos	65.5		P	53 - 121
Molinate	65.2		P	42 - 96.0
Myclobutanil	72.5		P	55 - 128
Naled	64.0		P	10 - 98.0
Napropamide	57.3		P	49 - 121

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P411884

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Norflurazon	71.0		P	61 - 126
Oxyfluorfen	81.0		P	64 - 137
Parathion Ethyl	95.3		P	70 - 112
Parathion Methyl	104		P	76 - 133
Pendimethalin	87.0		P	52 - 117
Phenytol	8.77		F	10 - 199
Phorate	90.5		P	48 - 121
Prodiamine	59.2		P	26 - 142
Prometon	77.6		P	43 - 123
Prometryn	71.8		P	66 - 127
Pronamide	99.8		P	75 - 121
Propanil	74.5		P	45 - 150
Propargite	48.7		P	42 - 208
Propiconazole	69.8		P	60 - 125
Pyraflufen Ethyl	79.7		P	70 - 138
Pyridaben	80.3		P	35 - 245
Pyriproxyfen	69.0		P	30 - 149
Simazine	83.7		P	72 - 125
Stirophos	37.0		P	29 - 164
Sulfentrazone	38.1		P	21 - 139
Tebuconazole	34.1		P	10 - 115
Terbufos	103		P	60 - 123
Terbuthylazine	93.8		P	72 - 115
Thiobencarb	81.0		P	31 - 139
Triadimefon	75.1		P	65 - 116

Reference Method: EPA 8270E
Batch ID: P412269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Oxadiazon	65.2		P	59 - 116

Reference Method: EPA 8276
Batch ID: P411882

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	87.0		P	61 - 118
Toxaphene	81.2		P	51 - 122

Reference Method: EPA 8321B
Batch ID: P411836

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	79.5		P	40 - 150
AMPA	122		P	40 - 150
Endothall	65.7		P	40 - 150
Glufosinate	108		P	40 - 150
Glyphosate	120		P	40 - 150
Sucralose	88.3		P	40 - 150

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Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P411856

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	65.5		P	30 - 160
2,4,5-T	56.7		P	30 - 160
Acetaminophen	57.6		P	30 - 150
Acetamiprid	85.4		P	30 - 160
Afidopyropen	50.0		P	30 - 160
Bentazon	132		P	30 - 150
Benzovindiflupyr	83.3		P	30 - 160
Carbamazepine	77.8		P	30 - 160
Clothianidin	96.5		P	30 - 160
Dinotefuran	85.7		P	30 - 160
Diuron	75.6		P	30 - 160
Fenuron	117		P	30 - 160
Fluridone	77.6		P	30 - 160
Hydrocodone	89.3		P	30 - 160
Ibuprofen	80.7		P	30 - 160
Imazapyr	92.7		P	30 - 160
Imidacloprid	97.4		P	30 - 160
Linuron	63.1		P	30 - 160
Mandestrobin	82.6		P	30 - 160
MCPP	74.2		P	30 - 160
Naproxen	52.2		P	30 - 160
Primidone	101		P	30 - 160
Pyraclostrobin	73.1		P	30 - 160
Silvex	52.8		P	30 - 160
Thiamethoxam	85.0		P	30 - 160
Tolfenpyrad	49.2		P	30 - 160
Triclopyr	57.9		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P411857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	83.2		P	40 - 150
Aldicarb	57.4		P	30 - 150
Aldicarb Sulfone	93.6		P	40 - 150
Aldicarb Sulfoxide	90.4		P	40 - 150
Carbaryl	83.4		P	40 - 150
Carbofuran	98.0		P	40 - 150
Methiocarb	77.4		P	40 - 150
Methomyl	89.4		P	40 - 150
Oxamyl	92.4		P	40 - 150
Propoxur	82.4		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P412056

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P412137

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: P412058

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	93 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P412109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315099	Calcium	102		P	80 - 120
2315099	Iron	109		P	80 - 120
2315099	Magnesium	103		P	80 - 120
2315099	Potassium	107		P	80 - 120
2315099	Sodium	104		P	80 - 120
2315099	Strontium	102		P	80 - 120
2315099	Tin	97.5		P	80 - 120
2315099	Titanium	102		P	80 - 120
2315099	Vanadium	96.2		P	80 - 120
2315099	Zinc	98.9		P	80 - 120
2316696	Calcium	107	104	P/P	80 - 120
2316696	Iron	109	108	P/P	80 - 120
2316696	Magnesium	108	106	P/P	80 - 120
2316696	Potassium	109	105	P/P	80 - 120
2316696	Sodium	110	107	P/P	80 - 120
2316696	Strontium	104	103	P/P	80 - 120
2316696	Tin	105	103	P/P	80 - 120
2316696	Titanium	105	103	P/P	80 - 120
2316696	Vanadium	97.7	96.9	P/P	80 - 120
2316696	Zinc	102	102	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315632	Iron	105	106	P/P	70 - 130
2315632	Vanadium	103	103	P/P	70 - 130
2315632	Zinc	97.6	97.7	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315099	Aluminum	104		P	80 - 120
2315099	Antimony	109		P	80 - 120
2315099	Arsenic	102		P	80 - 120
2315099	Barium	109		P	80 - 120
2315099	Beryllium	101		P	80 - 120
2315099	Boron	107		P	80 - 120
2315099	Cadmium	105		P	80 - 120
2315099	Chromium	102		P	80 - 120
2315099	Cobalt	102		P	80 - 120
2315099	Copper	98.5		P	80 - 120
2315099	Lead	101		P	80 - 120
2315099	Manganese	103		P	80 - 120
2315099	Molybdenum	105		P	80 - 120
2315099	Nickel	100		P	80 - 120
2315099	Selenium	99.2		P	80 - 120
2315099	Silver	106		P	80 - 120
2315099	Thallium	104		P	80 - 120
2316696	Aluminum	108	105	P/P	80 - 120
2316696	Antimony	105	105	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316696	Arsenic	101	99.0	P/P	80 - 120
2316696	Barium	106	108	P/P	80 - 120
2316696	Beryllium	98.4	99.3	P/P	80 - 120
2316696	Boron	109	107	P/P	80 - 120
2316696	Cadmium	102	103	P/P	80 - 120
2316696	Chromium	101	100	P/P	80 - 120
2316696	Cobalt	102	101	P/P	80 - 120
2316696	Copper	99.9	99.3	P/P	80 - 120
2316696	Lead	102	101	P/P	80 - 120
2316696	Manganese	102	101	P/P	80 - 120
2316696	Molybdenum	102	101	P/P	80 - 120
2316696	Nickel	101	100	P/P	80 - 120
2316696	Selenium	98.8	98.4	P/P	80 - 120
2316696	Silver	104	103	P/P	80 - 120
2316696	Thallium	104	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412052

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315632	Aluminum	103	103	P/P	70 - 130
2315632	Antimony	96.5	97.3	P/P	70 - 130
2315632	Arsenic	111	114	P/P	70 - 130
2315632	Beryllium	105	104	P/P	70 - 130
2315632	Cadmium	89.0	93.5	P/P	70 - 130
2315632	Chromium	97.6	102	P/P	70 - 130
2315632	Cobalt	113	117	P/P	70 - 130
2315632	Copper	106	109	P/P	70 - 130
2315632	Lead	106	109	P/P	70 - 130
2315632	Manganese	92.4	99.3	P/P	70 - 130
2315632	Molybdenum	113	120	P/P	70 - 130
2315632	Nickel	116	121	P/P	70 - 130
2315632	Selenium	97.7	99.2	P/P	70 - 130
2315632	Silver	89.4	91.8	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P411977

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315618	Ammonia-N	101	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P412083

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316138	Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P411916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315548	Kjeldahl Nitrogen	97.0	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P411951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316137	NO2NO3-N	98.6	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P411942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316139	Total-P	95.4	93.2	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P411882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316336	Aldrin	54.8	59.6	P/P	10 - 89.0
2316336	Alpha-BHC	90.1	91.8	P/P	71 - 105
2316336	Alpha-Chlordane	69.0	77.5	P/P	43 - 107
2316336	Beta-BHC	139	180	P/F	57 - 152
2316336	Beta-Cyfluthrin	69.1	99.1	P/P	29 - 186
2316336	Bifenthrin	69.4	65.6	P/P	19 - 119
2316336	Chlorothalonil	287	387	F/F	10 - 245
2316336	Cis-Nonachlor	52.8	62.9	P/P	36 - 110
2316336	Cypermethrin	78.3	107	P/P	24 - 169
2316336	Dacthal	85.3	93.8	P/P	62 - 115
2316336	DDD-p,p'	59.2	72.6	P/P	36 - 109
2316336	DDE-p,p'	61.9	72.0	P/P	30 - 114
2316336	DDT-p,p'	66.0	73.0	P/P	42 - 108
2316336	Delta-BHC	148	193	P/F	60 - 164
2316336	Deltamethrin	28.5	99.5	P/P	10 - 210
2316336	Dichlobenil	54.3	68.7	P/P	23 - 108
2316336	Dicofol	64.5	77.3	P/P	44 - 109
2316336	Dieldrin	67.7	80.0	P/P	37 - 119
2316336	Endosulfan I	74.7	86.0	P/P	52 - 105
2316336	Endosulfan II	67.1	81.8	P/P	35 - 127
2316336	Endosulfan Sulfate	80.4	97.3	P/P	39 - 130
2316336	Endrin	71.2	78.4	P/P	30 - 116
2316336	Endrin Aldehyde	70.7	59.2	P/P	20 - 110
2316336	Endrin Ketone	97.7	103	P/P	48 - 134
2316336	Esfenvalerate	78.4	105	P/P	10 - 199
2316336	Ethalfuralin	66.1	73.8	P/P	48 - 95.0
2316336	Fenpropathrin	65.1	85.6	P/P	37 - 121
2316336	Gamma-BHC	96.4	99.8	P/P	61 - 126
2316336	Gamma-Chlordane	65.4	77.4	P/P	39 - 105
2316336	Heptachlor	62.1	66.8	P/P	38 - 96.0
2316336	Heptachlor Epoxide	80.2	90.7	P/P	42 - 114
2316336	Hexachlorobenzene	73.1	71.5	P/P	39 - 93.0
2316336	Kepone	72.3	101	P/P	10 - 215
2316336	Lambda-Cyhalothrin	68.9	99.4	P/P	10 - 204
2316336	Methoprene	58.6	71.3	P/P	17 - 108
2316336	Methoxychlor	90.6	107	P/P	56 - 115
2316336	MGK-264	82.2	89.7	P/P	35 - 120
2316336	Mirex	45.9	56.3	P/P	10 - 178
2316336	Oxychlordane	71.7	75.1	P/P	47 - 91.0
2316336	Permethrin	91.2	91.9	P/P	27 - 170

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P411882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316336	Phenothrin	81.4	71.5	P/P	10 - 133
2316336	Piperonyl Butoxide	132	152	P/F	23 - 150
2316336	Prallethrin	69.3	76.3	P/P	21 - 113
2316336	Tau-Fluvalinate	65.5	93.8	P/P	16 - 158
2316336	Tetramethrin	95.2	119	P/P	22 - 132
2316336	Trans-Nonachlor	61.9	73.7	P/P	43 - 102
2316336	Triclosan Methyl	67.3	76.8	P/P	49 - 109
2316336	Trifluralin	66.5	74.6	P/P	48 - 93.0

Reference Method: EPA 8270E

Batch ID: P411884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316344	Acetochlor	85.9	101	P/P	65 - 124
2316344	Alachlor	86.3	113	P/P	61 - 121
2316344	Ametryn	106	108	P/P	52 - 216
2316344	Atrazine	93.9	106	P/P	68 - 133
2316344	Atrazine Desethyl	69.4	68.9	P/P	15 - 160
2316344	Azinphos Methyl	92.3	93.1	P/P	40 - 292
2316344	Azoxystrobin	118	121	P/P	12 - 242
2316344	Bromacil	79.5	81.1	P/P	54 - 167
2316344	Butylate	53.4	56.1	P/P	14 - 94.0
2316344	Caffeine	101	101	P/P	10 - 226
2316344	Carbophenothion	62.6	57.3	P/P	49 - 122
2316344	Carfentrazone Ethyl	76.3	65.7	P/P	53 - 138
2316344	Chlorfenapyr	62.6	59.8	P/P	50 - 150
2316344	Chlorpyrifos Ethyl	74.4	83.0	P/P	52 - 122
2316344	Chlorpyrifos Methyl	67.1	72.8	P/P	66 - 117
2316344	Coumaphos	60.1	56.5	P/P	50 - 220
2316344	Cyanazine	62.6	62.7	P/P	43 - 245
2316344	Cyprodinil	92.2	95.1	P/P	50 - 150
2316344	Demeton	60.1	73.2	P/P	43 - 188
2316344	Diazinon	105	120	P/P	69 - 131
2316344	Difenoconazole	85.9	71.8	P/P	34 - 231
2316344	Dimethenamid	68.3	88.8	P/P	55 - 118
2316344	Dimethomorph	170	216	F/F	50 - 150
2316344	Disulfoton	81.9	83.1	P/P	38 - 141
2316344	Dithiopyr	99.8	105	P/P	42 - 116
2316344	EPTC	37.7	51.0	P/P	18 - 85.0
2316344	Ethion	59.8	41.5	P/P	10 - 131
2316344	Ethoprop	85.2	82.9	P/P	65 - 129
2316344	Etridiazole	57.8	75.3	P/P	50 - 150
2316344	Fenamiphos	59.0	68.7	P/P	31 - 137
2316344	Fenbuconazole	85.8	82.5	P/P	57 - 160
2316344	Fipronil	95.5	75.9	P/P	62 - 132
2316344	Fipronil Desulfinyl	110	112	P/P	57 - 131
2316344	Fipronil Sulfide	66.3	49.0	P/P	15 - 138
2316344	Fipronil Sulfone	66.4	47.5	P/P	21 - 134
2316344	Fluazifop-P-butyl	66.1	58.4	P/P	54 - 133
2316344	Fludioxonil	81.2	85.7	P/P	58 - 127
2316344	Flumioxazin	103	120	P/P	33 - 300
2316344	Flutolanil	71.8	72.4	P/P	42 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P411884

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316344	Fluxapyroxad	90.8	86.9	P/P	23 - 141
2316344	Fonofos	67.1	87.7	P/P	58 - 119
2316344	Hexazinone	86.0	94.1	P/P	68 - 172
2316344	Imazalil	72.9	96.5	P/P	48 - 283
2316344	Iprodione	76.0	68.3	P/P	38 - 140
2316344	Loratadine	158	171	F/F	50 - 150
2316344	Malathion	83.1	90.0	P/P	40 - 137
2316344	Metalaxyl	75.6	92.9	P/P	21 - 129
2316344	Metolachlor	94.8	109	P/P	55 - 122
2316344	Metribuzin	84.7	57.8	P/P	38 - 187
2316344	Mevinphos	62.9	71.7	P/P	54 - 134
2316344	Molinate	64.9	86.4	P/P	41 - 97.0
2316344	Myclobutanil	101	102	P/P	56 - 125
2316344	Naled	63.5	61.4	P/P	10 - 108
2316344	Napropamide	62.9	68.7	P/P	50 - 150
2316344	Norflurazon	67.1	69.2	P/P	32 - 122
2316344	Oxyfluorfen	101	108	P/P	61 - 153
2316344	Parathion Ethyl	89.0	83.0	P/P	59 - 130
2316344	Parathion Methyl	105	101	P/P	65 - 155
2316344	Pendimethalin	121	93.1	P/P	49 - 138
2316344	Phenytoin	15.1	11.3	F/F	50 - 200
2316344	Phorate	92.9	86.8	P/P	54 - 161
2316344	Prodiamine	61.9	130	P/P	33 - 161
2316344	Prometon	64.6	73.2	P/P	48 - 140
2316344	Prometryn	92.4	98.0	P/P	55 - 134
2316344	Pronamide	114	128	P/P	66 - 137
2316344	Propanil	81.0	90.1	P/P	50 - 150
2316344	Propargite	57.8	52.4	P/P	50 - 200
2316344	Propiconazole	67.4	69.3	P/P	36 - 150
2316344	Pyraflufen Ethyl	60.9	63.3	P/P	50 - 150
2316344	Pyridaben	64.4	67.6	P/P	50 - 200
2316344	Pyriproxyfen	79.4	78.1	P/P	10 - 165
2316344	Simazine	84.3	109	P/P	57 - 145
2316344	Stirophos	41.1	38.1	F/F	50 - 150
2316344	Sulfentrazone	73.8	62.1	P/P	34 - 140
2316344	Tebuconazole	48.2	36.5	P/P	10 - 127
2316344	Terbufos	92.1	96.5	P/P	59 - 138
2316344	Terbutylazine	97.5	104	P/P	68 - 119
2316344	Thiobencarb	86.6	102	P/P	50 - 150
2316344	Triadimefon	82.4	85.7	P/P	50 - 150

Reference Method: EPA 8270E
Batch ID: P412269

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2318871	Oxadiazon	66.3	76.7	P/P	40 - 119

Reference Method: EPA 8276
Batch ID: P411882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316160	Chlordane	81.9	92.7	P/P	55 - 128

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P411882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316160	Toxaphene	82.4	102	P/P	57 - 211

Reference Method: EPA 8321B
Batch ID: P411836

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315345	Acesulfame K	125	120	P/P	40 - 150
2315345	AMPA	86.9	109	P/P	40 - 150
2315345	Endothall	87.6	86.5	P/P	40 - 150
2315345	Glufosinate	98.7	112	P/P	40 - 150
2315345	Glyphosate	77.4	86.5	P/P	40 - 150
2315345	Sucralose	96.1	90.9	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P411856

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315310	2,4-D	71.1	73.6	P/P	30 - 160
2315310	2,4,5-T	60.7	56.7	P/P	30 - 160
2315310	Acetaminophen	96.2	92.4	P/P	30 - 150
2315310	Acetamiprid	87.8	103	P/P	30 - 160
2315310	Afidopyrophen	61.1	69.5	P/P	30 - 160
2315310	Bentazon	108	124	P/P	30 - 150
2315310	Benzovindiflupyr	81.0	86.5	P/P	30 - 160
2315310	Carbamazepine	92.8	92.6	P/P	30 - 160
2315310	Clothianidin	106	111	P/P	30 - 160
2315310	Dinotefuran	109	115	P/P	30 - 160
2315310	Diuron	69.9	82.1	P/P	30 - 160
2315310	Fenuron	117	126	P/P	30 - 160
2315310	Fluridone	74.7	80.3	P/P	30 - 160
2315310	Hydrocodone	95.7	113	P/P	30 - 160
2315310	Ibuprofen	48.2	48.1	P/P	30 - 160
2315310	Imazapyr	82.7	105	P/P	30 - 160
2315310	Imidacloprid	101	123	P/P	30 - 160
2315310	Linuron	75.8	81.4	P/P	30 - 160
2315310	Mandestrobin	82.5	90.0	P/P	30 - 160
2315310	MCPP	79.6	80.9	P/P	30 - 160
2315310	Naproxen	66.2	63.1	P/P	30 - 160
2315310	Primidone	66.6	123	P/P	30 - 160
2315310	Pyraclostrobin	72.4	77.3	P/P	30 - 160
2315310	Silvex	58.0	61.7	P/P	30 - 160
2315310	Thiamethoxam	100	124	P/P	30 - 160
2315310	Tolfenpyrad	46.2	38.0	P/P	30 - 160
2315310	Triclopyr	66.6	71.9	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P411857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315482	3-Hydroxycarbofuran	105	107	P/P	40 - 150
2315482	Aldicarb	86.0	73.0	P/P	30 - 150
2315482	Aldicarb Sulfone	122	108	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P411857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315482	Aldicarb Sulfoxide	52.1	48.2	P/P	40 - 150
2315482	Carbaryl	70.9	69.8	P/P	40 - 150
2315482	Carbofuran	94.6	83.6	P/P	40 - 150
2315482	Methiocarb	67.5	71.9	P/P	40 - 150
2315482	Methomyl	94.9	90.1	P/P	40 - 150
2315482	Oxamyl	102	97.2	P/P	40 - 150
2315482	Propoxur	88.2	87.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P412058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315608	Fluoride	93.4	95.6	P/P	92 - 107

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2316174	Fluoride	98.3	97.7	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P412109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315572	Organic Carbon	94.1	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P411879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316134	Turbidity	2.74	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316696	Calcium	1.78	Spike	P	0 - 20
2316696	Iron	0.958	Spike	P	0 - 20
2316696	Magnesium	1.26	Spike	P	0 - 20
2316696	Potassium	2.68	Spike	P	0 - 20
2316696	Sodium	1.68	Spike	P	0 - 20
2316696	Strontium	0.961	Spike	P	0 - 20
2316696	Tin	1.99	Spike	P	0 - 20
2316696	Titanium	1.31	Spike	P	0 - 20
2316696	Vanadium	0.832	Spike	P	0 - 20
2316696	Zinc	0.534	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315632	Calcium	1.68	Spike	P	0 - 20
2315632	Iron	1.31	Spike	P	0 - 20
2315632	Magnesium	0.787	Spike	P	0 - 20
2315632	Strontium	1.21	Spike	P	0 - 20
2315632	Vanadium	0.350	Spike	P	0 - 20
2315632	Zinc	0.118	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316696	Aluminum	2.75	Spike	P	0 - 20
2316696	Antimony	0.126	Spike	P	0 - 20
2316696	Arsenic	2.12	Spike	P	0 - 20
2316696	Barium	1.35	Spike	P	0 - 20
2316696	Beryllium	0.912	Spike	P	0 - 20
2316696	Boron	1.45	Spike	P	0 - 20
2316696	Cadmium	1.14	Spike	P	0 - 20
2316696	Chromium	0.893	Spike	P	0 - 20
2316696	Cobalt	0.731	Spike	P	0 - 20
2316696	Copper	0.536	Spike	P	0 - 20
2316696	Lead	0.534	Spike	P	0 - 20
2316696	Manganese	0.964	Spike	P	0 - 20
2316696	Molybdenum	0.806	Spike	P	0 - 20
2316696	Nickel	0.845	Spike	P	0 - 20
2316696	Selenium	0.367	Spike	P	0 - 20
2316696	Silver	1.07	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316696	Thallium	0.305	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315632	Aluminum	0.0791	Spike	P	0 - 20
2315632	Antimony	0.836	Spike	P	0 - 20
2315632	Arsenic	2.40	Spike	P	0 - 20
2315632	Beryllium	1.45	Spike	P	0 - 20
2315632	Cadmium	4.90	Spike	P	0 - 20
2315632	Chromium	4.66	Spike	P	0 - 20
2315632	Cobalt	3.65	Spike	P	0 - 20
2315632	Copper	3.49	Spike	P	0 - 20
2315632	Lead	2.86	Spike	P	0 - 20
2315632	Manganese	4.42	Spike	P	0 - 20
2315632	Molybdenum	4.54	Spike	P	0 - 20
2315632	Nickel	4.34	Spike	P	0 - 20
2315632	Selenium	1.53	Spike	P	0 - 20
2315632	Silver	2.70	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P411977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315618	Ammonia-N	1.66	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412083

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316138	Ammonia-N	0.665	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315548	Kjeldahl Nitrogen	4.69	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316137	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316139	Total-P	2.08	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P411882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316336	Aldrin	8.38	Spike	P	0 - 37
2316336	Alpha-BHC	1.91	Spike	P	0 - 16
2316336	Alpha-Chlordane	11.6	Spike	P	0 - 28
2316336	Beta-BHC	25.5	Spike	P	0 - 32
2316336	Beta-Cyfluthrin	35.7	Spike	P	0 - 41
2316336	Bifenthrin	5.70	Spike	P	0 - 36
2316336	Chlorothalonil	29.6	Spike	P	0 - 54
2316336	Cis-Nonachlor	17.5	Spike	P	0 - 33
2316336	Cypermethrin	30.6	Spike	P	0 - 38
2316336	Dacthal	9.53	Spike	P	0 - 23
2316336	DDD-p,p'	20.3	Spike	P	0 - 35
2316336	DDE-p,p'	15.0	Spike	P	0 - 27
2316336	DDT-p,p'	10.1	Spike	P	0 - 31
2316336	Delta-BHC	26.2	Spike	P	0 - 30
2316336	Deltamethrin	111	Spike	F	0 - 76
2316336	Dichlobenil	23.4	Spike	P	0 - 33
2316336	Dicofol	18.0	Spike	P	0 - 24
2316336	Dieldrin	16.7	Spike	P	0 - 35
2316336	Endosulfan I	14.1	Spike	P	0 - 25
2316336	Endosulfan II	19.8	Spike	P	0 - 31
2316336	Endosulfan Sulfate	19.1	Spike	P	0 - 38
2316336	Endrin	9.68	Spike	P	0 - 53
2316336	Endrin Aldehyde	17.7	Spike	P	0 - 81
2316336	Endrin Ketone	5.60	Spike	P	0 - 33
2316336	Esfenvalerate	28.9	Spike	P	0 - 46
2316336	Ethalfuralin	10.9	Spike	P	0 - 22
2316336	Fenpropathrin	27.2	Spike	P	0 - 29
2316336	Gamma-BHC	3.49	Spike	P	0 - 17
2316336	Gamma-Chlordane	16.7	Spike	P	0 - 28
2316336	Heptachlor	7.18	Spike	P	0 - 28
2316336	Heptachlor Epoxide	12.4	Spike	P	0 - 23
2316336	Hexachlorobenzene	2.25	Spike	P	0 - 22
2316336	Kepone	33.2	Spike	P	0 - 61
2316336	Lambda-Cyhalothrin	36.2	Spike	P	0 - 52
2316336	Methoprene	19.6	Spike	P	0 - 38
2316336	Methoxychlor	16.9	Spike	P	0 - 29
2316336	MGK-264	8.72	Spike	P	0 - 41
2316336	Mirex	20.5	Spike	P	0 - 39
2316336	Oxychlordane	4.65	Spike	P	0 - 33
2316336	Permethrin	0.742	Spike	P	0 - 39
2316336	Phenothrin	12.9	Spike	P	0 - 52
2316336	Piperonyl Butoxide	14.1	Spike	P	0 - 91
2316336	Prallethrin	9.67	Spike	P	0 - 34
2316336	Tau-Fluvalinate	35.5	Spike	P	0 - 41

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P411882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316336	Tetramethrin	21.9	Spike	P	0 - 43
2316336	Trans-Nonachlor	17.3	Spike	P	0 - 31
2316336	Triclosan Methyl	13.1	Spike	P	0 - 24
2316336	Trifluralin	11.5	Spike	P	0 - 23

Reference Method: EPA 8270E
Batch ID: P411884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316344	Acetochlor	16.4	Spike	P	0 - 27
2316344	Alachlor	26.7	Spike	P	0 - 27
2316344	Ametryn	2.40	Spike	P	0 - 34
2316344	Atrazine	8.56	Spike	P	0 - 41
2316344	Atrazine Desethyl	0.599	Spike	P	0 - 38
2316344	Azinphos Methyl	0.811	Spike	P	0 - 62
2316344	Azoxystrobin	2.52	Spike	P	0 - 32
2316344	Bromacil	2.01	Spike	P	0 - 30
2316344	Butylate	4.86	Spike	P	0 - 59
2316344	Caffeine	0.678	Spike	P	0 - 60
2316344	Carbophenothion	8.86	Spike	P	0 - 25
2316344	Carfentrazone Ethyl	15.0	Spike	P	0 - 26
2316344	Chlorfenapyr	4.51	Spike	P	0 - 30
2316344	Chlorpyrifos Ethyl	10.9	Spike	P	0 - 27
2316344	Chlorpyrifos Methyl	8.12	Spike	P	0 - 26
2316344	Coumaphos	6.11	Spike	P	0 - 30
2316344	Cyanazine	0.175	Spike	P	0 - 58
2316344	Cyprodinil	3.11	Spike	P	0 - 30
2316344	Demeton	19.6	Spike	P	0 - 25
2316344	Diazinon	13.0	Spike	P	0 - 29
2316344	Difenoconazole	17.9	Spike	P	0 - 25
2316344	Dimethenamid	26.1	Spike	P	0 - 30
2316344	Dimethomorph	22.9	Spike	P	0 - 30
2316344	Disulfoton	1.41	Spike	P	0 - 33
2316344	Dithiopyr	5.26	Spike	P	0 - 22
2316344	EPTC	30.0	Spike	P	0 - 38
2316344	Ethion	36.2	Spike	P	0 - 79
2316344	Ethoprop	2.76	Spike	P	0 - 23
2316344	Etridiazole	26.3	Spike	P	0 - 30
2316344	Fenamiphos	15.2	Spike	P	0 - 58
2316344	Fenbuconazole	3.94	Spike	P	0 - 37
2316344	Fipronil	23.0	Spike	P	0 - 33
2316344	Fipronil Desulfinyl	1.63	Spike	P	0 - 26
2316344	Fipronil Sulfide	29.9	Spike	P	0 - 37
2316344	Fipronil Sulfone	33.1	Spike	P	0 - 50
2316344	Fluazifop-P-butyl	12.4	Spike	P	0 - 24
2316344	Fludioxonil	5.39	Spike	P	0 - 26
2316344	Flumioxazin	15.0	Spike	P	0 - 37
2316344	Flutolanil	0.789	Spike	P	0 - 26
2316344	Fluxapyroxad	2.60	Spike	P	0 - 34
2316344	Fonofos	26.6	Spike	P	0 - 27

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P411884

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316344	Hexazinone	9.01	Spike	P	0 - 36
2316344	Imazalil	27.9	Spike	P	0 - 65
2316344	Iprodione	10.6	Spike	P	0 - 33
2316344	Loratadine	7.99	Spike	P	0 - 30
2316344	Malathion	8.01	Spike	P	0 - 44
2316344	Metalaxyl	20.6	Spike	P	0 - 38
2316344	Metolachlor	14.3	Spike	P	0 - 36
2316344	Metribuzin	37.9	Spike	P	0 - 63
2316344	Mevinphos	13.1	Spike	P	0 - 26
2316344	Molinate	28.4	Spike	P	0 - 40
2316344	Myclobutanil	1.06	Spike	P	0 - 21
2316344	Naled	3.32	Spike	P	0 - 26
2316344	Napropamide	8.76	Spike	P	0 - 30
2316344	Norflurazon	3.03	Spike	P	0 - 24
2316344	Oxyfluorfen	7.34	Spike	P	0 - 24
2316344	Parathion Ethyl	6.99	Spike	P	0 - 28
2316344	Parathion Methyl	3.89	Spike	P	0 - 27
2316344	Pendimethalin	26.2	Spike	P	0 - 31
2316344	Phenytoin	28.4	Spike	P	0 - 30
2316344	Phorate	6.78	Spike	P	0 - 27
2316344	Prodiamine	70.8	Spike	F	0 - 52
2316344	Prometon	12.4	Spike	P	0 - 31
2316344	Prometryn	5.83	Spike	P	0 - 28
2316344	Pronamide	11.0	Spike	P	0 - 26
2316344	Propanil	10.7	Spike	P	0 - 30
2316344	Propargite	9.70	Spike	P	0 - 30
2316344	Propiconazole	2.09	Spike	P	0 - 31
2316344	Pyraflufen Ethyl	3.87	Spike	P	0 - 30
2316344	Pyridaben	4.91	Spike	P	0 - 30
2316344	Pyriproxyfen	1.61	Spike	P	0 - 50
2316344	Simazine	25.1	Spike	P	0 - 29
2316344	Stirophos	7.49	Spike	P	0 - 30
2316344	Sulfentrazone	17.1	Spike	P	0 - 33
2316344	Tebuconazole	27.7	Spike	P	0 - 44
2316344	Terbufos	4.69	Spike	P	0 - 29
2316344	Terbuthylazine	6.53	Spike	P	0 - 27
2316344	Thiobencarb	16.1	Spike	P	0 - 30
2316344	Triadimefon	3.98	Spike	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P412269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2318871	Oxadiazon	13.0	Spike	P	0 - 27

Reference Method: EPA 8276
Batch ID: P411882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P411882

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316160	Chlordane	12.4	Spike	P	0 - 25
2316160	Toxaphene	21.7	Spike	P	0 - 24

Reference Method: EPA 8321B

Batch ID: P411836

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315345	Acesulfame K	4.09	Spike	P	0 - 30
2315345	AMPA	22.9	Spike	P	0 - 30
2315345	Endothall	1.27	Spike	P	0 - 30
2315345	Glufosinate	12.6	Spike	P	0 - 30
2315345	Glyphosate	11.1	Spike	P	0 - 30
2315345	Sucralose	5.56	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P411856

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315310	2,4-D	3.28	Spike	P	0 - 30
2315310	2,4,5-T	6.77	Spike	P	0 - 30
2315310	Acetaminophen	3.96	Spike	P	0 - 30
2315310	Acetamiprid	15.6	Spike	P	0 - 30
2315310	Afidopyropen	12.9	Spike	P	0 - 30
2315310	Bentazon	6.07	Spike	P	0 - 30
2315310	Benzovindiflupyr	6.58	Spike	P	0 - 30
2315310	Carbamazepine	0.0807	Spike	P	0 - 30
2315310	Clothianidin	4.93	Spike	P	0 - 30
2315310	Dinotefuran	4.83	Spike	P	0 - 30
2315310	Diuron	14.6	Spike	P	0 - 30
2315310	Fenuron	7.30	Spike	P	0 - 30
2315310	Fluridone	6.41	Spike	P	0 - 30
2315310	Hydrocodone	16.7	Spike	P	0 - 30
2315310	Ibuprofen	0.364	Spike	P	0 - 30
2315310	Imazapyr	20.7	Spike	P	0 - 30
2315310	Imidacloprid	18.9	Spike	P	0 - 30
2315310	Linuron	7.14	Spike	P	0 - 30
2315310	Mandestrobin	8.62	Spike	P	0 - 30
2315310	MCPP	1.69	Spike	P	0 - 30
2315310	Naproxen	4.70	Spike	P	0 - 30
2315310	Primidone	34.6	Spike	F	0 - 30
2315310	Pyraclostrobin	6.48	Spike	P	0 - 30
2315310	Silvex	6.03	Spike	P	0 - 30
2315310	Thiamethoxam	21.0	Spike	P	0 - 30
2315310	Tolfenpyrad	19.5	Spike	P	0 - 30
2315310	Triclopyr	7.71	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P411857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315482	3-Hydroxycarbofuran	1.57	Spike	P	0 - 30
2315482	Aldicarb	16.4	Spike	P	0 - 30
2315482	Aldicarb Sulfone	12.1	Spike	P	0 - 30
2315482	Aldicarb Sulfoxide	7.73	Spike	P	0 - 30
2315482	Carbaryl	1.52	Spike	P	0 - 30
2315482	Carbofuran	12.3	Spike	P	0 - 30
2315482	Methiocarb	6.32	Spike	P	0 - 30
2315482	Methomyl	5.14	Spike	P	0 - 30
2315482	Oxamyl	4.89	Spike	P	0 - 30
2315482	Propoxur	1.14	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P412056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315608	Total Alkalinity	1.38	Sample	P	0 - 5.2

Reference Method: SM 2320 B-2011
Batch ID: P412137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316174	Total Alkalinity	1.42	Sample	P	0 - 5.2

Reference Method: SM 4500-F- C-2011
Batch ID: P412058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315608	Fluoride	1.50	Spike	P	0 - 2.1

Reference Method: SM 4500-F- C-2011
Batch ID: P412140

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2316174	Fluoride	0.492	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P412109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315572	Organic Carbon	2.50	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2316158
Field Sample ID: G2NE1216

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	80.4	P	30 - 160

Lab Sample ID: 2316159
Field Sample ID: G2NE1216

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	61.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	100	P	30 - 160
EPA 8321B	Diuron-d6	75.3	P	30 - 160
EPA 8321B	Endothall-d6	93.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	107	P	30 - 160
EPA 8321B	Ibuprofen-d3	100	P	30 - 160
EPA 8321B	Primidone-d5	87.7	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Lab Sample ID: 2316160
Field Sample ID: G2NE1216

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	103	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	79.3	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	83.1	P	30 - 97.0
EPA 8276	PCNB	77.3	P	45 - 119

Lab Sample ID: 2316161
Field Sample ID: G2NE1216

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	65.8	P	20 - 200
EPA 8270E	Caffeine-d9	68.7	P	20 - 200
EPA 8270E	Simazine-d10	107	P	71 - 140
EPA 8270E	Simazine-d10	92.4	P	71 - 140
EPA 8270E	Terbufos-d10	81.1	P	62 - 131
EPA 8270E	Terbufos-d10	92.4	P	62 - 131

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111273

Included Lab Sample IDs: 2316134, 2316135, 2316136, 2316140

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

Reference Method: EPA 8321B

Run ID: A111283

Included Lab Sample IDs: 2316159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	101	111	P/P	60 - 160
Glufosinate	96.8	96.5	P/P	60 - 160
Glyphosate	117	118	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111286

Included Lab Sample IDs: 2316159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	104	102	P/P	60 - 160
Endothall	77.6	79.9	P/P	60 - 160
Sucralose	110	110	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111302

Included Lab Sample IDs: 2316137, 2316138, 2316139, 2316141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111307

Included Lab Sample IDs: 2316137

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111326

Included Lab Sample IDs: 2316158

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	97.0	106	P/P	60 - 150
Aldicarb	84.0	95.2	P/P	60 - 150
Aldicarb Sulfone	100	107	P/P	50 - 150
Aldicarb Sulfoxide	105	107	P/P	50 - 150
Carbaryl	111	97.1	P/P	60 - 150
Carbofuran	106	104	P/P	50 - 150
Methiocarb	97.3	98.7	P/P	50 - 150
Methomyl	102	99.7	P/P	50 - 150
Oxamyl	100	101	P/P	50 - 150
Propoxur	110	112	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A111357

Included Lab Sample IDs: 2316134, 2316135, 2316136

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.4	98.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111357

Included Lab Sample IDs: 2316134, 2316135, 2316136

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

Reference Method: EPA 8321B

Run ID: A111358

Included Lab Sample IDs: 2316159

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.8	76.5	P/P	50 - 150
2,4,5-T	84.7	77.2	P/P	50 - 150
Acetaminophen	91.6	91.7	P/P	60 - 160
Acetamiprid	101	90.3	P/P	50 - 150
Afidopyropen	86.4	76.1	P/P	50 - 150
Bentazon	95.8	88.3	P/P	50 - 160
Benzovindiflupyr	93.5	83.1	P/P	50 - 160
Carbamazepine	94.7	92.2	P/P	60 - 150
Clothianidin	79.2	93.3	P/P	60 - 150
Dinotefuran	91.5	87.5	P/P	50 - 150
Diuron	103	96.9	P/P	60 - 160
Fenuron	94.3	85.0	P/P	60 - 150
Fluridone	90.5	92.7	P/P	60 - 160
Hydrocodone	84.3	81.3	P/P	60 - 150
Ibuprofen	85.7	114	P/P	50 - 160
Imazapyr	100	106	P/P	50 - 150
Imidacloprid	90.7	84.0	P/P	60 - 150
Linuron	108	100	P/P	60 - 150
Mandestrobin	94.9	86.8	P/P	50 - 150
MCP	83.9	83.4	P/P	50 - 150
Naproxen	74.0	103	P/P	50 - 160
Primidone	133	86.4	P/P	60 - 150
Pyraclostrobin	96.8	85.8	P/P	60 - 150
Silvex	101	89.3	P/P	50 - 150
Thiamethoxam	86.7	89.0	P/P	50 - 150
Tolfenpyrad	104	101	P/P	60 - 150
Triclopyr	94.4	76.1	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111365

Included Lab Sample IDs: 2316138, 2316139, 2316141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.1	97.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111371

Included Lab Sample IDs: 2316165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	103	P/P	90 - 110
Antimony	105	105	P/P	90 - 110
Arsenic	98.5	98.6	P/P	90 - 110
Barium	99.9	101	P/P	90 - 110
Beryllium	98.5	97.9	P/P	90 - 110
Boron	101	103	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Chromium	99.7	98.7	P/P	90 - 110
Copper	98.6	96.9	P/P	90 - 110
Lead	96.6	96.6	P/P	90 - 110
Manganese	99.5	100	P/P	90 - 110
Molybdenum	98.8	98.5	P/P	90 - 110
Nickel	98.1	97.7	P/P	90 - 110
Selenium	101	98.7	P/P	90 - 110
Silver	103	104	P/P	90 - 110
Thallium	97.2	96.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111373

Included Lab Sample IDs: 2316137, 2316138, 2316139, 2316141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	96.8	P/P	90 - 110
Organic Carbon	97.7	95.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A111388

Included Lab Sample IDs: 2316140

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.3	99.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A111388

Included Lab Sample IDs: 2316140

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111389

Included Lab Sample IDs: 2316137, 2316138, 2316139, 2316141

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111401

Included Lab Sample IDs: 2316162, 2316163, 2316164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111401

Included Lab Sample IDs: 2316162, 2316163, 2316164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	102	P/P	90 - 110
Aluminum	102	102	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Arsenic	102	104	P/P	90 - 110
Arsenic	103	102	P/P	90 - 110
Beryllium	97.7	97.9	P/P	90 - 110
Beryllium	99.5	97.7	P/P	90 - 110
Cadmium	98.9	99.5	P/P	90 - 110
Cadmium	99.5	100	P/P	90 - 110
Chromium	98.1	98.1	P/P	90 - 110
Chromium	98.4	98.1	P/P	90 - 110
Cobalt	102	103	P/P	90 - 110
Cobalt	104	102	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Copper	103	102	P/P	90 - 110
Lead	97.8	98.2	P/P	90 - 110
Lead	98.0	99.0	P/P	90 - 110
Manganese	98.7	99.4	P/P	90 - 110
Manganese	98.9	98.7	P/P	90 - 110
Molybdenum	98.8	99.3	P/P	90 - 110
Molybdenum	99.3	100	P/P	90 - 110
Nickel	102	103	P/P	90 - 110
Nickel	103	102	P/P	90 - 110
Selenium	100	99.6	P/P	90 - 110
Selenium	99.6	101	P/P	90 - 110
Silver	104	105	P/P	90 - 110
Silver	105	105	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A111409

Included Lab Sample IDs: 2316160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.4		P	80 - 120
Toxaphene	109		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111420

Included Lab Sample IDs: 2316164, 2316165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.6	99.7	P/P	90 - 110
Cobalt	98.2	97.3	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A111427

Included Lab Sample IDs: 2316160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111427
Included Lab Sample IDs: 2316160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	96.3		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	100		P	80 - 120
Bifenthrin	101		P	80 - 120
Chlorothalonil	83.0		P	80 - 120
Cis-Nonachlor	93.5		P	80 - 120
Cypermethrin	105		P	80 - 120
Dacthal	99.5		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	99.3		P	80 - 120
Delta-BHC	103		P	80 - 120
Deltamethrin	101		P	80 - 120
Dichlobenil	103		P	80 - 120
Dicofol	96.5		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	100		P	80 - 120
Endrin	104		P	80 - 120
Endrin Aldehyde	98.1		P	80 - 120
Endrin Ketone	101		P	80 - 120
Esfenvalerate	99.6		P	80 - 120
Ethalfuralin	99.3		P	80 - 120
Fenpropathrin	99.9		P	80 - 120
Gamma-BHC	94.5		P	80 - 120
Gamma-Chlordane	98.4		P	80 - 120
Heptachlor	99.2		P	80 - 120
Heptachlor Epoxide	98.0		P	80 - 120
Hexachlorobenzene	99.9		P	80 - 120
Kepone	89.9		P	80 - 120
Lambda-Cyhalothrin	104		P	80 - 120
Methoprene	101		P	80 - 120
Methoxychlor	98.4		P	80 - 120
MGK-264	101		P	80 - 120
Mirex	99.9		P	80 - 120
Oxychlordane	101		P	80 - 120
Permethrin	103		P	80 - 120
Phenothrin	102		P	80 - 120
Piperonyl Butoxide	93.6		P	80 - 120
Prallethrin	98.5		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	104		P	80 - 120
Trans-Nonachlor	97.9		P	80 - 120
Triclosan Methyl	103		P	80 - 120
Trifluralin	96.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111437

Included Lab Sample IDs: 2316165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.4	98.0	P/P	90 - 110
Iron	101	99.6	P/P	90 - 110
Magnesium	100	98.5	P/P	90 - 110
Potassium	101	101	P/P	90 - 110
Sodium	100	100	P/P	90 - 110
Strontium	101	102	P/P	90 - 110
Tin	101	99.2	P/P	90 - 110
Titanium	99.4	101	P/P	90 - 110
Vanadium	101	99.9	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111489

Included Lab Sample IDs: 2316137, 2316138, 2316139, 2316141

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	97.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111510

Included Lab Sample IDs: 2316162, 2316163, 2316164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	104	P/P	90 - 110
Iron	106	107	P/P	90 - 110
Magnesium	105	106	P/P	90 - 110
Strontium	99.6	102	P/P	90 - 110
Tin	101	98.9	P/P	90 - 110
Vanadium	100	101	P/P	90 - 110
Zinc	101	99.3	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A111526

Included Lab Sample IDs: 2316161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	91.5		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	97.9		P	80 - 120
Atrazine Desethyl	117		P	80 - 120
Azinphos Methyl	89.2		P	80 - 120
Azoxystrobin	90.0		P	80 - 120
Bromacil	96.5		P	80 - 120
Butylate	98.0		P	80 - 120
Caffeine	105		P	80 - 120
Carbophenothion	85.0		P	80 - 120
Carfentrazone Ethyl	97.8		P	80 - 120
Chlorfenapyr	88.5		P	80 - 120
Chlorpyrifos Ethyl	90.3		P	80 - 120
Chlorpyrifos Methyl	82.5		P	80 - 120
Coumaphos	86.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111526
Included Lab Sample IDs: 2316161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cyanazine	83.6		P	80 - 120
Cyprodinil	97.9		P	80 - 120
Demeton	95.2		P	80 - 120
Diazinon	108		P	80 - 120
Difenoconazole	93.2		P	80 - 120
Dimethenamid	94.4		P	80 - 120
Dimethomorph	90.4		P	80 - 120
Disulfoton	94.3		P	80 - 120
Dithiopyr	102		P	80 - 120
EPTC	96.3		P	80 - 120
Ethion	84.6		P	80 - 120
Ethoprop	97.6		P	80 - 120
Etridiazole	94.8		P	80 - 120
Fenamiphos	81.9		P	80 - 120
Fenbuconazole	94.7		P	80 - 120
Fipronil	90.0		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fluazifop-P-butyl	99.1		P	80 - 120
Fludioxonil	81.7		P	80 - 120
Flumioxazin	114		P	80 - 120
Flutolanil	88.4		P	80 - 120
Fluxapyroxad	102		P	80 - 120
Fonofos	94.0		P	80 - 120
Hexazinone	96.8		P	80 - 120
Imazalil	87.8		P	80 - 120
Iprodione	98.1		P	80 - 120
Loratadine	110		P	80 - 120
Malathion	86.8		P	80 - 120
Metaxyl	98.8		P	80 - 120
Metolachlor	96.3		P	80 - 120
Metribuzin	96.3		P	80 - 120
Mevinphos	87.8		P	80 - 120
Molinate	105		P	80 - 120
Myclobutanil	98.4		P	80 - 120
Naled	91.2		P	80 - 120
Napropamide	86.7		P	80 - 120
Norflurazon	94.1		P	80 - 120
Oxyfluorfen	81.3		P	80 - 120
Parathion Ethyl	109		P	80 - 120
Parathion Methyl	105		P	80 - 120
Pendimethalin	105		P	80 - 120
Phenytoin	88.3		P	80 - 120
Phorate	97.5		P	80 - 120
Prodiamine	98.8		P	80 - 120
Prometon	97.6		P	80 - 120
Prometryn	98.9		P	80 - 120
Pronamide	105		P	80 - 120
Propanil	92.4		P	80 - 120
Propargite	104		P	80 - 120
Propiconazole	94.0		P	80 - 120
Pyraflufen Ethyl	93.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111526
Included Lab Sample IDs: 2316161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyridaben	81.5		P	80 - 120
Pyriproxyfen	89.9		P	80 - 120
Simazine	101		P	80 - 120
Stirophos	83.2		P	80 - 120
Sulfentrazone	88.7		P	80 - 120
Tebuconazole	88.7		P	80 - 120
Terbufos	97.4		P	80 - 120
Terbuthylazine	99.5		P	80 - 120
Thiobencarb	96.0		P	80 - 120
Triadimefon	98.8		P	80 - 120

Reference Method: EPA 8270E
Run ID: A111561
Included Lab Sample IDs: 2316161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	103		P	80 - 120
Fipronil Sulfide	94.3		P	80 - 120
Fipronil Sulfone	101		P	80 - 120

Reference Method: EPA 8270E
Run ID: A111564
Included Lab Sample IDs: 2316161

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Oxadiazon	106		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity	96.9					2.74	
EPA 200.7 Rev. 4.4	Calcium	108	102	107	104			1.78
	Calcium	106						1.68
	Iron	110	109	109	108			0.958
	Iron	107	105	106				1.31
	Magnesium	109	103	108	106			1.26
	Magnesium	104						0.787
	Potassium	107	107	109	105			2.68
	Sodium	108	104	110	107			1.68
	Strontium	103	102	104	103			0.961
	Strontium	107						1.21
	Tin	102	97.5	105	103			1.99
	Tin	110						
	Titanium	102	102	105	103			1.31
	Vanadium	94.8	96.2	97.7	96.9			0.832
	Vanadium	101	103	103				0.350
	Zinc	100	98.9	102	102			0.534
	Zinc	106	97.6	97.7				0.118
EPA 200.8 Rev. 5.4	Aluminum	103	108	105	104			2.75
	Aluminum	98.3	103	103				0.0791
	Antimony	103	105	105	109			0.126
	Antimony	99.4	96.5	97.3				0.836
	Arsenic	100	101	99.0	102			2.12
	Arsenic	98.2	111	114				2.40
	Barium	104	106	108	109			1.35
	Beryllium	99.7	98.4	99.3	101			0.912
	Beryllium	91.3	105	104				1.45
	Boron	106	109	107	107			1.45
	Cadmium	101	102	103	105			1.14
	Cadmium	98.9	89.0	93.5				4.90
	Chromium	97.6	101	100	102			0.893
	Chromium	96.4	97.6	102				4.66
	Cobalt	101	102	101	102			0.731
	Cobalt	98.3	113	117				3.65
	Copper	98.4	99.9	99.3	98.5			0.536
	Copper	94.2	106	109				3.49
	Lead	99.5	102	101	101			0.534
	Lead	98.2	106	109				2.86
	Manganese	98.2	102	101	103			0.964
	Manganese	98.0	92.4	99.3				4.42
	Molybdenum	101	102	101	105			0.806
	Molybdenum	98.0	113	120				4.54
	Nickel	99.0	101	100	100			0.845
	Nickel	95.9	116	121				4.34
	Selenium	98.1	98.8	98.4	99.2			0.367
	Selenium	96.1	97.7	99.2				1.53
	Silver	104	104	103	106			1.07
	Silver	101	89.4	91.8				2.70
	Thallium	102	104	104	104			0.305
EPA 350.1 Rev. 2.0	Ammonia-N	93.4	101	99.0				1.66
	Ammonia-N	96.8	99.8	101				0.665
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	93.4	97.0	103				4.69
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	98.6	98.6				0.0
EPA 365.1 Rev. 2.0	Total-P	102	95.4	93.2				2.08

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Acetochlor	94.8	85.9	101			16.4
	Alachlor	85.4	86.3	113			26.7
	Aldrin	50.7	54.8	59.6			8.38
	Alpha-BHC	89.7	90.1	91.8			1.91
	Alpha-Chlordane	73.5	69.0	77.5			11.6
	Ametryn	88.3	106	108			2.40
	Atrazine	97.1	93.9	106			8.56
	Atrazine Desethyl	51.8	69.4	68.9			0.599
	Azinphos Methyl	87.3	92.3	93.1			0.811
	Azoxystrobin	115	118	121			2.52
	Beta-BHC	115	139	180			25.5
	Beta-Cyfluthrin	84.2	69.1	99.1			35.7
	Bifenthrin	61.6	69.4	65.6			5.70
	Bromacil	65.4	79.5	81.1			2.01
	Butylate	49.7	53.4	56.1			4.86
	Caffeine	96.8	101	101			0.678
	Carbophenothion	69.0	62.6	57.3			8.86
	Carfentrazone Ethyl	70.3	76.3	65.7			15.0
	Chlorfenapyr	60.0	62.6	59.8			4.51
	Chlorothalonil	170	287	387			29.6
	Chlorpyrifos Ethyl	83.7	74.4	83.0			10.9
	Chlorpyrifos Methyl	85.5	67.1	72.8			8.12
	Cis-Nonachlor	70.1	52.8	62.9			17.5
	Coumaphos	68.3	60.1	56.5			6.11
	Cyanazine	63.4	62.6	62.7			0.175
	Cypermethrin	89.5	78.3	107			30.6
	Cyprodinil	78.9	92.2	95.1			3.11
	Dacthal	92.6	85.3	93.8			9.53
	DDD-p,p'	74.1	59.2	72.6			20.3
	DDE-p,p'	70.6	61.9	72.0			15.0
	DDT-p,p'	70.5	66.0	73.0			10.1
	Delta-BHC	123	148	193			26.2
	Deltamethrin	85.7	28.5	99.5			111
	Demeton	67.2	60.1	73.2			19.6
	Diazinon	84.2	105	120			13.0
	Dichlobenil	85.2	54.3	68.7			23.4
	Dicofol	69.2	64.5	77.3			18.0
	Dieldrin	77.4	67.7	80.0			16.7
	Difenoconazole	77.8	85.9	71.8			17.9
	Dimethenamid	73.0	68.3	88.8			26.1
	Dimethomorph	176	170	216			22.9
	Disulfoton	74.3	81.9	83.1			1.41
	Dithiopyr	83.9	99.8	105			5.26
	Endosulfan I	79.2	74.7	86.0			14.1
	Endosulfan II	84.2	67.1	81.8			19.8
	Endosulfan Sulfate	96.4	80.4	97.3			19.1
	Endrin	79.2	71.2	78.4			9.68
	Endrin Aldehyde	90.5	70.7	59.2			17.7
	Endrin Ketone	102	97.7	103			5.60
	EPTC	44.5	37.7	51.0			30.0
	Esfenvalerate	80.3	78.4	105			28.9
	Ethalfuralin	70.6	66.1	73.8			10.9
	Ethion	44.4	59.8	41.5			36.2
	Ethoprop	90.9	85.2	82.9			2.76

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Etridiazole	55.3	57.8	75.3			26.3
	Fenamiphos	59.0	59.0	68.7			15.2
	Fenbuconazole	92.7	85.8	82.5			3.94
	Fenpropathrin	74.8	65.1	85.6			27.2
	Fipronil	98.2	95.5	75.9			23.0
	Fipronil Desulfinyl	89.8	110	112			1.63
	Fipronil Sulfide	102	66.3	49.0			29.9
	Fipronil Sulfone	86.3	66.4	47.5			33.1
	Fluazifop-P-butyl	95.9	66.1	58.4			12.4
	Fludioxonil	66.1	81.2	85.7			5.39
	Flumioxazin	112	103	120			15.0
	Flutolanil	61.1	71.8	72.4			0.789
	Fluxapyroxad	53.1	90.8	86.9			2.60
	Fonofos	85.1	67.1	87.7			26.6
	Gamma-BHC	91.8	96.4	99.8			3.49
	Gamma-Chlordane	68.7	65.4	77.4			16.7
	Heptachlor	62.2	62.1	66.8			7.18
	Heptachlor Epoxide	84.7	80.2	90.7			12.4
	Hexachlorobenzene	66.3	73.1	71.5			2.25
	Hexazinone	86.1	86.0	94.1			9.01
	Imazalil	42.0	72.9	96.5			27.9
	Iprodione	73.1	76.0	68.3			10.6
	Kepone	88.0	72.3	101			33.2
	Lambda-Cyhalothrin	76.2	68.9	99.4			36.2
	Loratadine	188	158	171			7.99
	Malathion	91.4	83.1	90.0			8.01
	Metalaxyl	85.5	75.6	92.9			20.6
	Methoprene	62.5	58.6	71.3			19.6
	Methoxychlor	84.9	90.6	107			16.9
	Metolachlor	88.1	94.8	109			14.3
	Metribuzin	86.6	84.7	57.8			37.9
	Mevinphos	65.5	62.9	71.7			13.1
	MGK-264	83.7	82.2	89.7			8.72
	Mirex	55.8	45.9	56.3			20.5
	Molinate	65.2	64.9	86.4			28.4
	Myclobutanil	72.5	101	102			1.06
	Naled	64.0	63.5	61.4			3.32
	Napropamide	57.3	62.9	68.7			8.76
	Norflurazon	71.0	67.1	69.2			3.03
	Oxadiazon	65.2	66.3	76.7			13.0
	Oxychlordane	70.5	71.7	75.1			4.65
	Oxyfluorfen	81.0	101	108			7.34
	Parathion Ethyl	95.3	89.0	83.0			6.99
	Parathion Methyl	104	105	101			3.89
	Pendimethalin	87.0	121	93.1			26.2
	Permethrin	78.7	91.2	91.9			0.742
	Phenothrin	54.0	81.4	71.5			12.9
	Phenytol	8.77	15.1	11.3			28.4
	Phorate	90.5	92.9	86.8			6.78
	Piperonyl Butoxide	107	132	152			14.1
	Prallethrin	70.8	69.3	76.3			9.67
	Prodiamine	59.2	61.9	130			70.8
	Prometon	77.6	64.6	73.2			12.4
	Prometryn	71.8	92.4	98.0			5.83

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Pronamide	99.8	114	128		11.0
	Propanil	74.5	81.0	90.1		10.7
	Propargite	48.7	57.8	52.4		9.70
	Propiconazole	69.8	67.4	69.3		2.09
	Pyraflufen Ethyl	79.7	60.9	63.3		3.87
	Pyridaben	80.3	64.4	67.6		4.91
	Pyriproxyfen	69.0	79.4	78.1		1.61
	Simazine	83.7	84.3	109		25.1
	Stirophos	37.0	41.1	38.1		7.49
	Sulfentrazone	38.1	73.8	62.1		17.1
	Tau-Fluvalinate	74.4	65.5	93.8		35.5
	Tebuconazole	34.1	48.2	36.5		27.7
	Terbufos	103	92.1	96.5		4.69
	Terbuthylazine	93.8	97.5	104		6.53
	Tetramethrin	85.3	95.2	119		21.9
	Thiobencarb	81.0	86.6	102		16.1
	Trans-Nonachlor	67.1	61.9	73.7		17.3
	Triadimefon	75.1	82.4	85.7		3.98
	Triclosan Methyl	77.5	67.3	76.8		13.1
	Trifluralin	71.2	66.5	74.6		11.5
EPA 8276	Chlordane	87.0	81.9	92.7		12.4
	Toxaphene	81.2	82.4	102		21.7
EPA 8321B	2,4-D	65.5	71.1	73.6		3.28
	2,4,5-T	56.7	60.7	56.7		6.77
	3-Hydroxycarbofuran	83.2	105	107		1.57
	Acesulfame K	79.5	125	120		4.09
	Acetaminophen	57.6	96.2	92.4		3.96
	Acetamiprid	85.4	87.8	103		15.6
	Afidopyropen	50.0	61.1	69.5		12.9
	Aldicarb	57.4	86.0	73.0		16.4
	Aldicarb Sulfone	93.6	122	108		12.1
	Aldicarb Sulfoxide	90.4	52.1	48.2		7.73
	AMPA	122	86.9	109		22.9
	Bentazon	132	108	124		6.07
	Benzovindiflupyr	83.3	81.0	86.5		6.58
	Carbamazepine	77.8	92.8	92.6		0.0807
	Carbaryl	83.4	70.9	69.8		1.52
	Carbofuran	98.0	94.6	83.6		12.3
	Clothianidin	96.5	106	111		4.93
	Dinotefuran	85.7	109	115		4.83
	Diuron	75.6	69.9	82.1		14.6
	Endothall	65.7	87.6	86.5		1.27
	Fenuron	117	117	126		7.30
	Fluridone	77.6	74.7	80.3		6.41
	Glufosinate	108	98.7	112		12.6
	Glyphosate	120	77.4	86.5		11.1
	Hydrocodone	89.3	95.7	113		16.7
	Ibuprofen	80.7	48.2	48.1		0.364
	Imazapyr	92.7	82.7	105		20.7
	Imidacloprid	97.4	101	123		18.9
	Linuron	63.1	75.8	81.4		7.14
	Mandestrobin	82.6	82.5	90.0		8.62
	MCPP	74.2	79.6	80.9		1.69
	Methiocarb	77.4	67.5	71.9		6.32

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Methomyl	89.4	94.9	90.1			5.14
	Naproxen	52.2	66.2	63.1			4.70
	Oxamyl	92.4	102	97.2			4.89
	Primidone	101	66.6	123			34.6
	Propoxur	82.4	88.2	87.2			1.14
	Pyraclostrobin	73.1	72.4	77.3			6.48
	Silvex	52.8	58.0	61.7			6.03
	Sucralose	88.3	96.1	90.9			5.56
	Thiamethoxam	85.0	100	124			21.0
	Tolfenpyrad	49.2	46.2	38.0			19.5
	Triclopyr	57.9	66.6	71.9			7.71
	Total Alkalinity	98.1				1.38	
SM 2320 B-2011	Total Alkalinity	98.5				1.42	
SM 4500-F- C-2011	Fluoride	96.9	93.4	95.6			1.50
	Fluoride	98.3	98.3	97.7			0.492
SM 5310 B-2011	Organic Carbon	99.0	94.1	97.0			2.50

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2316134, 2316135, 2316136, 2316140
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2316162, 2316163, 2316164, 2316165
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2316162, 2316163, 2316164, 2316165
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2316137, 2316138, 2316139, 2316141
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2316137, 2316138, 2316139, 2316141
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2316137, 2316138, 2316139, 2316141
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2316137, 2316138, 2316139, 2316141
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2316160
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2316161
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2316160
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2316158
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2316159
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2316134, 2316135, 2316136, 2316140
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2316165
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2316134, 2316135, 2316136, 2316140
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2316134, 2316135, 2316136, 2316140
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2316137, 2316138, 2316139, 2316141

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	04/01/2022			04/01/2022 13:45	Anna M. Plaviak	2316134
	04/01/2022			04/01/2022 14:09	Anna M. Plaviak	2316135
	04/01/2022			04/01/2022 14:11	Anna M. Plaviak	2316136
	04/01/2022			04/01/2022 14:12	Anna M. Plaviak	2316140
EPA 200.7 Rev. 4.4	04/01/2022	04/06/2022 12:30	Emily M Philpot	04/12/2022 21:03	Josef B Mick	2316165
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/13/2022 23:28	Josef B Mick	2316162
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/13/2022 23:36	Josef B Mick	2316162
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/13/2022 23:44	Josef B Mick	2316163
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/13/2022 23:52	Josef B Mick	2316163
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/14/2022 00:00	Josef B Mick	2316164
EPA 200.8 Rev. 5.4	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/14/2022 00:08	Josef B Mick	2316164
	04/01/2022	04/06/2022 12:30	Emily M Philpot	04/07/2022 14:43	Alexander Thompson	2316165
	04/01/2022	04/06/2022 12:30	Emily M Philpot	04/11/2022 14:19	Alexander Thompson	2316165
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 14:58	Alexander Thompson	2316162
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 15:07	Alexander Thompson	2316163
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 16:53	Alexander Thompson	2316162
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 18:20	Alexander Thompson	2316163
	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/08/2022 18:29	Alexander Thompson	2316164
EPA 350.1 Rev. 2.0	04/01/2022	04/07/2022 10:25	Megan Whitefoot	04/11/2022 13:03	Alexander Thompson	2316164
	04/01/2022			04/05/2022 13:21	Ping Hua	2316137
	04/01/2022			04/07/2022 11:48	Ping Hua	2316138
	04/01/2022			04/07/2022 11:52	Ping Hua	2316139
EPA 351.2 Rev. 2.0	04/01/2022			04/07/2022 11:53	Ping Hua	2316141
	04/01/2022	04/08/2022 09:39	Samantha L Bates	04/14/2022 15:10	Alexandra J Mattheus	2316137
	04/01/2022	04/08/2022 09:39	Samantha L Bates	04/14/2022 15:12	Alexandra J Mattheus	2316138
	04/01/2022	04/08/2022 09:39	Samantha L Bates	04/14/2022 15:14	Alexandra J Mattheus	2316139
EPA 353.2 Rev. 2.0	04/01/2022	04/08/2022 09:39	Samantha L Bates	04/14/2022 15:15	Alexandra J Mattheus	2316141
	04/01/2022			04/05/2022 09:45	Beverly Y. Sanders	2316137
	04/01/2022			04/05/2022 09:50	Beverly Y. Sanders	2316138
	04/01/2022			04/05/2022 09:52	Beverly Y. Sanders	2316139
EPA 365.1 Rev. 2.0	04/01/2022			04/05/2022 09:53	Beverly Y. Sanders	2316141
	04/01/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/08/2022 12:02	James L Waggeberby	2316139
	04/01/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/08/2022 12:06	James L Waggeberby	2316137
	04/01/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/08/2022 12:07	James L Waggeberby	2316138
EPA 8270E	04/01/2022	04/07/2022 10:00	Simonne.V. Calhoun	04/08/2022 12:08	James L Waggeberby	2316141
	04/01/2022	04/06/2022 08:00	Fe-Val Siddell	04/08/2022 23:08	Vandana T. Nagar	2316160
	04/01/2022	04/07/2022 08:00	Fe-Val Siddell	04/12/2022 16:47	Michael Poppell	2316161
	04/01/2022	04/07/2022 08:00	Fe-Val Siddell	04/15/2022 21:22	Michael Poppell	2316161
	04/01/2022	04/07/2022 08:00	Fe-Val Siddell	04/15/2022 21:49	Michael Poppell	2316161
	04/01/2022	04/15/2022 08:00	Fe-Val Siddell	04/19/2022 00:36	Michael Poppell	2316161

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8276	04/01/2022	04/06/2022 08:00	Fe-Val Siddell	04/09/2022 02:28	Arthur Maknenko	2316160
EPA 8321B	04/01/2022	04/01/2022 12:30	Umesh Chiluwal	04/01/2022 15:26	Manjita Shrestha	2316159
	04/01/2022	04/01/2022 12:30	Umesh Chiluwal	04/02/2022 01:24	Manjita Shrestha	2316159
	04/01/2022	04/04/2022 09:30	June Rhew	04/05/2022 10:11	Juyoung Kim	2316159
	04/01/2022	04/05/2022 08:30	June Rhew	04/06/2022 08:03	Juyoung Kim	2316158
	04/01/2022			04/06/2022 22:55	Dale L. Simmons	2316134
SM 2320 B-2011	04/01/2022			04/06/2022 23:09	Dale L. Simmons	2316135
	04/01/2022			04/06/2022 23:22	Dale L. Simmons	2316136
	04/01/2022			04/08/2022 10:39	Dale L. Simmons	2316140
	04/01/2022			04/12/2022 21:03	Josef B Mick	2316165
	04/01/2022			04/05/2022 14:26	Blanca Fach	2316134, 2316135, 2316136, 2316140
SM 2340 B-2011	04/01/2022			04/06/2022 18:34	Dale L. Simmons	2316134
SM 2540 D-2011	04/01/2022			04/06/2022 18:39	Dale L. Simmons	2316135
SM 4500-F- C-2011	04/01/2022			04/06/2022 18:44	Dale L. Simmons	2316136
	04/01/2022			04/08/2022 10:39	Dale L. Simmons	2316140
	04/01/2022			04/07/2022 23:49	Khloe J Berg	2316137
	04/01/2022			04/08/2022 00:29	Khloe J Berg	2316138
	04/01/2022			04/08/2022 00:42	Khloe J Berg	2316139
SM 5310 B-2011	04/01/2022			04/08/2022 00:59	Khloe J Berg	2316141