

Chemical Analysis Report

NE-DIST-2022-01-11-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **LSJR South West 2022**

Request ID: **RQ-2022-01-10-24**

Customer: **NE-DIST**

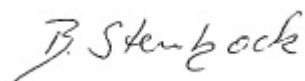
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 03-FEB-2022 17:55



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: Swimming Pen Creek at Eagles Creek Dr.

Collection Date/Time: 01/10/2022 10:00

Field ID: G2NE1188

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298536	EPA 200.7 Rev. 4.4	Calcium	30.7		mg/L	P408482	
		Iron	730		ug/L	P408482	
		Magnesium	3.72		mg/L	P408482	
		Potassium	3.0		mg/L	P408482	
		Sodium	19.2		mg/L	P408482	
		Strontium	150		ug/L	P408482	
		Tin	3.0	U	ug/L	P408482	
		Titanium	1.3	I	ug/L	P408482	
		Vanadium	2.0	U	ug/L	P408482	
		Zinc	5.0	U	ug/L	P408482	
	EPA 200.8 Rev. 5.4	Aluminum	53		ug/L	P408482	
		Antimony	0.10	I	ug/L	P408482	
		Arsenic	0.67		ug/L	P408482	
		Barium	29.4		ug/L	P408482	
		Beryllium	0.015	I	ug/L	P408482	
		Boron**	38.6		ug/L	P408482	
		Cadmium	0.020	U	ug/L	P408482	
		Chromium	0.40	U	ug/L	P408482	
		Cobalt	0.087		ug/L	P408482	
		Copper	2.21		ug/L	P408482	
		Lead	0.20	U	ug/L	P408482	
		Manganese	13.2		ug/L	P408482	
		Molybdenum	0.57	I	ug/L	P408482	
		Nickel	0.56	I	ug/L	P408482	
		Selenium	0.20	U	ug/L	P408482	
		Silver	0.010	U	ug/L	P408482	
		Thallium	0.10	U	ug/L	P408482	
	SM 2340B	Hardness	92.0		mg/L	P408482	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Swimming Pen CR at SR 220

Collection Date/Time: 01/10/2022 10:20

Field ID: 20030191

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298507	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P408356	
	EPA 300.0 Rev. 2.1	Chloride	470		mg Cl/L	P409038	
		Sulfate	86		mg SO4/L	P409041	
		Color (true)**	100		PCU	P408370	
	SM 2320 B-2011	Total Alkalinity	62		mg CaCO3/L	P408539	
	SM 2540 C-2011	TDS	934		mg/L	P408872	
	SM 2540 D-2011	TSS	5	I	mg/L	P408772	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P408542	
2298508	EPA 350.1 Rev. 2.0	Ammonia-N	0.025		mg N/L	P408717	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P408617	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.022		mg N/L	P408497	
	EPA 365.1 Rev. 2.0	Total-P	0.056		mg P/L	P408378	MS
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P408527	
2298509	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P408352	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Little Black Creek at SR 220

Collection Date/Time: 01/10/2022 10:50

Field ID: 20030667

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298532	EPA 8270E	Aldrin	0.66	U	ng/L	P408463	
		Alpha-BHC	0.10	U	ng/L	P408463	
		Alpha-Chlordane	0.20	U	ng/L	P408463	
		Beta-BHC	0.10	U	ng/L	P408463	
		Beta-Cyfluthrin**	1.3	U	ng/L	P408463	
		Bifenthrin**	0.51	U	ng/L	P408463	
		Carbophenothion	0.92	U	ng/L	P408463	
		Chlorothalonil	1.3	U	ng/L	P408463	
		Cis-Nonachlor**	0.20	U	ng/L	P408463	
		Cypermethrin	1.5	U	ng/L	P408463	
		Dacthal**	0.15	U	ng/L	P408463	
		DDD-p,p'	0.26	U	ng/L	P408463	
		DDE-p,p'	0.20	U	ng/L	P408463	
		DDT-p,p'	0.26	U	ng/L	P408463	
		Delta-BHC	0.41	U	ng/L	P408463	
		Deltamethrin**	1.3	U	ng/L	P408463	
		Dichlobenil**	0.26	U	ng/L	P408463	RPD
		Dicofol	1.3	U	ng/L	P408463	
		Dieldrin	0.41	U	ng/L	P408463	
		Endosulfan I	0.41	U	ng/L	P408463	
		Endosulfan II	0.41	U	ng/L	P408463	
		Endosulfan Sulfate	0.31	U	ng/L	P408463	
		Endrin	0.41	U	ng/L	P408463	
		Endrin Aldehyde	0.77	U	ng/L	P408463	
		Endrin Ketone	0.41	U	ng/L	P408463	
		Esfenvalerate**	0.77	U	ng/L	P408463	
		Ethalfuralin**	0.15	U	ng/L	P408463	
		Fenpropathrin**	0.26	U	ng/L	P408463	
		Gamma-BHC	0.13	U	ng/L	P408463	
		Gamma-Chlordane	0.20	U	ng/L	P408463	
		Heptachlor	0.20	U	ng/L	P408463	
		Heptachlor Epoxide	0.26	U	ng/L	P408463	
		Hexachlorobenzene	1.0	U	ng/L	P408463	
		Kepone**	5.1	UJ	ng/L	P408463	CCV
		Lambda-Cyhalothrin**	0.77	U	ng/L	P408463	
		Methoprene**	0.77	U	ng/L	P408463	
		Methoxychlor	0.31	U	ng/L	P408463	
		MGK-264**	0.20	U	ng/L	P408463	
		Mirex	0.71	U	ng/L	P408463	
		Oxychlordane**	0.31	U	ng/L	P408463	
		Permethrin	1.6	U	ng/L	P408463	
		Phenothrin**	0.92	U	ng/L	P408463	
		Piperonyl Butoxide**	0.15	UJ	ng/L	P408463	CCV
		Prallethrin**	2.0	U	ng/L	P408463	

Field ID: 20030667

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298532	EPA 8270E	Tau-Fluvalinate**	0.26	U	ng/L	P408463	CCV
		Tetramethrin**	0.77	UJ	ng/L	P408463	
		Trans-Nonachlor**	0.20	U	ng/L	P408463	
		Triclosan Methyl**	0.15	U	ng/L	P408463	
		Trifluralin	0.20	U	ng/L	P408463	
	EPA 8276	Chlordane	2.6	U	ng/L	P408463	
		Toxaphene	15	U	ng/L	P408463	

Ref. Method and Comment:

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

Sample Location: Little Black CR at SR 21

Collection Date/Time: 01/10/2022 11:25

Field ID: 20030629

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298533	EPA 8270E	Aldrin	0.66	U	ng/L	P408463	
		Alpha-BHC	0.10	U	ng/L	P408463	
		Alpha-Chlordane	0.20	U	ng/L	P408463	
		Beta-BHC	0.10	U	ng/L	P408463	
		Beta-Cyfluthrin**	1.3	U	ng/L	P408463	
		Bifenthrin**	0.51	U	ng/L	P408463	
		Carbophenothion	0.92	U	ng/L	P408463	
		Chlorothalonil	1.3	U	ng/L	P408463	
		Cis-Nonachlor**	0.20	U	ng/L	P408463	
		Cypermethrin	1.5	U	ng/L	P408463	
		Dacthal**	0.15	U	ng/L	P408463	
		DDD-p,p'	0.26	U	ng/L	P408463	
		DDE-p,p'	0.20	U	ng/L	P408463	
		DDT-p,p'	0.26	U	ng/L	P408463	
		Delta-BHC	0.41	U	ng/L	P408463	
		Deltamethrin**	1.3	U	ng/L	P408463	
		Dichlobenil**	0.26	U	ng/L	P408463	RPD
		Dicofol	1.3	U	ng/L	P408463	
		Dieldrin	0.54	I	ng/L	P408463	
		Endosulfan I	0.41	U	ng/L	P408463	
		Endosulfan II	0.41	U	ng/L	P408463	
		Endosulfan Sulfate	0.31	U	ng/L	P408463	
		Endrin	0.41	U	ng/L	P408463	
		Endrin Aldehyde	0.77	U	ng/L	P408463	
		Endrin Ketone	0.41	U	ng/L	P408463	
		Esfenvalerate**	0.77	U	ng/L	P408463	
		Ethalfuralin**	0.15	U	ng/L	P408463	
		Fenpropathrin**	0.26	U	ng/L	P408463	
		Gamma-BHC	0.13	U	ng/L	P408463	
		Gamma-Chlordane	0.20	U	ng/L	P408463	
		Heptachlor	0.20	U	ng/L	P408463	
		Heptachlor Epoxide	0.26	U	ng/L	P408463	
		Hexachlorobenzene	1.0	U	ng/L	P408463	
		Kepone**	5.1	UJ	ng/L	P408463	CCV
		Lambda-Cyhalothrin**	0.77	U	ng/L	P408463	
		Methoprene**	0.77	U	ng/L	P408463	
		Methoxychlor	0.31	U	ng/L	P408463	
		MGK-264**	0.20	U	ng/L	P408463	
		Mirex	0.72	U	ng/L	P408463	
		Oxychlordane**	0.31	U	ng/L	P408463	
		Permethrin	1.6	U	ng/L	P408463	
		Phenothrin**	0.92	U	ng/L	P408463	
		Piperonyl Butoxide**	0.15	UJ	ng/L	P408463	CCV
		Prallethrin**	2.0	U	ng/L	P408463	

Field ID: 20030629

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298533	EPA 8270E	Tau-Fluvalinate**	0.26	U	ng/L	P408463	CCV
		Tetramethrin**	0.77	UJ	ng/L	P408463	
		Trans-Nonachlor**	0.20	U	ng/L	P408463	
		Triclosan Methyl**	0.15	U	ng/L	P408463	
		Trifluralin	0.20	U	ng/L	P408463	
	EPA 8276	Chlordane	2.6	U	ng/L	P408463	
		Toxaphene	15	U	ng/L	P408463	

Ref. Method and Comment:

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

Sample Location: Peters Creek at Rosemary Hill RD

Collection Date/Time: 01/10/2022 13:40

Field ID: 20030571

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298535	EPA 8321B	2,4-D	0.0020	U	ug/L	P408364	
		Acesulfame K	0.10	U	ug/L	P408366	
		2,4,5-T	0.0040	U	ug/L	P408364	
		AMPA	0.10	U	ug/L	P408366	
		Acetaminophen	0.0080	U	ug/L	P408364	
		Acetamiprid	0.0020	U	ug/L	P408364	
		Endothall	0.25	U	ug/L	P408366	
		Glufosinate	0.10	U	ug/L	P408366	
		Glyphosate	0.10	U	ug/L	P408366	
		Afidopyropen	0.0020	U	ug/L	P408364	
		Bentazon	8.0E-04	U	ug/L	P408364	
		Sucralose	0.61		ug/L	P408366	
		Benzovindiflupyr	0.0020	U	ug/L	P408364	
		Carbamazepine	8.0E-04	U	ug/L	P408364	
		Clothianidin	0.0020	U	ug/L	P408364	
		Dinotefuran	0.0020	U	ug/L	P408364	
		Diuron	0.0020	U	ug/L	P408364	
		Fenuron	0.016	U	ug/L	P408364	
		Fluridone	8.0E-04	U	ug/L	P408364	
		Imazapyr	0.0040	U	ug/L	P408364	
		Hydrocodone	0.0020	U	ug/L	P408364	
		Ibuprofen	0.020	U	ug/L	P408364	MS, RPD
		Imidacloprid	0.0020	U	ug/L	P408364	
		Linuron	0.0040	U	ug/L	P408364	RPD
		Mandestrobin	0.0020	U	ug/L	P408364	
		MCPP	0.0040	U	ug/L	P408364	
		Naproxen	0.0080	U	ug/L	P408364	
		Primidone	0.0040	U	ug/L	P408364	
		Pyraclostrobin	0.0020	U	ug/L	P408364	
		Silvex	0.0040	U	ug/L	P408364	
		Thiamethoxam	0.0020	U	ug/L	P408364	
		Tolfenpyrad	0.0020	U	ug/L	P408364	
		Triclopyr	0.0040	U	ug/L	P408364	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: FB

Collection Date/Time: 01/10/2022 11:05

Field ID: FB_01102022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298534	EPA 8270E	Aldrin	0.71	U	ng/L	P408463	
		Alpha-BHC	0.11	U	ng/L	P408463	
		Alpha-Chlordane	0.22	U	ng/L	P408463	
		Beta-BHC	0.11	U	ng/L	P408463	
		Beta-Cyfluthrin**	1.4	U	ng/L	P408463	
		Bifenthrin**	0.54	U	ng/L	P408463	
		Carbophenothion	0.98	U	ng/L	P408463	
		Chlorothalonil	1.4	U	ng/L	P408463	
		Cis-Nonachlor**	0.22	U	ng/L	P408463	
		Cypermethrin	1.6	U	ng/L	P408463	
		Dacthal**	0.16	U	ng/L	P408463	
		DDD-p,p'	0.27	U	ng/L	P408463	
		DDE-p,p'	0.22	U	ng/L	P408463	
		DDT-p,p'	0.27	U	ng/L	P408463	
		Delta-BHC	0.44	U	ng/L	P408463	
		Deltamethrin**	1.4	U	ng/L	P408463	
		Dichlobenil**	0.27	U	ng/L	P408463	RPD
		Dicofol	1.4	U	ng/L	P408463	
		Dieldrin	0.44	U	ng/L	P408463	
		Endosulfan I	0.44	U	ng/L	P408463	
		Endosulfan II	0.44	U	ng/L	P408463	
		Endosulfan Sulfate	0.33	U	ng/L	P408463	
		Endrin	0.44	U	ng/L	P408463	
		Endrin Aldehyde	0.82	U	ng/L	P408463	
		Endrin Ketone	0.44	U	ng/L	P408463	
		Esfenvalerate**	0.82	U	ng/L	P408463	
		Ethalfuralin**	0.16	U	ng/L	P408463	
		Fenpropathrin**	0.27	U	ng/L	P408463	
		Gamma-BHC	0.14	U	ng/L	P408463	
		Gamma-Chlordane	0.22	U	ng/L	P408463	
		Heptachlor	0.22	U	ng/L	P408463	
		Heptachlor Epoxide	0.27	U	ng/L	P408463	
		Hexachlorobenzene	1.1	U	ng/L	P408463	
		Kepone**	5.4	UJ	ng/L	P408463	CCV
		Lambda-Cyhalothrin**	0.82	U	ng/L	P408463	
		Methoprene**	0.82	U	ng/L	P408463	
		Methoxychlor	0.33	U	ng/L	P408463	
		MGK-264**	0.32	I	ng/L	P408463	
		Mirex	0.76	U	ng/L	P408463	
		Oxychlordane**	0.33	U	ng/L	P408463	
		Permethrin	1.7	U	ng/L	P408463	
		Phenothrin**	0.98	U	ng/L	P408463	
		Piperonyl Butoxide**	0.16	UJ	ng/L	P408463	CCV
		Prallethrin**	2.2	U	ng/L	P408463	

Field ID: FB_01102022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2298534	EPA 8270E	Tau-Fluvalinate**	0.27	U	ng/L	P408463	
		Tetramethrin**	0.82	UJ	ng/L	P408463	CCV
		Trans-Nonachlor**	0.22	U	ng/L	P408463	
		Triclosan Methyl**	0.16	U	ng/L	P408463	
		Trifluralin	0.22	U	ng/L	P408463	
	EPA 8276	Chlordane	2.7	UJ	ng/L	P408463	SUR
		Toxaphene	16	UJ	ng/L	P408463	SUR

Ref. Method and Comment:

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes. Analytical results were confirmed by re-extraction and re-analysis.

EPA 8276: Reported results qualified with J due to surrogate below control limits; the sample was subsequently re-analyzed (after expiration) with acceptable surrogate recovery and the same analytical results were obtained. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P408356

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408482

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 200.8 Rev. 5.4
Batch ID: P408482

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409038

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409041

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408717

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408617

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408497

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408378

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408352

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P408463

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
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
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408463

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408463

Component	Result	Code	Units
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 8276

Batch ID: P408463

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: P408364

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P408364

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

Reference Method: EPA 8321B

Batch ID: P408366

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: SM 2120 B-2011

Batch ID: P408370

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P408539

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

Reference Method: SM 2540 C-2011

Batch ID: P408872

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P408772

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-2011
Batch ID: P408542

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P408527

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408482

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	103		P	85 - 115
Sodium	104		P	85 - 115
Strontium	100		P	85 - 115
Tin	104		P	85 - 115
Titanium	105		P	85 - 115
Vanadium	104		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408482

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	98.3		P	85 - 115
Arsenic	101		P	85 - 115
Barium	105		P	85 - 115
Beryllium	104		P	85 - 115
Boron	96.3		P	85 - 115
Cadmium	97.9		P	85 - 115
Chromium	99.4		P	85 - 115
Cobalt	99.9		P	85 - 115
Copper	103		P	85 - 115
Lead	95.8		P	85 - 115
Manganese	98.6		P	85 - 115
Molybdenum	99.5		P	85 - 115
Nickel	102		P	85 - 115
Selenium	99.8		P	85 - 115
Silver	99.0		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409038

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409041

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408717

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408617

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408497

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408378

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.7		P	90 - 110

Reference Method: EPA 8270E

Batch ID: P408463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	58.8		P	10 - 93.0
Alpha-BHC	94.8		P	75 - 106
Alpha-Chlordane	84.4		P	50 - 109
Beta-BHC	109		P	65 - 135
Beta-Cyfluthrin	74.1		P	23 - 167
Bifenthrin	57.6		P	11 - 123
Carbophenothion	49.4		P	18 - 96.0
Chlorothalonil	84.8		P	26 - 182
Cis-Nonachlor	76.9		P	40 - 111
Cypermethrin	83.3		P	25 - 155
Dacthal	98.1		P	73 - 112
DDD-p,p'	85.2		P	47 - 108
DDE-p,p'	77.6		P	48 - 107
DDT-p,p'	75.5		P	49 - 111
Delta-BHC	112		P	68 - 143
Deltamethrin	84.1		P	16 - 176
Dichlobenil	96.5		P	32 - 113
Dicofol	77.3		P	50 - 108
Dieldrin	84.1		P	56 - 110
Endosulfan I	84.3		P	60 - 105
Endosulfan II	89.0		P	50 - 120
Endosulfan Sulfate	95.0		P	55 - 121
Endrin	84.3		P	35 - 117
Endrin Aldehyde	84.9		P	36 - 116
Endrin Ketone	123		P	56 - 130
Esfenvalerate	66.6		P	10 - 179
Ethalfuralin	78.3		P	49 - 99.0
Fenpropathrin	76.0		P	35 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P408463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Gamma-BHC	101		P	72 - 115
Gamma-Chlordane	79.1		P	45 - 107
Heptachlor	72.6		P	41 - 100
Heptachlor Epoxide	90.8		P	58 - 106
Hexachlorobenzene	78.2		P	39 - 100
Kepone	134		P	10 - 191
Lambda-Cyhalothrin	68.6		P	10 - 186
Methoprene	47.0		P	10 - 129
Methoxychlor	94.9		P	61 - 111
MGK-264	85.8		P	20 - 123
Mirex	53.1		P	10 - 182
Oxychlordane	78.1		P	39 - 110
Permethrin	75.2		P	26 - 152
Phenothrin	47.3		P	10 - 109
Piperonyl Butoxide	96.1		P	27 - 142
Prallethrin	67.7		P	14 - 109
Tau-Fluvalinate	65.0		P	16 - 134
Tetramethrin	83.6		P	10 - 125
Trans-Nonachlor	78.7		P	45 - 107
Triclosan Methyl	87.6		P	60 - 110
Trifluralin	77.6		P	49 - 98.0

Reference Method: EPA 8276

Batch ID: P408463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.0		P	61 - 118
Toxaphene	67.6		P	51 - 122

Reference Method: EPA 8321B

Batch ID: P408364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	83.0		P	40 - 150
Acetaminophen	102		P	30 - 150
Acetamiprid	79.8		P	40 - 150
Afidopyropen	50.0		P	40 - 150
Bentazon	84.0		P	30 - 150
Benzovindiflupyr	81.4		P	40 - 150
Carbamazepine	82.0		P	40 - 150
Clothianidin	87.5		P	40 - 150
Dinotefuran	95.9		P	40 - 150
Diuron	101		P	40 - 150
Fenuron	92.9		P	40 - 150
Fluridone	87.7		P	40 - 150
Hydrocodone	90.2		P	40 - 150
Ibuprofen	131		P	40 - 150
Imazapyr	96.9		P	40 - 150
Imidacloprid	85.2		P	40 - 150
Linuron	85.4		P	40 - 150
Mandestrobin	95.3		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P408364

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MCPPE	106		P	40 - 150
Naproxen	88.4		P	40 - 150
Primidone	91.0		P	40 - 150
Pyraclostrobin	83.6		P	40 - 150
Silvex	82.0		P	40 - 150
Thiamethoxam	92.1		P	40 - 150
Tolfenpyrad	43.4		P	30 - 150
Triclopyr	96.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P408366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	94.4		P	40 - 150
AMPA	95.3		P	40 - 160
Endothall	83.6		P	40 - 150
Glufosinate	99.1		P	40 - 160
Glyphosate	91.2		P	40 - 160
Sucralose	96.4		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P408370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P408539

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.7		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P408542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P408527

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	100		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298497	Iron	109	108	P/P	80 - 120
2298497	Magnesium	108		P	80 - 120
2298497	Potassium	106		P	80 - 120
2298497	Sodium	106		P	80 - 120
2298497	Strontium	103	102	P/P	80 - 120
2298497	Tin	102	102	P/P	80 - 120
2298497	Titanium	105	103	P/P	80 - 120
2298497	Vanadium	105	104	P/P	80 - 120
2298497	Zinc	104	103	P/P	80 - 120
2298617	Iron	107		P	80 - 120
2298617	Magnesium	101		P	80 - 120
2298617	Potassium	103		P	80 - 120
2298617	Sodium	102		P	80 - 120
2298617	Strontium	99.6		P	80 - 120
2298617	Tin	97.9		P	80 - 120
2298617	Titanium	102		P	80 - 120
2298617	Vanadium	102		P	80 - 120
2298617	Zinc	99.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298497	Aluminum	101	99.8	P/P	80 - 120
2298497	Antimony	102	102	P/P	80 - 120
2298497	Arsenic	105	103	P/P	80 - 120
2298497	Barium	106	105	P/P	80 - 120
2298497	Beryllium	103	100	P/P	80 - 120
2298497	Boron	97.5	97.0	P/P	80 - 120
2298497	Cadmium	101	99.3	P/P	80 - 120
2298497	Chromium	105	104	P/P	80 - 120
2298497	Cobalt	103	102	P/P	80 - 120
2298497	Copper	103	102	P/P	80 - 120
2298497	Lead	99.2	98.9	P/P	80 - 120
2298497	Manganese	102	102	P/P	80 - 120
2298497	Molybdenum	103	104	P/P	80 - 120
2298497	Nickel	106	105	P/P	80 - 120
2298497	Selenium	103	102	P/P	80 - 120
2298497	Silver	100	98.7	P/P	80 - 120
2298497	Thallium	113	112	P/P	80 - 120
2298617	Aluminum	102		P	80 - 120
2298617	Antimony	104		P	80 - 120
2298617	Arsenic	107		P	80 - 120
2298617	Barium	107		P	80 - 120
2298617	Beryllium	106		P	80 - 120
2298617	Boron	102		P	80 - 120
2298617	Cadmium	102		P	80 - 120
2298617	Chromium	105		P	80 - 120
2298617	Cobalt	103		P	80 - 120
2298617	Copper	102		P	80 - 120
2298617	Lead	100		P	80 - 120
2298617	Manganese	103		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298617	Molybdenum	108		P	80 - 120
2298617	Nickel	104		P	80 - 120
2298617	Selenium	103		P	80 - 120
2298617	Silver	99.0		P	80 - 120
2298617	Thallium	111		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298247	Chloride	104		P	90 - 110
2298453	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409041

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298247	Sulfate	97.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P408717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298454	Ammonia-N	98.0	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P408617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2297922	Kjeldahl Nitrogen	105	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P408497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298793	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P408378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298503	Total-P	105	112	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P408352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298455	O-Phosphate-P	92.9	93.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298524	Aldrin	60.8		P	10 - 93.0
2298524	Aldrin	56.9		P	10 - 89.0
2298524	Alpha-BHC	93.2		P	75 - 106
2298524	Alpha-BHC	101		P	71 - 105
2298524	Alpha-Chlordane	76.2		P	50 - 109
2298524	Alpha-Chlordane	69.5		P	43 - 107
2298524	Beta-BHC	106		P	65 - 135
2298524	Beta-BHC	79.9		P	57 - 152
2298524	Beta-Cyfluthrin	94.0		P	23 - 167
2298524	Beta-Cyfluthrin	71.4		P	29 - 186
2298524	Bifenthrin	75.1		P	11 - 123
2298524	Bifenthrin	70.5		P	19 - 119
2298524	Carbophenothion	64.0		P	18 - 96.0
2298524	Carbophenothion	62.8		P	19 - 107
2298524	Chlorothalonil	76.1		P	26 - 182
2298524	Chlorothalonil	76.6		P	10 - 245
2298524	Cis-Nonachlor	64.3		P	40 - 111
2298524	Cis-Nonachlor	55.9		P	36 - 110
2298524	Cypermethrin	99.4		P	25 - 155
2298524	Cypermethrin	80.0		P	24 - 169
2298524	Dacthal	87.2		P	73 - 112
2298524	Dacthal	78.9		P	62 - 115
2298524	DDD-p,p'	78.5		P	47 - 108
2298524	DDD-p,p'	67.7		P	36 - 109
2298524	DDE-p,p'	69.7		P	48 - 107
2298524	DDE-p,p'	69.1		P	30 - 114
2298524	DDT-p,p'	76.6		P	49 - 111
2298524	DDT-p,p'	71.9		P	42 - 108
2298524	Delta-BHC	105		P	68 - 143
2298524	Delta-BHC	92.2		P	60 - 164
2298524	Deltamethrin	114		P	16 - 176
2298524	Deltamethrin	86.4		P	10 - 210
2298524	Dichlobenil	77.2		P	32 - 113
2298524	Dichlobenil	51.5		P	23 - 108
2298524	Dicofol	81.5		P	50 - 108
2298524	Dicofol	74.8		P	44 - 109
2298524	Dieldrin	71.4		P	56 - 110
2298524	Dieldrin	63.3		P	37 - 119
2298524	Endosulfan I	74.3		P	60 - 105
2298524	Endosulfan I	69.2		P	52 - 105
2298524	Endosulfan II	72.2		P	50 - 120
2298524	Endosulfan II	56.2		P	35 - 127
2298524	Endosulfan Sulfate	80.2		P	55 - 121
2298524	Endosulfan Sulfate	54.7		P	39 - 130
2298524	Endrin	76.1		P	35 - 117
2298524	Endrin	66.9		P	30 - 116
2298524	Endrin Aldehyde	75.8		P	36 - 116
2298524	Endrin Aldehyde	55.2		P	20 - 110
2298524	Endrin Ketone	103		P	56 - 130
2298524	Endrin Ketone	76.7		P	48 - 134
2298524	Esfenvalerate	84.8		P	10 - 179
2298524	Esfenvalerate	66.0		P	10 - 199

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298524	Ethalfuralin	79.7		P	49 - 99.0
2298524	Ethalfuralin	75.3		P	48 - 95.0
2298524	Fenpropathrin	88.6		P	35 - 119
2298524	Fenpropathrin	76.3		P	37 - 121
2298524	Gamma-BHC	95.7		P	72 - 115
2298524	Gamma-BHC	92.1		P	61 - 126
2298524	Gamma-Chlordane	74.6		P	45 - 107
2298524	Gamma-Chlordane	67.5		P	39 - 105
2298524	Heptachlor	68.2		P	41 - 100
2298524	Heptachlor	63.3		P	38 - 96.0
2298524	Heptachlor Epoxide	82.3		P	58 - 106
2298524	Heptachlor Epoxide	70.4		P	42 - 114
2298524	Hexachlorobenzene	78.5		P	39 - 100
2298524	Hexachlorobenzene	73.7		P	39 - 93.0
2298524	Kepone	106		P	10 - 191
2298524	Kepone	75.1		P	10 - 215
2298524	Lambda-Cyhalothrin	98.5		P	10 - 186
2298524	Lambda-Cyhalothrin	90.8		P	10 - 204
2298524	Methoprene	65.6		P	10 - 129
2298524	Methoprene	67.2		P	17 - 108
2298524	Methoxychlor	104		P	61 - 111
2298524	Methoxychlor	93.3		P	56 - 115
2298524	MGK-264	82.8		P	20 - 123
2298524	MGK-264	76.2		P	35 - 120
2298524	Mirex	55.5		P	10 - 182
2298524	Mirex	53.9		P	10 - 178
2298524	Oxychlordane	79.7		P	39 - 110
2298524	Oxychlordane	75.3		P	47 - 91.0
2298524	Permethrin	97.2		P	26 - 152
2298524	Permethrin	87.8		P	27 - 170
2298524	Phenothrin	78.7		P	10 - 109
2298524	Phenothrin	77.0		P	10 - 133
2298524	Piperonyl Butoxide	101		P	27 - 142
2298524	Piperonyl Butoxide	91.8		P	23 - 150
2298524	Prallethrin	70.4		P	14 - 109
2298524	Prallethrin	63.7		P	21 - 113
2298524	Tau-Fluvalinate	84.8		P	16 - 134
2298524	Tau-Fluvalinate	62.0		P	16 - 158
2298524	Tetramethrin	103		P	10 - 125
2298524	Tetramethrin	91.3		P	22 - 132
2298524	Trans-Nonachlor	79.0		P	45 - 107
2298524	Trans-Nonachlor	64.8		P	43 - 102
2298524	Triclosan Methyl	73.2		P	60 - 110
2298524	Triclosan Methyl	71.3		P	49 - 109
2298524	Trifluralin	79.6		P	49 - 98.0
2298524	Trifluralin	75.3		P	48 - 93.0

Reference Method: EPA 8276

Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299619	Chlordane	77.8	68.4	P/P	55 - 128

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P408463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299619	Toxaphene	75.2	86.9	P/P	29 - 164

Reference Method: EPA 8321B

Batch ID: P408364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298464	2,4-D	101	115	P/P	40 - 150
2298464	2,4,5-T	93.0	122	P/P	40 - 150
2298464	Acetaminophen	97.0	104	P/P	30 - 150
2298464	Acetamiprid	96.3	98.8	P/P	40 - 150
2298464	Afidopyropen	81.4	83.5	P/P	40 - 150
2298464	Bentazon	72.5	86.2	P/P	30 - 150
2298464	Benzovindiflupyr	85.5	105	P/P	40 - 150
2298464	Carbamazepine	86.4	114	P/P	40 - 150
2298464	Clothianidin	126	115	P/P	40 - 150
2298464	Dinotefuran	107	118	P/P	40 - 150
2298464	Diuron	97.4	121	P/P	40 - 150
2298464	Fenuron	98.2	103	P/P	40 - 150
2298464	Fluridone	96.6	108	P/P	40 - 150
2298464	Hydrocodone	101	101	P/P	40 - 150
2298464	Ibuprofen	69.3	154	P/F	40 - 150
2298464	Imazapyr	113	108	P/P	40 - 150
2298464	Linuron	79.8	123	P/P	40 - 150
2298464	Mandestrobin	103	104	P/P	40 - 150
2298464	MCPP	95.5	108	P/P	40 - 150
2298464	Naproxen	110	142	P/P	40 - 150
2298464	Primidone	122	120	P/P	40 - 150
2298464	Pyraclostrobin	100	107	P/P	40 - 150
2298464	Silvex	87.5	117	P/P	40 - 150
2298464	Thiamethoxam	111	123	P/P	40 - 150
2298464	Tolfenpyrad	56.6	66.2	P/P	30 - 150
2298464	Triclopyr	102	96.4	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P408366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298464	Acesulfame K	128	140	P/P	40 - 150
2298464	AMPA	97.0	93.1	P/P	40 - 160
2298464	Endothall	124	135	P/P	40 - 150
2298464	Glufosinate	108	101	P/P	40 - 160
2298464	Glyphosate	93.9	93.7	P/P	40 - 160
2298464	Sucralose	102	109	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P408542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298602	Fluoride	99.0	99.7	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P408527

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2298503	Organic Carbon	98.4	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P408356

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298492	Turbidity	2.47	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408482

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298497	Calcium	0.704	Spike	P	0 - 20
2298497	Iron	0.193	Spike	P	0 - 20
2298497	Magnesium	0.763	Spike	P	0 - 20
2298497	Potassium	0.278	Spike	P	0 - 20
2298497	Sodium	0.0437	Spike	P	0 - 20
2298497	Strontium	0.986	Spike	P	0 - 20
2298497	Tin	0.102	Spike	P	0 - 20
2298497	Titanium	1.37	Spike	P	0 - 20
2298497	Vanadium	0.983	Spike	P	0 - 20
2298497	Zinc	1.37	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408482

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298497	Aluminum	1.08	Spike	P	0 - 20
2298497	Antimony	0.0631	Spike	P	0 - 20
2298497	Arsenic	1.57	Spike	P	0 - 20
2298497	Barium	0.721	Spike	P	0 - 20
2298497	Beryllium	2.56	Spike	P	0 - 20
2298497	Boron	0.397	Spike	P	0 - 20
2298497	Cadmium	1.37	Spike	P	0 - 20
2298497	Chromium	0.515	Spike	P	0 - 20
2298497	Cobalt	0.635	Spike	P	0 - 20
2298497	Copper	0.345	Spike	P	0 - 20
2298497	Lead	0.324	Spike	P	0 - 20
2298497	Manganese	0.108	Spike	P	0 - 20
2298497	Molybdenum	0.572	Spike	P	0 - 20
2298497	Nickel	0.683	Spike	P	0 - 20
2298497	Selenium	0.476	Spike	P	0 - 20
2298497	Silver	1.62	Spike	P	0 - 20
2298497	Thallium	0.344	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409038

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298247	Chloride	0.197	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409041

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298247	Sulfate	0.0827	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P408717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298454	Ammonia-N	1.10	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2297922	Kjeldahl Nitrogen	1.81	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298793	NO2NO3-N	0.272	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298503	Total-P	5.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P408352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298455	O-Phosphate-P	0.857	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P408463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298524	Aldrin	6.74	Spike	P	0 - 37
2298524	Alpha-BHC	7.74	Spike	P	0 - 16
2298524	Alpha-Chlordane	9.18	Spike	P	0 - 28
2298524	Beta-BHC	28.3	Spike	P	0 - 32
2298524	Beta-Cyfluthrin	27.3	Spike	P	0 - 41
2298524	Bifenthrin	6.26	Spike	P	0 - 36
2298524	Carbophenothion	1.89	Spike	P	0 - 81
2298524	Chlorothalonil	0.639	Spike	P	0 - 54
2298524	Cis-Nonachlor	14.1	Spike	P	0 - 33

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P408463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298524	Cypermethrin	21.7	Spike	P	0 - 38
2298524	Dacthal	9.92	Spike	P	0 - 23
2298524	DDD-p,p'	14.9	Spike	P	0 - 35
2298524	DDE-p,p'	0.842	Spike	P	0 - 27
2298524	DDT-p,p'	6.37	Spike	P	0 - 31
2298524	Delta-BHC	13.4	Spike	P	0 - 30
2298524	Deltamethrin	27.6	Spike	P	0 - 76
2298524	Dichlobenil	39.8	Spike	F	0 - 33
2298524	Dicofol	8.65	Spike	P	0 - 24
2298524	Dieldrin	11.3	Spike	P	0 - 35
2298524	Endosulfan I	7.08	Spike	P	0 - 25
2298524	Endosulfan II	24.9	Spike	P	0 - 31
2298524	Endosulfan Sulfate	37.8	Spike	P	0 - 38
2298524	Endrin	12.9	Spike	P	0 - 53
2298524	Endrin Aldehyde	31.5	Spike	P	0 - 81
2298524	Endrin Ketone	29.5	Spike	P	0 - 33
2298524	Esfenvalerate	24.9	Spike	P	0 - 46
2298524	Ethalfuralin	5.69	Spike	P	0 - 22
2298524	Fenpropathrin	14.9	Spike	P	0 - 29
2298524	Gamma-BHC	3.81	Spike	P	0 - 17
2298524	Gamma-Chlordane	9.98	Spike	P	0 - 28
2298524	Heptachlor	7.41	Spike	P	0 - 28
2298524	Heptachlor Epoxide	15.6	Spike	P	0 - 23
2298524	Hexachlorobenzene	6.28	Spike	P	0 - 22
2298524	Kepone	33.8	Spike	P	0 - 61
2298524	Lambda-Cyhalothrin	8.17	Spike	P	0 - 52
2298524	Methoprene	2.46	Spike	P	0 - 38
2298524	Methoxychlor	11.1	Spike	P	0 - 29
2298524	MGK-264	8.29	Spike	P	0 - 41
2298524	Mirex	2.77	Spike	P	0 - 39
2298524	Oxychlordane	5.71	Spike	P	0 - 33
2298524	Permethrin	10.1	Spike	P	0 - 39
2298524	Phenothrin	2.19	Spike	P	0 - 52
2298524	Piperonyl Butoxide	9.33	Spike	P	0 - 91
2298524	Prallethrin	9.99	Spike	P	0 - 34
2298524	Tau-Fluvalinate	31.1	Spike	P	0 - 41
2298524	Tetramethrin	12.0	Spike	P	0 - 43
2298524	Trans-Nonachlor	19.8	Spike	P	0 - 31
2298524	Triclosan Methyl	2.68	Spike	P	0 - 24
2298524	Trifluralin	5.55	Spike	P	0 - 23

Reference Method: EPA 8276
Batch ID: P408463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299619	Chlordane	11.0	Spike	P	0 - 30
2299619	Toxaphene	14.5	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P408364

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298464	2,4-D	12.3	Spike	P	0 - 30
2298464	2,4,5-T	26.8	Spike	P	0 - 30
2298464	Acetaminophen	6.65	Spike	P	0 - 30
2298464	Acetamiprid	2.61	Spike	P	0 - 30
2298464	Afidopyropen	2.55	Spike	P	0 - 30
2298464	Bentazon	17.3	Spike	P	0 - 30
2298464	Benzovindiflupyr	20.6	Spike	P	0 - 30
2298464	Carbamazepine	27.9	Spike	P	0 - 30
2298464	Clothianidin	6.54	Spike	P	0 - 30
2298464	Dinotefuran	10.2	Spike	P	0 - 30
2298464	Diuron	20.3	Spike	P	0 - 30
2298464	Fenuron	4.90	Spike	P	0 - 30
2298464	Fluridone	11.3	Spike	P	0 - 30
2298464	Hydrocodone	0.0362	Spike	P	0 - 30
2298464	Ibuprofen	76.0	Spike	F	0 - 30
2298464	Imazapyr	4.08	Spike	P	0 - 30
2298464	Imidacloprid	6.97	Spike	P	0 - 30
2298464	Linuron	42.5	Spike	F	0 - 30
2298464	Mandestrobin	1.02	Spike	P	0 - 30
2298464	MCPP	12.2	Spike	P	0 - 30
2298464	Naproxen	25.6	Spike	P	0 - 30
2298464	Primidone	1.36	Spike	P	0 - 30
2298464	Pyraclostrobin	6.72	Spike	P	0 - 30
2298464	Silvex	28.8	Spike	P	0 - 30
2298464	Thiamethoxam	6.13	Spike	P	0 - 30
2298464	Tolfenpyrad	15.7	Spike	P	0 - 30
2298464	Triclopyr	5.69	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P408366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298464	Acesulfame K	9.50	Spike	P	0 - 30
2298464	AMPA	4.14	Spike	P	0 - 30
2298464	Endothall	7.94	Spike	P	0 - 30
2298464	Glufosinate	6.24	Spike	P	0 - 30
2298464	Glyphosate	0.124	Spike	P	0 - 30
2298464	Sucralose	5.95	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P408370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298492	Color (true)	0.969	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P408539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298602	Total Alkalinity	1.59	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P408872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298450	TDS	2.69	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P408542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298602	Fluoride	0.531	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P408527

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2298503	Organic Carbon	3.15	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2298532
Field Sample ID: 20030667

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.1	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	73.0	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	65.0	P	30 - 97.0
EPA 8276	PCNB	70.8	P	45 - 119

Lab Sample ID: 2298533
Field Sample ID: 20030629

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	64.7	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	68.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	68.6	P	30 - 97.0
EPA 8276	PCNB	73.8	P	45 - 119

Lab Sample ID: 2298534
Field Sample ID: FB_01102022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	33.0	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	52.9	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	28.3	F	30 - 97.0
EPA 8276	Decachlorobiphenyl	67.9	P	30 - 97.0
EPA 8276	PCNB	62.8	P	45 - 119
EPA 8276	PCNB	70.1	P	45 - 119

Lab Sample ID: 2298535
Field Sample ID: 20030571

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	133	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	118	P	30 - 160
EPA 8321B	Diuron-d6	98.8	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	98.7	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A109791

Included Lab Sample IDs: 2298509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A109792

Included Lab Sample IDs: 2298507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	98.5	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A109799

Included Lab Sample IDs: 2298507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.7	101	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109844

Included Lab Sample IDs: 2298508

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109860

Included Lab Sample IDs: 2298536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	103	P/P	90 - 110
Antimony	99.2	99.9	P/P	90 - 110
Arsenic	99.7	102	P/P	90 - 110
Barium	100	99.6	P/P	90 - 110
Beryllium	101	101	P/P	90 - 110
Boron	102	103	P/P	90 - 110
Cadmium	100	99.1	P/P	90 - 110
Chromium	99.8	101	P/P	90 - 110
Cobalt	97.6	98.8	P/P	90 - 110
Copper	100	102	P/P	90 - 110
Lead	94.8	95.1	P/P	90 - 110
Manganese	101	102	P/P	90 - 110
Molybdenum	99.6	99.6	P/P	90 - 110
Nickel	100	101	P/P	90 - 110
Selenium	98.4	101	P/P	90 - 110
Silver	100	99.5	P/P	90 - 110
Thallium	106	107	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A109866

Included Lab Sample IDs: 2298508

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

Reference Method: SM 5310 B-2011

Run ID: A109866

Included Lab Sample IDs: 2298508

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

Reference Method: EPA 8321B

Run ID: A109872

Included Lab Sample IDs: 2298535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	101	102	P/P	60 - 160
Endothall	89.0	89.3	P/P	60 - 160
Sucralose	101	105	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A109873

Included Lab Sample IDs: 2298507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.1	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109873

Included Lab Sample IDs: 2298507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A109876

Included Lab Sample IDs: 2298508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	107	107	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A109892

Included Lab Sample IDs: 2298536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	101	P/P	90 - 110
Iron	104	103	P/P	90 - 110
Magnesium	103	102	P/P	90 - 110
Potassium	99.7	100	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Strontium	101	98.1	P/P	90 - 110
Tin	98.4	98.8	P/P	90 - 110
Titanium	99.2	98.8	P/P	90 - 110
Vanadium	98.0	97.4	P/P	90 - 110
Zinc	98.6	98.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A109917

Included Lab Sample IDs: 2298532, 2298533, 2298534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.7		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	106		P	80 - 120
Beta-BHC	100		P	80 - 120
Beta-Cyfluthrin	89.8		P	80 - 120
Bifenthrin	98.3		P	80 - 120
Carbophenothion	97.9		P	80 - 120
Chlorothalonil	93.2		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	104		P	80 - 120
Dacthal	99.2		P	80 - 120
DDD-p,p'	98.4		P	80 - 120
DDE-p,p'	99.5		P	80 - 120
DDT-p,p'	99.8		P	80 - 120
Delta-BHC	98.4		P	80 - 120
Deltamethrin	90.5		P	80 - 120
Dichlobenil	95.8		P	80 - 120
Dicofol	98.6		P	80 - 120
Dieldrin	98.1		P	80 - 120
Endosulfan I	98.7		P	80 - 120
Endosulfan II	97.0		P	80 - 120
Endosulfan Sulfate	93.3		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	103		P	80 - 120
Endrin Ketone	112		P	80 - 120
Esfenvalerate	92.1		P	80 - 120
Ethalfuralin	99.2		P	80 - 120
Fenpropathrin	92.8		P	80 - 120
Gamma-BHC	99.2		P	80 - 120
Gamma-Chlordane	97.8		P	80 - 120
Heptachlor	99.3		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Kepone	57.1*		F	80 - 120
Lambda-Cyhalothrin	88.5		P	80 - 120
Methoprene	95.4		P	80 - 120
Methoxychlor	100		P	80 - 120
MGK-264	87.6		P	80 - 120
Mirex	96.2		P	80 - 120
Oxychlordane	97.8		P	80 - 120
Permethrin	98.8		P	80 - 120
Phenothrin	99.1		P	80 - 120
Piperonyl Butoxide	72.5*		F	80 - 120
Prallethrin	84.1		P	80 - 120
Tau-Fluvalinate	94.2		P	80 - 120
Tetramethrin	79.6*		F	80 - 120
Trans-Nonachlor	103		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	98.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A109936

Included Lab Sample IDs: 2298508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A109942

Included Lab Sample IDs: 2298508

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	100	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A109954

Included Lab Sample IDs: 2298532, 2298533, 2298534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.7		P	80 - 120
Chlordane	97.6		P	80 - 120
Toxaphene	104		P	80 - 120
Toxaphene	104		P	80 - 120

Reference Method: EPA 8321B

Run ID: A109964

Included Lab Sample IDs: 2298535

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	79.0	86.6	P/P	50 - 150
2,4,5-T	103	118	P/P	50 - 150
Acetaminophen	96.4	96.5	P/P	60 - 160
Acetamiprid	95.8	101	P/P	50 - 150
Afidopyropen	108	77.5	P/P	50 - 150
Bentazon	103	77.5	P/P	50 - 160
Benzovindiflupyr	118	102	P/P	50 - 150
Carbamazepine	93.3	104	P/P	60 - 150
Clothianidin	140	92.9	P/P	60 - 150
Dinotefuran	112	97.8	P/P	50 - 150
Diuron	85.9	123	P/P	60 - 160
Fenuron	107	108	P/P	60 - 150
Fluridone	105	103	P/P	60 - 160
Hydrocodone	96.9	102	P/P	60 - 150
Ibuprofen	125	99.3	P/P	50 - 160
Imazapyr	109	118	P/P	50 - 150
Imidacloprid	94.0	88.1	P/P	60 - 150
Linuron	102	90.2	P/P	60 - 150
Mandestrobin	103	103	P/P	50 - 150
MCPP	90.1	81.0	P/P	50 - 150
Naproxen	82.3	65.0	P/P	50 - 160
Primidone	61.2	62.1	P/P	60 - 150
Pyraclostrobin	104	112	P/P	60 - 150
Silvex	124	105	P/P	50 - 150
Thiamethoxam	99.0	89.0	P/P	50 - 150
Tolfenpyrad	115	109	P/P	60 - 150
Triclopyr	111	114	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110040

Included Lab Sample IDs: 2298507

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.47	
EPA 200.7 Rev. 4.4	Calcium	106						0.704
	Iron	107	109	108	107			0.193
	Magnesium	105	108	101				0.763
	Potassium	103	106	103				0.278
	Sodium	104	106	102				0.0437
	Strontium	100	103	102	99.6			0.986
	Tin	104	102	102	97.9			0.102
	Titanium	105	105	103	102			1.37
	Vanadium	104	105	104	102			0.983
	Zinc	105	104	103	99.3			1.37
EPA 200.8 Rev. 5.4	Aluminum	100	101	99.8	102			1.08
	Antimony	98.3	102	102	104			0.0631
	Arsenic	101	105	103	107			1.57
	Barium	105	106	105	107			0.721
	Beryllium	104	103	100	106			2.56
	Boron	96.3	97.5	97.0	102			0.397
	Cadmium	97.9	101	99.3	102			1.37
	Chromium	99.4	105	104	105			0.515
	Cobalt	99.9	103	102	103			0.635
	Copper	103	103	102	102			0.345
	Lead	95.8	99.2	98.9	100			0.324
	Manganese	98.6	102	102	103			0.108
	Molybdenum	99.5	103	104	108			0.572
	Nickel	102	106	105	104			0.683
	Selenium	99.8	103	102	103			0.476
	Silver	99.0	100	98.7	99.0			1.62
	Thallium	105	113	112	111			0.344
EPA 300.0 Rev. 2.1	Chloride	103	104	106			0.197	
	Sulfate	101	97.9				0.0827	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	98.0	96.8				1.10
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	105	108				1.81
EPA 353.2 Rev. 2.0	NO2NO3-N	103	101	100				0.272
EPA 365.1 Rev. 2.0	Total-P	106	105	112				5.03
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	92.9	93.7				0.857
EPA 8270E	Aldrin	58.8	60.8	56.9				6.74
	Alpha-BHC	94.8	93.2	101				7.74
	Alpha-Chlordane	84.4	76.2	69.5				9.18
	Beta-BHC	109	106	79.9				28.3
	Beta-Cyfluthrin	74.1	94.0	71.4				27.3
	Bifenthrin	57.6	75.1	70.5				6.26
	Carbophenothion	49.4	64.0	62.8				1.89
	Chlorothalonil	84.8	76.1	76.6				0.639
	Cis-Nonachlor	76.9	64.3	55.9				14.1
	Cypermethrin	83.3	99.4	80.0				21.7
	Dacthal	98.1	87.2	78.9				9.92
	DDD-p,p'	85.2	78.5	67.7				14.9
	DDE-p,p'	77.6	69.7	69.1				0.842
	DDT-p,p'	75.5	76.6	71.9				6.37
	Delta-BHC	112	105	92.2				13.4
	Deltamethrin	84.1	114	86.4				27.6
	Dichlobenil	96.5	77.2	51.5				39.8
	Dicofol	77.3	81.5	74.8				8.65
	Dieldrin	84.1	71.4	63.3				11.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Endosulfan I	84.3	74.3	69.2		7.08
	Endosulfan II	89.0	72.2	56.2		24.9
	Endosulfan Sulfate	95.0	80.2	54.7		37.8
	Endrin	84.3	76.1	66.9		12.9
	Endrin Aldehyde	84.9	75.8	55.2		31.5
	Endrin Ketone	123	103	76.7		29.5
	Esfenvalerate	66.6	84.8	66.0		24.9
	Ethalfuralin	78.3	79.7	75.3		5.69
	Fenpropathrin	76.0	88.6	76.3		14.9
	Gamma-BHC	101	95.7	92.1		3.81
	Gamma-Chlordane	79.1	74.6	67.5		9.98
	Heptachlor	72.6	68.2	63.3		7.41
	Heptachlor Epoxide	90.8	82.3	70.4		15.6
	Hexachlorobenzene	78.2	78.5	73.7		6.28
	Kepone	134	106	75.1		33.8
	Lambda-Cyhalothrin	68.6	98.5	90.8		8.17
	Methoprene	47.0	65.6	67.2		2.46
	Methoxychlor	94.9	104	93.3		11.1
	MGK-264	85.8	82.8	76.2		8.29
	Mirex	53.1	55.5	53.9		2.77
	Oxychlordane	78.1	79.7	75.3		5.71
	Permethrin	75.2	97.2	87.8		10.1
	Phenothrin	47.3	78.7	77.0		2.19
	Piperonyl Butoxide	96.1	101	91.8		9.33
	Prallethrin	67.7	70.4	63.7		9.99
	Tau-Fluvalinate	65.0	84.8	62.0		31.1
	Tetramethrin	83.6	103	91.3		12.0
	Trans-Nonachlor	78.7	79.0	64.8		19.8
	Triclosan Methyl	87.6	73.2	71.3		2.68
	Trifluralin	77.6	79.6	75.3		5.55
EPA 8276	Chlordane	78.0	77.8	68.4		11.0
	Toxaphene	67.6	75.2	86.9		14.5
EPA 8321B	2,4-D	110	101	115		12.3
	2,4,5-T	83.0	93.0	122		26.8
	Acesulfame K	94.4	128	140		9.50
	Acetaminophen	102	97.0	104		6.65
	Acetamiprid	79.8	96.3	98.8		2.61
	Afidopyropen	50.0	81.4	83.5		2.55
	AMPA	95.3	97.0	93.1		4.14
	Bentazon	84.0	72.5	86.2		17.3
	Benzovindiflupyr	81.4	85.5	105		20.6
	Carbamazepine	82.0	86.4	114		27.9
	Clothianidin	87.5	126	115		6.54
	Dinotefuran	95.9	107	118		10.2
	Diuron	101	97.4	121		20.3
	Endothall	83.6	124	135		7.94
	Fenuron	92.9	98.2	103		4.90
	Fluridone	87.7	96.6	108		11.3
	Glufosinate	99.1	108	101		6.24
	Glyphosate	91.2	93.9	93.7		0.124
	Hydrocodone	90.2	101	101		0.0362
	Ibuprofen	131	69.3	154		76.0
	Imazapyr	96.9	113	108		4.08
	Imidacloprid	85.2				6.97

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Linuron	85.4	79.8	123			42.5
	Mandestrobin	95.3	103	104			1.02
	MCCP	106	95.5	108			12.2
	Naproxen	88.4	110	142			25.6
	Primidone	91.0	122	120			1.36
	Pyraclostrobin	83.6	100	107			6.72
	Silvex	82.0	87.5	117			28.8
	Sucralose	96.4	102	109			5.95
	Thiamethoxam	92.1	111	123			6.13
	Tolfenpyrad	43.4	56.6	66.2			15.7
	Triclopyr	96.5	102	96.4			5.69
SM 2120 B-2011	Color (true)	100				0.969	
SM 2320 B-2011	Total Alkalinity	97.7				1.59	
SM 2540 C-2011	TDS					2.69	
SM 4500 F-C-2011	Fluoride	100	99.0	99.7			0.531
SM 5310 B-2011	Organic Carbon	100	98.4	103			3.15

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2298507
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2298536
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2298536
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2298507
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2298507
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2298508
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2298508
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2298508
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2298508
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2298509
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2298532, 2298533, 2298534
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2298532, 2298533, 2298534
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2298535
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2298507
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2298507
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2298536
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2298507
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2298507
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2298507
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2298508

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	01/11/2022			01/11/2022 17:12	Khloe J Berg	2298507
EPA 200.7 Rev. 4.4	01/11/2022	01/13/2022 10:30	Vijayalakshmi Reddy	01/14/2022 16:57	Josef B Mick	2298536
EPA 200.8 Rev. 5.4	01/11/2022	01/13/2022 10:30	Vijayalakshmi Reddy	01/13/2022 21:15	Alexander Thompson	2298536
EPA 300.0 Rev. 2.1	01/11/2022			01/26/2022 22:04	James L Waggeberby	2298507
EPA 350.1 Rev. 2.0	01/11/2022			01/19/2022 13:07	Ping Hua	2298508
EPA 351.2 Rev. 2.0	01/11/2022	01/19/2022 11:18	Samantha L Bates	01/20/2022 10:16	Alexandra J Mattheus	2298508
EPA 353.2 Rev. 2.0	01/11/2022			01/13/2022 11:20	Beverly Y. Sanders	2298508
EPA 365.1 Rev. 2.0	01/11/2022	01/13/2022 13:10	Simonne.V. Calhoun	01/14/2022 12:42	Shengyu Ding	2298508
EPA 365.1 Rev. 2.0 dissolved	01/11/2022			01/11/2022 15:54	James L Waggeberby	2298509
EPA 8270E	01/11/2022	01/14/2022 08:30	Rasheda Ghaffari	01/18/2022 19:31	Vandana T. Nagar	2298532
	01/11/2022	01/14/2022 08:30	Rasheda Ghaffari	01/18/2022 20:01	Vandana T. Nagar	2298533
	01/11/2022	01/14/2022 08:30	Rasheda Ghaffari	01/18/2022 20:30	Vandana T. Nagar	2298534
EPA 8276	01/11/2022	01/14/2022 08:30	Rasheda Ghaffari	01/20/2022 06:35	Arthur Maknenko	2298532
	01/11/2022	01/14/2022 08:30	Rasheda Ghaffari	01/20/2022 08:26	Arthur Maknenko	2298533
	01/11/2022	01/14/2022 08:30	Rasheda Ghaffari	01/20/2022 14:53	Arthur Maknenko	2298534
EPA 8321B	01/11/2022	01/12/2022 10:00	Hoor Shaik	01/15/2022 06:29	Juyoung Kim	2298535
	01/11/2022	01/12/2022 10:00	Juyoung Kim	01/12/2022 15:15	Juyoung Kim	2298535
	01/11/2022	01/12/2022 10:00	Juyoung Kim	01/12/2022 15:40	Manjita Shrestha	2298535
SM 2120 B-2011	01/11/2022			01/11/2022 15:44	Blanca Fach	2298507
SM 2320 B-2011	01/11/2022			01/14/2022 07:45	Dale L. Simmons	2298507
SM 2340B	01/11/2022			01/14/2022 16:57	Josef B Mick	2298536
SM 2540 C-2011	01/11/2022			01/13/2022 14:02	Yijie Li	2298507
SM 2540 D-2011	01/11/2022			01/13/2022 14:02	Yijie Li	2298507
SM 4500 F-C-2011	01/11/2022			01/14/2022 07:45	Dale L. Simmons	2298507
SM 5310 B-2011	01/11/2022			01/14/2022 02:08	Nathaniel J Jones	2298508