

Chemical Analysis Report

SE-DIST-2022-04-19-01

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

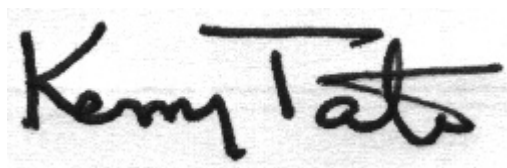
Event Description: **FDC (BIO)**
Request ID: **RQ-2022-04-18-44**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 09-MAY-2022 10:32

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: C-25 West of S99

Collection Date/Time: 04/18/2022 08:10

Field ID: G2SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319994	EPA 8270E	Aldrin	0.67	U	ng/L	P412577	
		Alpha-BHC	0.10	U	ng/L	P412577	
		Alpha-Chlordane	0.21	U	ng/L	P412577	RPD
		PCB-1016	2.1	U	ng/L	P412577	
		Beta-BHC	0.10	U	ng/L	P412577	
		PCB-1221	2.1	U	ng/L	P412577	
		Beta-Cyfluthrin**	1.3	U	ng/L	P412577	
		PCB-1232	2.1	U	ng/L	P412577	
		Bifenthrin**	0.52	U	ng/L	P412577	
		PCB-1242	2.1	U	ng/L	P412577	
		Carbophenothion	0.93	U	ng/L	P412577	
		PCB-1248	2.1	U	ng/L	P412577	
		Chlorothalonil	1.3	U	ng/L	P412577	
		PCB-1254	2.1	U	ng/L	P412577	
		Cis-Nonachlor**	0.21	U	ng/L	P412577	RPD
		PCB-1260	2.1	U	ng/L	P412577	
		Cypermethrin	1.6	U	ng/L	P412577	
		Dacthal**	0.16	U	ng/L	P412577	
		DDD-p,p'	0.50	I	ng/L	P412577	
		DDE-p,p'	0.21	U	ng/L	P412577	
		DDT-p,p'	0.26	U	ng/L	P412577	
		Delta-BHC	0.41	U	ng/L	P412577	
		Deltamethrin**	1.3	U	ng/L	P412577	
		Dichlobenil**	0.26	U	ng/L	P412577	
		Dicofol	1.3	U	ng/L	P412577	
		Dieldrin	0.42	I	ng/L	P412577	
		Endosulfan I	0.41	U	ng/L	P412577	
		Endosulfan II	0.41	U	ng/L	P412577	
		Endosulfan Sulfate	0.31	U	ng/L	P412577	
		Endrin	0.41	U	ng/L	P412577	
		Endrin Aldehyde	0.78	U	ng/L	P412577	
		Endrin Ketone	0.41	U	ng/L	P412577	
		Esfenvalerate**	0.78	U	ng/L	P412577	
		Ethalfuralin**	0.16	U	ng/L	P412577	
		Fenpropathrin**	0.26	U	ng/L	P412577	
		Gamma-BHC	0.13	U	ng/L	P412577	MS
		Gamma-Chlordane	0.21	U	ng/L	P412577	RPD
		Heptachlor	0.21	U	ng/L	P412577	
		Heptachlor Epoxide	0.26	U	ng/L	P412577	
		Hexachlorobenzene**	1.0	U	ng/L	P412577	
		Kepone**	5.2	U	ng/L	P412577	
		Lambda-Cyhalothrin**	0.78	U	ng/L	P412577	
		Methoprene**	0.78	U	ng/L	P412577	
		Methoxychlor	0.31	U	ng/L	P412577	

Field ID: G2SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319994	EPA 8270E	MGK-264**	0.21	U	ng/L	P412577	
		Mirex	0.72	U	ng/L	P412577	
		Oxychlordane**	0.31	U	ng/L	P412577	
		Permethrin	1.7	U	ng/L	P412577	
		Phenothrin**	0.93	U	ng/L	P412577	
		Piperonyl Butoxide**	0.16	U	ng/L	P412577	
		Prallethrin**	2.1	U	ng/L	P412577	
		Tau-Fluvalinate**	0.26	U	ng/L	P412577	
		Tetramethrin**	0.78	U	ng/L	P412577	
		Trans-Nonachlor**	0.21	U	ng/L	P412577	
		Triclosan Methyl**	0.16	U	ng/L	P412577	RPD
		Trifluralin	0.21	U	ng/L	P412577	
		Chlordane	2.6	U	ng/L	P412577	
	EPA 8276	Toxaphene	16	U	ng/L	P412577	

Sample Location: Fort Drum Creek @ 304th Street

Collection Date/Time: 04/18/2022 09:10

Field ID: G3SE0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319984	DEP SOP: NU-094-1	Color (true)**	54	A	PCU	P412562	
	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P412572	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P412953	
		Sulfate	4.5		mg SO4/L	P412956	
	SM 2320 B-2011	Total Alkalinity	71		mg CaCO3/L	P412807	
	SM 2540 C-2011	TDS	134		mg/L	P413062	
	SM 2540 D-2011	TSS	7	I	mg/L	P412989	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P412810	
2319985	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P412706	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P412929	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P412610	
	EPA 365.1 Rev. 2.0	Total-P	0.37		mg P/L	P412797	
	SM 5310 B-2011	Organic Carbon	8.5		mg C/L	P412742	

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: Fort Drum Creek @ 441

Collection Date/Time: 04/18/2022 09:25

Field ID: G3SE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2319995	EPA 8321B	2,4-D	0.0020	U	ug/L	P412554	
		Acesulfame K	0.10	U	ug/L	P412593	
		2,4,5-T	0.0040	U	ug/L	P412554	
		AMPA	0.10	U	ug/L	P412593	
		Acetaminophen	0.0080	U	ug/L	P412554	
		Acetamiprid	0.0020	U	ug/L	P412554	
		Endothall	0.25	U	ug/L	P412593	
		Glufosinate	0.10	U	ug/L	P412593	
		Glyphosate	0.10	U	ug/L	P412593	
		Afidopyropen	0.0020	U	ug/L	P412554	
		Bentazon	8.0E-04	U	ug/L	P412554	
		Sucralose	0.012	I	ug/L	P412593	
		Benzovindiflupyr	0.0020	U	ug/L	P412554	
		Carbamazepine	8.0E-04	U	ug/L	P412554	
		Clothianidin	0.0020	U	ug/L	P412554	
		Dinotefuran	0.0020	U	ug/L	P412554	
		Diuron	0.0020	U	ug/L	P412554	
		Fenuron	0.032	U	ug/L	P412554	
		Fluridone	8.0E-04	U	ug/L	P412554	
		Imazapyr	0.0040	U	ug/L	P412554	
		Hydrocodone	0.0020	U	ug/L	P412554	
		Ibuprofen	0.020	U	ug/L	P412554	
		Imidacloprid	0.0020	UJ	ug/L	P412554	MS
		Linuron	0.0040	U	ug/L	P412554	
		Mandestrobin	0.0020	U	ug/L	P412554	
		MCPP	0.0020	U	ug/L	P412554	
		Naproxen	0.0080	U	ug/L	P412554	
		Primidone	0.0040	U	ug/L	P412554	
		Pyraclostrobin	0.0020	U	ug/L	P412554	
		Silvex	0.0040	UJ	ug/L	P412554	RPD
		Thiamethoxam	0.0020	UJ	ug/L	P412554	MS
		Tolfenpyrad	0.0020	U	ug/L	P412554	
		Triclopyr	0.0040	U	ug/L	P412554	

Ref. Method and Comment:

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412562

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412572

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412953

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412956

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412706

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412929

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412610

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412797

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

Reference Method: EPA 8270E
Batch ID: P412577

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412577

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412577

Component	Result	Code	Units
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
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
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412577

Component	Result	Code	Units
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: P412577

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: P412554

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.089		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	0.032	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
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P412593

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P412593

Component	Result	Code	Units
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 2320 B-2011
Batch ID: P412807

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

Reference Method: SM 2540 C-2011
Batch ID: P413062

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P412989

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412810

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412742

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P412562

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412572

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412953

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412956

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412706

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412929

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412610

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412797

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

Reference Method: EPA 8270E
Batch ID: P412577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.7		P	10 - 93.0
Alpha-BHC	96.7		P	75 - 106
Alpha-Chlordane	72.7		P	50 - 109
Beta-BHC	123		P	36 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P412577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	61.1		P	23 - 167
Bifenthrin	47.1		P	11 - 123
Carbophenothion	64.4		P	18 - 96.0
Chlorothalonil	66.9		P	27 - 190
Cis-Nonachlor	78.2		P	40 - 111
Cypermethrin	65.4		P	25 - 155
Dacthal	85.2		P	72 - 119
DDD-p,p'	74.0		P	47 - 108
DDE-p,p'	74.5		P	48 - 107
DDT-p,p'	71.4		P	49 - 111
Delta-BHC	130		P	54 - 138
Deltamethrin	73.4		P	22 - 189
Dichlobenil	92.2		P	32 - 113
Dicofol	70.9		P	50 - 108
Dieldrin	75.1		P	56 - 110
Endosulfan I	79.9		P	60 - 105
Endosulfan II	82.4		P	50 - 120
Endosulfan Sulfate	92.5		P	55 - 121
Endrin	77.4		P	31 - 119
Endrin Aldehyde	92.6		P	36 - 116
Endrin Ketone	105		P	69 - 177
Esfenvalerate	67.0		P	10 - 179
Ethalfuralin	72.2		P	49 - 99.0
Fenpropathrin	56.1		P	35 - 119
Gamma-BHC	111		P	69 - 120
Gamma-Chlordane	66.8		P	45 - 107
Heptachlor	61.4		P	41 - 100
Heptachlor Epoxide	80.4		P	58 - 106
Hexachlorobenzene	79.7		P	39 - 100
Kepone	144		P	10 - 191
Lambda-Cyhalothrin	57.0		P	21 - 206
Methoprene	50.3		P	10 - 129
Methoxychlor	74.5		P	61 - 111
MGK-264	77.0		P	20 - 123
Mirex	52.1		P	10 - 182
Oxychlordane	64.7		P	39 - 110
PCB-1016	74.1		P	49 - 111
PCB-1260	79.9		P	42 - 116
Permethrin	74.2		P	26 - 152
Phenothrin	67.6		P	10 - 109
Piperonyl Butoxide	92.6		P	19 - 147
Prallethrin	70.4		P	14 - 109
Tau-Fluvalinate	60.5		P	16 - 134
Tetramethrin	68.5		P	10 - 125
Trans-Nonachlor	70.1		P	45 - 107
Triclosan Methyl	88.8		P	60 - 110
Trifluralin	61.0		P	44 - 101

Reference Method: EPA 8276
Batch ID: P412577

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

Reference Method: EPA 8276

Batch ID: P412577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	88.6		P	61 - 118
Toxaphene	94.9		P	51 - 122

Reference Method: EPA 8321B

Batch ID: P412554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.5		P	30 - 160
2,4,5-T	105		P	30 - 160
Acetaminophen	88.1		P	30 - 150
Acetamiprid	104		P	30 - 160
Afidopyropen	72.8		P	30 - 160
Bentazon	59.1		P	30 - 150
Benzovindiflupyr	96.1		P	30 - 160
Carbamazepine	110		P	30 - 160
Clothianidin	108		P	30 - 160
Dinotefuran	104		P	30 - 160
Diuron	98.4		P	30 - 160
Fenuron	103		P	30 - 160
Fluridone	95.6		P	30 - 160
Hydrocodone	101		P	30 - 160
Ibuprofen	80.8		P	30 - 160
Imazapyr	98.9		P	30 - 160
Imidacloprid	104		P	30 - 160
Linuron	82.4		P	30 - 160
Mandestrobin	104		P	30 - 160
MCPP	116		P	30 - 160
Naproxen	112		P	30 - 160
Primidone	108		P	30 - 160
Pyraclostrobin	101		P	30 - 160
Silvex	106		P	30 - 160
Thiamethoxam	104		P	30 - 160
Tolfenpyrad	63.4		P	30 - 160
Triclopyr	112		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P412593

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	99.6		P	40 - 150
Endothall	94.6		P	40 - 150
Glufosinate	96.6		P	40 - 150
Glyphosate	92.9		P	40 - 150
Sucralose	92.3		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P412807

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P412810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P412742

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319884	Chloride	101		P	90 - 110
2319984	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319884	Sulfate	99.4		P	90 - 110
2319984	Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319885	Ammonia-N	100	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412929

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319868	Kjeldahl Nitrogen	108	113	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412610

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319985	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319892	Total-P	104	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P412577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319826	Aldrin	70.4	61.5	P/P	10 - 89.0
2319826	Alpha-BHC	97.4	103	P/P	71 - 105
2319826	Alpha-Chlordane	90.3	64.4	P/P	43 - 107
2319826	Beta-BHC	120	114	P/P	57 - 152
2319826	Beta-Cyfluthrin	91.5	70.9	P/P	29 - 186
2319826	Bifenthrin	65.8	60.3	P/P	19 - 119
2319826	Carbophenothion	94.0	70.6	P/P	19 - 107
2319826	Chlorothalonil	102	99.8	P/P	10 - 245
2319826	Cis-Nonachlor	100	71.8	P/P	36 - 110
2319826	Cypermethrin	102	80.8	P/P	24 - 169
2319826	Dacthal	102	82.2	P/P	62 - 115
2319826	DDD-p,p'	92.9	74.4	P/P	36 - 109
2319826	DDE-p,p'	97.6	76.4	P/P	30 - 114
2319826	DDT-p,p'	78.4	77.0	P/P	42 - 108

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319826	Delta-BHC	120	119	P/P	60 - 164
2319826	Deltamethrin	107	88.6	P/P	10 - 210
2319826	Dichlobenil	73.0	73.8	P/P	23 - 108
2319826	Dicofol	69.8	73.7	P/P	44 - 109
2319826	Dieldrin	90.4	71.6	P/P	37 - 119
2319826	Endosulfan I	93.1	77.6	P/P	52 - 105
2319826	Endosulfan II	87.4	70.4	P/P	35 - 127
2319826	Endosulfan Sulfate	102	80.0	P/P	39 - 130
2319826	Endrin	85.0	70.1	P/P	30 - 116
2319826	Endrin Aldehyde	86.0	63.9	P/P	20 - 110
2319826	Endrin Ketone	98.0	99.0	P/P	48 - 134
2319826	Esfenvalerate	98.2	81.3	P/P	10 - 199
2319826	Ethalfuralin	93.8	82.1	P/P	48 - 95.0
2319826	Fenpropathrin	68.7	77.0	P/P	37 - 121
2319826	Gamma-BHC	108	127	P/F	61 - 126
2319826	Gamma-Chlordane	90.1	58.1	P/P	39 - 105
2319826	Heptachlor	81.8	72.2	P/P	38 - 96.0
2319826	Heptachlor Epoxide	96.6	89.6	P/P	42 - 114
2319826	Hexachlorobenzene	84.7	72.9	P/P	39 - 93.0
2319826	Kepone	113	103	P/P	10 - 215
2319826	Lambda-Cyhalothrin	89.0	76.1	P/P	10 - 204
2319826	Methoprene	92.7	71.0	P/P	17 - 108
2319826	Methoxychlor	65.6	86.3	P/P	56 - 115
2319826	MGK-264	93.3	91.6	P/P	35 - 120
2319826	Mirex	71.4	66.0	P/P	10 - 178
2319826	Oxychlordane	82.6	74.2	P/P	47 - 91.0
2319826	Permethrin	113	86.1	P/P	27 - 170
2319826	Phenothrin	88.8	63.9	P/P	10 - 133
2319826	Piperonyl Butoxide	108	98.0	P/P	23 - 150
2319826	Prallethrin	92.4	74.5	P/P	21 - 113
2319826	Tau-Fluvalinate	83.5	68.7	P/P	16 - 158
2319826	Tetramethrin	91.5	94.8	P/P	22 - 132
2319826	Trans-Nonachlor	86.5	68.3	P/P	43 - 102
2319826	Triclosan Methyl	93.5	62.6	P/P	49 - 109
2319826	Trifluralin	84.8	81.7	P/P	48 - 93.0
2319836	PCB-1016	90.5	84.5	P/P	46 - 110
2319836	PCB-1260	80.9	75.9	P/P	42 - 111

Reference Method: EPA 8276
Batch ID: P412577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319836	Chlordane	88.9	89.8	P/P	55 - 128
2319836	Toxaphene	106	99.4	P/P	57 - 211

Reference Method: EPA 8321B
Batch ID: P412554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319995	2,4-D	108	84.5	P/P	30 - 160
2319995	2,4,5-T	109	82.1	P/P	30 - 160
2319995	Acetaminophen	97.0	80.2	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P412554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319995	Acetamiprid	115	102	P/P	30 - 160
2319995	Afidopyropen	80.9	76.6	P/P	30 - 160
2319995	Bentazon	39.7	31.9	P/P	30 - 150
2319995	Benzovindiflupyr	88.7	76.5	P/P	30 - 160
2319995	Carbamazepine	102	88.3	P/P	30 - 160
2319995	Clothianidin	130	110	P/P	30 - 160
2319995	Dinotefuran	128	115	P/P	30 - 160
2319995	Diuron	84.0	73.4	P/P	30 - 160
2319995	Fenuron	87.8	77.7	P/P	30 - 160
2319995	Fluridone	90.0	75.0	P/P	30 - 160
2319995	Hydrocodone	110	89.0	P/P	30 - 160
2319995	Ibuprofen	76.8	68.1	P/P	30 - 160
2319995	Imazapyr	112	90.0	P/P	30 - 160
2319995	Imidacloprid	184	159	F/P	30 - 160
2319995	Linuron	70.8	64.4	P/P	30 - 160
2319995	Mandestrobin	95.0	81.5	P/P	30 - 160
2319995	MCCP	129	98.5	P/P	30 - 160
2319995	Naproxen	92.3	86.1	P/P	30 - 160
2319995	Primidone	106	105	P/P	30 - 160
2319995	Pyraclostrobin	97.7	80.9	P/P	30 - 160
2319995	Silvex	113	80.5	P/P	30 - 160
2319995	Thiamethoxam	170	148	F/P	30 - 160
2319995	Tolfenpyrad	61.0	48.9	P/P	30 - 160
2319995	Triclopyr	122	96.2	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P412593

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319878	Acesulfame K	106	110	P/P	40 - 150
2319878	AMPA	106	108	P/P	40 - 150
2319878	Endothall	100	104	P/P	40 - 150
2319878	Glufosinate	98.5	106	P/P	40 - 150
2319878	Glyphosate	89.8	90.1	P/P	40 - 150
2319878	Sucralose	99.0	102	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P412810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2319704	Fluoride	100	99.4	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P412742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2320074	Organic Carbon	99.7	98.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319984	Color (true)	0.972	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320005	Turbidity	2.14	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319884	Chloride	5.81	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319884	Sulfate	4.79	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319885	Ammonia-N	1.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319868	Kjeldahl Nitrogen	2.87	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412610

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319985	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319892	Total-P	1.01	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P412577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319826	Aldrin	13.5	Spike	P	0 - 37
2319826	Alpha-BHC	5.21	Spike	P	0 - 16
2319826	Alpha-Chlordane	33.4	Spike	F	0 - 28
2319826	Beta-BHC	5.41	Spike	P	0 - 32
2319826	Beta-Cyfluthrin	25.3	Spike	P	0 - 41
2319826	Bifenthrin	8.63	Spike	P	0 - 36
2319826	Carbophenothion	28.5	Spike	P	0 - 30
2319826	Chlorothalonil	2.18	Spike	P	0 - 54
2319826	Cis-Nonachlor	33.0	Spike	F	0 - 33
2319826	Cypermethrin	23.6	Spike	P	0 - 38
2319826	Dacthal	21.4	Spike	P	0 - 23
2319826	DDD-p,p'	22.1	Spike	P	0 - 35
2319826	DDE-p,p'	24.4	Spike	P	0 - 27
2319826	DDT-p,p'	1.71	Spike	P	0 - 31
2319826	Delta-BHC	0.257	Spike	P	0 - 30
2319826	Deltamethrin	18.5	Spike	P	0 - 76
2319826	Dichlobenil	1.10	Spike	P	0 - 33
2319826	Dicofol	5.46	Spike	P	0 - 24
2319826	Dieldrin	23.2	Spike	P	0 - 35
2319826	Endosulfan I	18.1	Spike	P	0 - 25
2319826	Endosulfan II	21.6	Spike	P	0 - 31
2319826	Endosulfan Sulfate	23.9	Spike	P	0 - 38
2319826	Endrin	19.1	Spike	P	0 - 53
2319826	Endrin Aldehyde	29.5	Spike	P	0 - 81
2319826	Endrin Ketone	1.02	Spike	P	0 - 33
2319826	Esfenvalerate	18.9	Spike	P	0 - 46
2319826	Ethalfuralin	13.3	Spike	P	0 - 22
2319826	Fenpropathrin	11.4	Spike	P	0 - 29
2319826	Gamma-BHC	15.5	Spike	P	0 - 17
2319826	Gamma-Chlordane	39.9	Spike	F	0 - 28
2319826	Heptachlor	12.4	Spike	P	0 - 28
2319826	Heptachlor Epoxide	7.47	Spike	P	0 - 23
2319826	Hexachlorobenzene	15.0	Spike	P	0 - 22
2319826	Kepone	8.45	Spike	P	0 - 61
2319826	Lambda-Cyhalothrin	15.7	Spike	P	0 - 52
2319826	Methoprene	26.6	Spike	P	0 - 38
2319826	Methoxychlor	27.3	Spike	P	0 - 29
2319826	MGK-264	1.87	Spike	P	0 - 41
2319826	Mirex	7.89	Spike	P	0 - 39
2319826	Oxychlordane	10.7	Spike	P	0 - 33
2319826	Permethrin	26.6	Spike	P	0 - 39
2319826	Phenothrin	32.6	Spike	P	0 - 52
2319826	Piperonyl Butoxide	9.93	Spike	P	0 - 91
2319826	Prallethrin	21.5	Spike	P	0 - 34
2319826	Tau-Fluvalinate	19.6	Spike	P	0 - 41
2319826	Tetramethrin	3.54	Spike	P	0 - 43
2319826	Trans-Nonachlor	23.5	Spike	P	0 - 31
2319826	Triclosan Methyl	39.6	Spike	F	0 - 24
2319826	Trifluralin	3.72	Spike	P	0 - 23
2319836	PCB-1016	6.82	Spike	P	0 - 32
2319836	PCB-1260	6.40	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P412577

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319836	Chlordane	0.944	Spike	P	0 - 25
2319836	Toxaphene	6.48	Spike	P	0 - 24

Reference Method: EPA 8321B
Batch ID: P412554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319995	2,4-D	24.1	Spike	P	0 - 30
2319995	2,4,5-T	28.6	Spike	P	0 - 30
2319995	Acetaminophen	18.9	Spike	P	0 - 30
2319995	Acetamiprid	11.4	Spike	P	0 - 30
2319995	Afidopyropen	5.51	Spike	P	0 - 30
2319995	Bentazon	21.7	Spike	P	0 - 30
2319995	Benzovindiflupyr	14.8	Spike	P	0 - 30
2319995	Carbamazepine	14.6	Spike	P	0 - 30
2319995	Clothianidin	17.0	Spike	P	0 - 30
2319995	Dinotefuran	10.6	Spike	P	0 - 30
2319995	Diuron	13.4	Spike	P	0 - 30
2319995	Fenuron	12.1	Spike	P	0 - 30
2319995	Fluridone	18.2	Spike	P	0 - 30
2319995	Hydrocodone	21.0	Spike	P	0 - 30
2319995	Ibuprofen	12.0	Spike	P	0 - 30
2319995	Imazapyr	21.5	Spike	P	0 - 30
2319995	Imidacloprid	14.8	Spike	P	0 - 30
2319995	Linuron	9.42	Spike	P	0 - 30
2319995	Mandestrobin	15.3	Spike	P	0 - 30
2319995	MCP	26.9	Spike	P	0 - 30
2319995	Naproxen	6.90	Spike	P	0 - 30
2319995	Primidone	0.363	Spike	P	0 - 30
2319995	Pyraclostrobin	18.9	Spike	P	0 - 30
2319995	Silvex	33.3	Spike	F	0 - 30
2319995	Thiamethoxam	13.5	Spike	P	0 - 30
2319995	Tolfenpyrad	22.1	Spike	P	0 - 30
2319995	Triclopyr	23.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P412593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319878	Acesulfame K	3.55	Spike	P	0 - 30
2319878	AMPA	2.21	Spike	P	0 - 30
2319878	Endothall	3.93	Spike	P	0 - 30
2319878	Glufosinate	7.61	Spike	P	0 - 30
2319878	Glyphosate	0.343	Spike	P	0 - 30
2319878	Sucralose	3.20	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P412807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319704	Total Alkalinity	0.146	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P413062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319891	TDS	6.74	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P412810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2319704	Fluoride	0.476	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P412742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2320074	Organic Carbon	0.755	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2319994

Field Sample ID: G2SE0057

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	75.7	P	38 - 115
EPA 8270E	Decachlorobiphenyl	54.8	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	89.0	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	84.2	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	67.7	P	30 - 97.0
EPA 8276	PCNB	74.5	P	45 - 119

Lab Sample ID: 2319995

Field Sample ID: G3SE0024

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	119	P	30 - 160
EPA 8321B	Diuron-d6	88.9	P	30 - 160
EPA 8321B	Endothall-d6	103	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	81.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.2	P	30 - 160
EPA 8321B	Primidone-d5	115	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A111556

Included Lab Sample IDs: 2319984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111559

Included Lab Sample IDs: 2319984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111570

Included Lab Sample IDs: 2319985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111601

Included Lab Sample IDs: 2319985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.7	99.4	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A111622

Included Lab Sample IDs: 2319985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A111640

Included Lab Sample IDs: 2319995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	95.4	P/P	60 - 160
Sucralose	99.9	99.3	P/P	60 - 160

Reference Method: EPA 8276

Run ID: A111653

Included Lab Sample IDs: 2319994

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Toxaphene	103		P	80 - 120

Reference Method: EPA 8321B

Run ID: A111655

Included Lab Sample IDs: 2319995

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

Reference Method: EPA 8321B
Run ID: A111655
Included Lab Sample IDs: 2319995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	110	106	P/P	60 - 160
Endothall	101	100	P/P	60 - 160
Glufosinate	108	106	P/P	60 - 160
Glyphosate	105	104	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A111656
Included Lab Sample IDs: 2319984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.6	98.2	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A111656
Included Lab Sample IDs: 2319984

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

Reference Method: EPA 8270E
Run ID: A111665
Included Lab Sample IDs: 2319994

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	104		P	80 - 120
Alpha-BHC	104		P	80 - 120
Alpha-Chlordane	97.6		P	80 - 120
Beta-BHC	108		P	80 - 120
Beta-Cyfluthrin	96.2		P	80 - 120
Bifenthrin	95.1		P	80 - 120
Carbophenothion	95.8		P	80 - 120
Chlorothalonil	84.3		P	80 - 120
Cis-Nonachlor	119		P	80 - 120
Cypermethrin	80.1		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	100		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	98.3		P	80 - 120
Delta-BHC	102		P	80 - 120
Deltamethrin	91.7		P	80 - 120
Dichlobenil	86.2		P	80 - 120
Dicofol	98.6		P	80 - 120
Dieldrin	97.4		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	98.6		P	80 - 120
Endrin	99.0		P	80 - 120
Endrin Aldehyde	117		P	80 - 120
Endrin Ketone	115		P	80 - 120
Esfenvalerate	93.5		P	80 - 120
Ethalfuralin	99.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111665
Included Lab Sample IDs: 2319994

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenpropathrin	91.2		P	80 - 120
Gamma-BHC	110		P	80 - 120
Gamma-Chlordane	104		P	80 - 120
Heptachlor	95.7		P	80 - 120
Heptachlor Epoxide	110		P	80 - 120
Hexachlorobenzene	94.3		P	80 - 120
Kepone	107		P	80 - 120
Lambda-Cyhalothrin	94.6		P	80 - 120
Methoprene	94.4		P	80 - 120
Methoxychlor	94.3		P	80 - 120
MGK-264	99.2		P	80 - 120
Mirex	95.6		P	80 - 120
Oxychlordane	94.6		P	80 - 120
Permethrin	98.3		P	80 - 120
Phenothrin	96.8		P	80 - 120
Piperonyl Butoxide	94.0		P	80 - 120
Prallethrin	104		P	80 - 120
Tau-Fluvalinate	99.2		P	80 - 120
Tetramethrin	86.0		P	80 - 120
Trans-Nonachlor	105		P	80 - 120
Triclosan Methyl	109		P	80 - 120
Trifluralin	89.4		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A111715
Included Lab Sample IDs: 2319984

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

Reference Method: EPA 8321B
Run ID: A111767
Included Lab Sample IDs: 2319995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.6	95.7	P/P	50 - 150
2,4,5-T	100	105	P/P	50 - 150
Acetaminophen	87.7	99.4	P/P	60 - 160
Acetamiprid	100	105	P/P	50 - 150
Afidopyropen	82.6	95.7	P/P	50 - 150
Bentazon	100	106	P/P	50 - 160
Benzovindiflupyr	86.7	113	P/P	50 - 150
Carbamazepine	95.0	105	P/P	60 - 150
Clothianidin	103	105	P/P	60 - 150
Dinotefuran	91.7	103	P/P	50 - 150
Diuron	101	105	P/P	60 - 160
Fenuron	95.1	101	P/P	60 - 150
Fluridone	97.7	107	P/P	60 - 160
Hydrocodone	97.7	104	P/P	60 - 150
Ibuprofen	72.8	107	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A111767
Included Lab Sample IDs: 2319995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	89.8	87.7	P/P	50 - 150
Imidacloprid	93.1	101	P/P	60 - 150
Linuron	89.6	98.3	P/P	60 - 150
Mandestrobin	87.8	112	P/P	50 - 150
MCPP	101	84.6	P/P	50 - 150
Naproxen	70.9	104	P/P	50 - 160
Primidone	93.1	91.2	P/P	60 - 150
Pyraclostrobin	94.8	120	P/P	60 - 150
Silvex	85.9	88.4	P/P	50 - 150
Thiamethoxam	93.4	102	P/P	50 - 150
Tolfenpyrad	82.9	108	P/P	60 - 150
Triclopyr	111	110	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A111780
Included Lab Sample IDs: 2319985

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

Reference Method: EPA 8270E
Run ID: A111790
Included Lab Sample IDs: 2319994

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	111		P	80 - 120
PCB-1260	106		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A111794
Included Lab Sample IDs: 2319985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	96.1	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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	101				0.972	
EPA 180.1 Rev. 2.0	Turbidity	95.5				2.14	
EPA 300.0 Rev. 2.1	Chloride	99.4	101	99.1		5.81	
	Sulfate	99.3	99.4	97.3		4.79	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	100	98.4			1.46
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	108	113			2.87
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	100	104	103			1.01
EPA 8270E	Aldrin	49.7	70.4	61.5			13.5
	Alpha-BHC	96.7	97.4	103			5.21
	Alpha-Chlordane	72.7	90.3	64.4			33.4
	Beta-BHC	123	120	114			5.41
	Beta-Cyfluthrin	61.1	91.5	70.9			25.3
	Bifenthrin	47.1	65.8	60.3			8.63
	Carbophenothion	64.4	94.0	70.6			28.5
	Chlorothalonil	66.9	102	99.8			2.18
	Cis-Nonachlor	78.2	100	71.8			33.0
	Cypermethrin	65.4	102	80.8			23.6
	Dacthal	85.2	102	82.2			21.4
	DDD-p,p'	74.0	92.9	74.4			22.1
	DDE-p,p'	74.5	97.6	76.4			24.4
	DDT-p,p'	71.4	78.4	77.0			1.71
	Delta-BHC	130	120	119			0.257
	Deltamethrin	73.4	107	88.6			18.5
	Dichlobenil	92.2	73.0	73.8			1.10
	Dicofol	70.9	69.8	73.7			5.46
	Dieldrin	75.1	90.4	71.6			23.2
	Endosulfan I	79.9	93.1	77.6			18.1
	Endosulfan II	82.4	87.4	70.4			21.6
	Endosulfan Sulfate	92.5	102	80.0			23.9
	Endrin	77.4	85.0	70.1			19.1
	Endrin Aldehyde	92.6	86.0	63.9			29.5
	Endrin Ketone	105	98.0	99.0			1.02
	Esfenvalerate	67.0	98.2	81.3			18.9
	Ethalfuralin	72.2	93.8	82.1			13.3
	Fenpropathrin	56.1	68.7	77.0			11.4
	Gamma-BHC	111	108	127			15.5
	Gamma-Chlordane	66.8	90.1	58.1			39.9
	Heptachlor	61.4	81.8	72.2			12.4
	Heptachlor Epoxide	80.4	96.6	89.6			7.47
	Hexachlorobenzene	79.7	84.7	72.9			15.0
	Kepone	144	113	103			8.45
	Lambda-Cyhalothrin	57.0	89.0	76.1			15.7
	Methoprene	50.3	92.7	71.0			26.6
	Methoxychlor	74.5	65.6	86.3			27.3
	MGK-264	77.0	93.3	91.6			1.87
	Mirex	52.1	71.4	66.0			7.89
	Oxychlordane	64.7	82.6	74.2			10.7
	PCB-1016	74.1	90.5	84.5			6.82
	PCB-1260	79.9	80.9	75.9			6.40
	Permethrin	74.2	113	86.1			26.6
	Phenothrin	67.6	88.8	63.9			32.6
	Piperonyl Butoxide	92.6	108	98.0			9.93
	Prallethrin	70.4	92.4	74.5			21.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Tau-Fluvalinate	60.5	83.5	68.7			19.6
	Tetramethrin	68.5	91.5	94.8			3.54
	Trans-Nonachlor	70.1	86.5	68.3			23.5
	Triclosan Methyl	88.8	93.5	62.6			39.6
	Trifluralin	61.0	84.8	81.7			3.72
EPA 8276	Chlordane	88.6	88.9	89.8			0.944
	Toxaphene	94.9	106	99.4			6.48
EPA 8321B	2,4-D	90.5	108	84.5			24.1
	2,4,5-T	105	109	82.1			28.6
	Acesulfame K	103	106	110			3.55
	Acetaminophen	88.1	97.0	80.2			18.9
	Acetamiprid	104	115	102			11.4
	Afidopyropen	72.8	80.9	76.6			5.51
	AMPA	99.6	106	108			2.21
	Bentazon	59.1	39.7	31.9			21.7
	Benzovindiflupyr	96.1	88.7	76.5			14.8
	Carbamazepine	110	102	88.3			14.6
	Clothianidin	108	130	110			17.0
	Dinotefuran	104	128	115			10.6
	Diuron	98.4	84.0	73.4			13.4
	Endothall	94.6	100	104			3.93
	Fenuron	103	87.8	77.7			12.1
	Fluridone	95.6	90.0	75.0			18.2
	Glufosinate	96.6	98.5	106			7.61
	Glyphosate	92.9	89.8	90.1			0.343
	Hydrocodone	101	110	89.0			21.0
	Ibuprofen	80.8	76.8	68.1			12.0
	Imazapyr	98.9	112	90.0			21.5
	Imidacloprid	104	184	159			14.8
	Linuron	82.4	70.8	64.4			9.42
	Mandestrobin	104	95.0	81.5			15.3
	MCPP	116	129	98.5			26.9
	Naproxen	112	92.3	86.1			6.90
	Primidone	108	106	105			0.363
	Pyraclostrobin	101	97.7	80.9			18.9
	Silvex	106	113	80.5			33.3
	Sucralose	92.3	99.0	102			3.20
	Thiamethoxam	104	170	148			13.5
	Tolfenpyrad	63.4	61.0	48.9			22.1
	Triclopyr	112	122	96.2			23.3
SM 2320 B-2011	Total Alkalinity	96.6				0.146	
SM 2540 C-2011	TDS					6.74	
SM 4500-F- C-2011	Fluoride	99.6	100	99.4			0.476
SM 5310 B-2011	Organic Carbon	95.0	99.7	98.4			0.755

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2319984
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2319984
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2319984
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2319984
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2319985

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2319985
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2319985
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2319985
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2319994
EPA 8270E	PCBs in water matrices by GC/MS/MS	2319994
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2319994
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2319995
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2319984
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2319984
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2319984
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2319984
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2319985

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	04/19/2022			04/19/2022 15:33	Anna M. Plaviak	2319984
EPA 180.1 Rev. 2.0	04/19/2022			04/19/2022 14:15	Sarah A Nixon	2319984
EPA 300.0 Rev. 2.1	04/19/2022			04/26/2022 18:48	Anna M. Plaviak	2319984
EPA 350.1 Rev. 2.0	04/19/2022			04/21/2022 11:01	Ping Hua	2319985
EPA 351.2 Rev. 2.0	04/19/2022	04/27/2022 17:18	Alexandra J Mattheus	04/28/2022 15:51	Alexandra J Mattheus	2319985
EPA 353.2 Rev. 2.0	04/19/2022			04/20/2022 10:45	Beverly Y. Sanders	2319985
EPA 365.1 Rev. 2.0	04/19/2022	04/26/2022 14:30	Simonne.V. Calhoun	04/27/2022 17:02	Sarah A Nixon	2319985
EPA 8270E	04/19/2022	04/20/2022 08:45	Rasheda Ghaffari	04/22/2022 20:25	Vandana T. Nagar	2319994
	04/19/2022	04/20/2022 08:45	Rasheda Ghaffari	04/28/2022 22:19	Vandana T. Nagar	2319994
EPA 8276	04/19/2022	04/20/2022 08:45	Rasheda Ghaffari	04/23/2022 11:06	Arthur Maknenko	2319994
EPA 8321B	04/19/2022	04/20/2022 09:00	Hoor Shaik	04/21/2022 04:52	Juyoung Kim	2319995
	04/19/2022	04/20/2022 10:50	Manjita Shrestha	04/20/2022 19:57	Manjita Shrestha	2319995
	04/19/2022	04/20/2022 10:50	Manjita Shrestha	04/22/2022 14:51	Manjita Shrestha	2319995
SM 2320 B-2011	04/19/2022			04/22/2022 07:40	Sarah A Nixon	2319984
SM 2540 C-2011	04/19/2022			04/20/2022 15:36	Yijie Li	2319984
SM 2540 D-2011	04/19/2022			04/20/2022 15:36	Yijie Li	2319984
SM 4500-F- C-2011	04/19/2022			04/22/2022 07:40	Sarah A Nixon	2319984
SM 5310 B-2011	04/19/2022			04/21/2022 18:48	Khloe J Berg	2319985