

Chemical Analysis Report

SE-DIST-2022-07-19-01

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

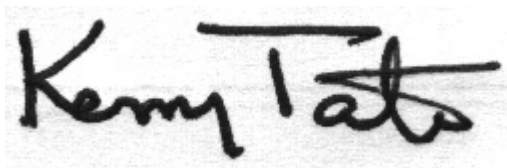
Event Description: **FDC**
Request ID: **RQ-2022-07-18-41**
Customer: **SE-DIST**
Project ID: **SMP**

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

Date Certified: 03-AUG-2022 09:28

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: 07/18/2022 08:15

Field ID: G2SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2342266	EPA 8270E	Aldrin	0.69	U	ng/L	P416766	
		Alpha-BHC	0.11	U	ng/L	P416766	
		Alpha-Chlordane	0.21	U	ng/L	P416766	
		PCB-1016	2.1	U	ng/L	P416766	
		Beta-BHC	0.11	U	ng/L	P416766	
		PCB-1221	2.1	U	ng/L	P416766	
		Beta-Cyfluthrin	1.3	U	ng/L	P416766	
		PCB-1232	2.1	U	ng/L	P416766	
		Bifenthrin	0.53	U	ng/L	P416766	
		PCB-1242	2.1	U	ng/L	P416766	
		Carbophenothion	0.95	U	ng/L	P416766	
		PCB-1248	2.1	U	ng/L	P416766	
		Chlorothalonil	1.3	U	ng/L	P416766	
		PCB-1254	2.1	U	ng/L	P416766	
		Cis-Nonachlor	0.21	U	ng/L	P416766	
		PCB-1260	2.1	U	ng/L	P416766	
		Cypermethrin	1.6	U	ng/L	P416766	
		Dacthal	0.16	U	ng/L	P416766	
		DDD-p,p'	0.33	I	ng/L	P416766	
		DDE-p,p'	0.21	U	ng/L	P416766	
		DDT-p,p'	0.26	U	ng/L	P416766	
		Delta-BHC	0.42	U	ng/L	P416766	
		Deltamethrin	1.3	U	ng/L	P416766	
		Dichlobenil	0.26	U	ng/L	P416766	
		Dicofol	1.3	U	ng/L	P416766	
		Dieldrin	0.42	U	ng/L	P416766	
		Endosulfan I	0.42	U	ng/L	P416766	
		Endosulfan II	0.42	U	ng/L	P416766	
		Endosulfan Sulfate	0.32	U	ng/L	P416766	
		Endrin	0.42	U	ng/L	P416766	
		Endrin Aldehyde	0.79	U	ng/L	P416766	
		Endrin Ketone	0.42	U	ng/L	P416766	
		Esfenvalerate	0.79	U	ng/L	P416766	
		Ethalfuralin	0.16	U	ng/L	P416766	
		Fenpropathrin	0.26	U	ng/L	P416766	
		Gamma-BHC	0.13	U	ng/L	P416766	
		Gamma-Chlordane	0.21	U	ng/L	P416766	
		Heptachlor	0.21	U	ng/L	P416766	
		Heptachlor Epoxide	0.26	U	ng/L	P416766	
		Hexachlorobenzene**	1.1	U	ng/L	P416766	
		Kepone	5.3	UJ	ng/L	P416766	CCV
		Lambda-Cyhalothrin	0.79	U	ng/L	P416766	
		Methoprene	0.79	U	ng/L	P416766	
		Methoxychlor	0.32	U	ng/L	P416766	

Field ID: G2SE0057

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2342266	EPA 8270E	MGK-264	0.21	U	ng/L	P416766	
		Mirex	0.37	U	ng/L	P416766	
		Oxychlordane	0.32	U	ng/L	P416766	
		Permethrin	1.7	U	ng/L	P416766	
		Phenothrin	0.95	U	ng/L	P416766	
		Piperonyl Butoxide	0.29	I	ng/L	P416766	
		Prallethrin	2.1	U	ng/L	P416766	
		Tau-Fluvalinate	0.26	U	ng/L	P416766	
		Tetramethrin	0.79	U	ng/L	P416766	
		Trans-Nonachlor	0.21	U	ng/L	P416766	
		Triclosan Methyl	0.16	U	ng/L	P416766	
		Trifluralin	0.21	U	ng/L	P416766	
	EPA 8276	Chlordane	2.6	U	ng/L	P416766	
		Toxaphene	16	U	ng/L	P416766	

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

Sample Location: Fort Drum Creek @ 441

Collection Date/Time: 07/18/2022 09:30

Field ID: G3SE0024

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2342267	EPA 8321B	2,4-D	0.0036	I	ug/L	P416992	
		Acesulfame K	0.10	U	ug/L	P416713	
		2,4,5-T	0.0040	U	ug/L	P416992	
		AMPA	0.10	U	ug/L	P416713	
		Acetaminophen	0.012	I	ug/L	P416992	
		Acetamiprid	0.0020	U	ug/L	P416992	
		Endothall	0.25	U	ug/L	P416713	MS
		Glufosinate	0.10	U	ug/L	P416713	
		Glyphosate	0.10	U	ug/L	P416713	
		Afidopyropen	0.0020	U	ug/L	P416992	
		Bentazon	8.0E-04	U	ug/L	P416992	
		Sucralose	0.012	I	ug/L	P416713	
		Benzovindiflupyr	0.0020	U	ug/L	P416992	
		Carbamazepine	8.0E-04	U	ug/L	P416992	
		Clothianidin	0.0020	U	ug/L	P416992	
		Dinotefuran	0.0020	U	ug/L	P416992	
		Diuron	0.0020	U	ug/L	P416992	
		Fenuron	0.032	U	ug/L	P416992	
		Fluridone	8.0E-04	U	ug/L	P416992	
		Imazapyr	0.0040	U	ug/L	P416992	
		Hydrocodone	0.0020	U	ug/L	P416992	
		Ibuprofen	0.080	U	ug/L	P416992	
		Imidacloprid	0.0020	U	ug/L	P416992	
		Linuron	0.0040	U	ug/L	P416992	
		Mandestrobin	0.0020	U	ug/L	P416992	
		MCPP	0.0040	U	ug/L	P416992	
		Naproxen	0.0080	U	ug/L	P416992	
		Primidone	0.0040	U	ug/L	P416992	
		Pyraclostrobin	0.0020	U	ug/L	P416992	
		Silvex	0.0040	U	ug/L	P416992	
		Thiamethoxam	0.0020	U	ug/L	P416992	
		Tolfenpyrad	0.0020	U	ug/L	P416992	
		Triclopyr	0.0040	U	ug/L	P416992	

Sample Location: Fort Drum Creek @ 304th Street

Collection Date/Time: 07/18/2022 09:05

Field ID: G3SE0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2342257	DEP SOP: NU-094-1	Color (true)	54		PCU	P416853	
	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P416869	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P417208	
		Sulfate	7.4		mg SO4/L	P417211	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P417082	
	SM 2540 C-2011	TDS	140		mg/L	P417298	
	SM 2540 D-2011	TSS	2	I	mg/L	P417287	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P417088	
2342258	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P417122	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P416989	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.090		mg N/L	P417035	
	EPA 365.1 Rev. 2.0	Total-P	0.37		mg P/L	P416951	
	SM 5310 B-2011	Organic Carbon	8.8		mg C/L	P417151	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P416853

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416869

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417208

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417211

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417122

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416989

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P417035

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416951

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

Reference Method: EPA 8270E
Batch ID: P416766

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: P416766

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: P416766

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	0.35	U	ng/L
Mirex	0.35	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: P416766

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: P416766

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: P416713

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

Reference Method: EPA 8321B

Batch ID: P416992

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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P416992

Component	Result	Code	Units
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: SM 2320 B-2011
Batch ID: P417082

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

Reference Method: SM 2540 C-2011
Batch ID: P417298

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P417287

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P417088

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P417151

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: P416853

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416869

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417208

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417211

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417122

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416989

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P417035

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416951

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

Reference Method: EPA 8270E
Batch ID: P416766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	56.2		P	10 - 92.0
Alpha-BHC	100		P	75 - 107
Alpha-Chlordane	73.1		P	50 - 108
Beta-BHC	119		P	36 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P416766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	69.7		P	20 - 161
Bifenthrin	54.9		P	10 - 119
Carbophenothion	50.0		P	19 - 94.0
Chlorothalonil	101		P	26 - 186
Cis-Nonachlor	63.1		P	42 - 119
Cypermethrin	72.4		P	22 - 150
Dacthal	96.5		P	72 - 119
DDD-p,p'	66.0		P	45 - 107
DDE-p,p'	67.5		P	48 - 106
DDT-p,p'	67.6		P	48 - 110
Delta-BHC	128		P	54 - 140
Deltamethrin	78.0		P	22 - 189
Dichlobenil	94.0		P	36 - 117
Dicofol	72.3		P	46 - 155
Dieldrin	78.3		P	54 - 110
Endosulfan I	80.2		P	59 - 105
Endosulfan II	78.2		P	51 - 118
Endosulfan Sulfate	87.3		P	57 - 121
Endrin	71.9		P	10 - 120
Endrin Aldehyde	77.1		P	34 - 118
Endrin Ketone	87.0		P	69 - 177
Esfenvalerate	69.0		P	23 - 168
Ethalfuralin	78.0		P	49 - 99.0
Fenpropathrin	69.8		P	34 - 117
Gamma-BHC	107		P	72 - 117
Gamma-Chlordane	70.8		P	43 - 106
Heptachlor	69.0		P	41 - 98.0
Heptachlor Epoxide	75.8		P	57 - 106
Hexachlorobenzene	69.0		P	36 - 99.0
Kepone	55.3		P	16 - 215
Lambda-Cyhalothrin	63.5		P	21 - 177
Methoprene	60.0		P	10 - 119
Methoxychlor	90.0		P	60 - 112
MGK-264	89.6		P	26 - 122
Mirex	46.6		P	10 - 169
Oxychlordane	67.4		P	43 - 105
PCB-1016	95.3		P	48 - 112
PCB-1260	95.8		P	44 - 118
Permethrin	65.4		P	24 - 148
Phenothrin	51.6		P	10 - 106
Piperonyl Butoxide	126		P	10 - 139
Prallethrin	80.2		P	17 - 109
Tau-Fluvalinate	67.6		P	13 - 131
Tetramethrin	92.8		P	10 - 132
Trans-Nonachlor	66.5		P	44 - 106
Triclosan Methyl	81.0		P	59 - 109
Trifluralin	74.8		P	44 - 101

Reference Method: EPA 8276

Batch ID: P416766

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: P416766

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	105		P	61 - 116
Toxaphene	106		P	48 - 124

Reference Method: EPA 8321B

Batch ID: P416713

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	80.2		P	40 - 150
AMPA	112		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	128		P	40 - 150
Glyphosate	103		P	40 - 150
Sucralose	102		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416992

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	72.9		P	40 - 150
2,4,5-T	64.6		P	40 - 150
Acetaminophen	85.8		P	30 - 150
Acetamiprid	63.4		P	40 - 150
Afidopyropen	66.2		P	30 - 150
Bentazon	104		P	30 - 150
Benzovindiflupyr	93.8		P	40 - 150
Carbamazepine	92.5		P	40 - 150
Clothianidin	101		P	40 - 150
Dinotefuran	90.9		P	40 - 150
Diuron	80.7		P	40 - 150
Fenuron	93.0		P	40 - 150
Fluridone	100		P	40 - 150
Hydrocodone	90.6		P	40 - 150
Ibuprofen	89.2		P	40 - 150
Imazapyr	89.8		P	40 - 150
Imidacloprid	92.2		P	40 - 150
Linuron	87.9		P	40 - 150
Mandestrobin	90.7		P	40 - 150
MCPP	87.6		P	40 - 150
Naproxen	66.2		P	40 - 150
Primidone	79.7		P	40 - 150
Pyraclostrobin	77.1		P	40 - 150
Silvex	55.3		P	40 - 150
Thiamethoxam	90.4		P	40 - 150
Tolfenpyrad	44.8		P	30 - 150
Triclopyr	66.5		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P417082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.4		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P417088

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P417151

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417208

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342439	Chloride	97.1		P	90 - 110
2342500	Chloride	95.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342439	Sulfate	96.7		P	90 - 110
2342500	Sulfate	96.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417122

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342221	Ammonia-N	99.6	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416989

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342258	Kjeldahl Nitrogen	108	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P417035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342258	NO2NO3-N	98.1	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416951

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342218	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P416766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342074	Aldrin	60.3	67.1	P/P	20 - 82.0
2342074	Alpha-BHC	96.9	93.2	P/P	71 - 109
2342074	Alpha-Chlordane	80.2	81.2	P/P	42 - 106
2342074	Beta-BHC	113	109	P/P	69 - 180
2342074	Beta-Cyfluthrin	79.1	94.5	P/P	18 - 175
2342074	Bifenthrin	65.1	74.1	P/P	21 - 128
2342074	Carbophenothion	64.4	75.1	P/P	10 - 126
2342074	Chlorothalonil	120	106	P/P	10 - 300
2342074	Cis-Nonachlor	63.9	71.9	P/P	34 - 106
2342074	Cypermethrin	84.1	101	P/P	22 - 158
2342074	Dacthal	92.5	98.4	P/P	54 - 116
2342074	DDD-p,p'	70.6	74.4	P/P	34 - 107
2342074	DDE-p,p'	77.9	78.8	P/P	33 - 110
2342074	DDT-p,p'	76.6	81.1	P/P	50 - 122

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P416766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342074	Delta-BHC	127	124	P/P	77 - 193
2342074	Deltamethrin	93.7	103	P/P	10 - 195
2342074	Dichlobenil	87.6	78.1	P/P	25 - 113
2342074	Dicofol	73.5	78.3	P/P	38 - 247
2342074	Dieldrin	80.3	81.2	P/P	45 - 118
2342074	Endosulfan I	86.6	86.7	P/P	51 - 106
2342074	Endosulfan II	81.6	83.6	P/P	37 - 122
2342074	Endosulfan Sulfate	88.4	94.5	P/P	43 - 132
2342074	Endrin	74.5	76.2	P/P	29 - 101
2342074	Endrin Aldehyde	75.0	70.8	P/P	19 - 110
2342074	Endrin Ketone	88.5	92.8	P/P	60 - 140
2342074	Esfenvalerate	79.3	92.6	P/P	26 - 199
2342074	Ethalfuralin	80.1	81.9	P/P	45 - 99.0
2342074	Fenpropathrin	69.0	83.7	P/P	35 - 120
2342074	Gamma-BHC	101	97.8	P/P	63 - 128
2342074	Gamma-Chlordane	73.2	77.9	P/P	40 - 104
2342074	Heptachlor	71.5	73.2	P/P	36 - 97.0
2342074	Heptachlor Epoxide	79.9	85.8	P/P	49 - 184
2342074	Hexachlorobenzene	77.5	71.8	P/P	39 - 96.0
2342074	Kepone	53.7	48.2	P/P	10 - 217
2342074	Lambda-Cyhalothrin	72.4	83.0	P/P	21 - 193
2342074	Methoprene	59.7	66.9	P/P	20 - 106
2342074	Methoxychlor	85.8	93.7	P/P	53 - 118
2342074	MGK-264	87.8	95.8	P/P	40 - 118
2342074	Mirex	55.2	60.5	P/P	26 - 92.0
2342074	Oxychlordane	73.4	84.2	P/P	44 - 99.0
2342074	Permethrin	72.5	86.1	P/P	33 - 182
2342074	Phenothrin	54.0	68.6	P/P	10 - 129
2342074	Piperonyl Butoxide	125	120	P/P	10 - 211
2342074	Prallethrin	76.6	93.5	P/P	24 - 113
2342074	Tau-Fluvalinate	81.8	95.7	P/P	14 - 149
2342074	Tetramethrin	90.7	113	P/P	17 - 151
2342074	Trans-Nonachlor	73.7	75.3	P/P	42 - 102
2342074	Triclosan Methyl	86.1	85.6	P/P	48 - 108
2342074	Trifluralin	83.4	81.0	P/P	47 - 96.0
2342080	PCB-1016	95.0	97.1	P/P	46 - 111
2342080	PCB-1260	88.7	97.9	P/P	45 - 114

Reference Method: EPA 8276

Batch ID: P416766

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342080	Chlordane	105	107	P/P	53 - 126
2342080	Toxaphene	109	110	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P416713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342112	Acesulfame K	67.2	64.6	P/P	40 - 150
2342112	AMPA	87.5	88.8	P/P	40 - 150
2342112	Endothall	158	148	F/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P416713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342112	Glufosinate	84.7	85.2	P/P	40 - 150
2342112	Glyphosate	88.0	81.5	P/P	40 - 150
2342112	Sucralose	98.9	96.0	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416992

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342488	2,4-D	78.5	74.0	P/P	40 - 150
2342488	2,4,5-T	58.5	63.9	P/P	40 - 150
2342488	Acetaminophen	81.5	83.3	P/P	30 - 150
2342488	Acetamiprid	76.2	69.8	P/P	40 - 150
2342488	Afidopyropen	61.9	63.4	P/P	30 - 150
2342488	Bentazon	94.7	109	P/P	30 - 150
2342488	Benzovindiflupyr	75.0	92.8	P/P	40 - 150
2342488	Carbamazepine	84.4	87.8	P/P	40 - 150
2342488	Clothianidin	95.5	94.4	P/P	40 - 150
2342488	Dinotefuran	83.0	87.9	P/P	40 - 150
2342488	Diuron	72.6	74.2	P/P	40 - 150
2342488	Fenuron	87.0	89.2	P/P	40 - 150
2342488	Fluridone	88.2	94.5	P/P	40 - 150
2342488	Hydrocodone	81.8	85.3	P/P	40 - 150
2342488	Ibuprofen	68.7	68.9	P/P	40 - 150
2342488	Imazapyr	75.6	81.9	P/P	40 - 150
2342488	Imidacloprid	89.0	90.5	P/P	40 - 150
2342488	Linuron	83.9	73.8	P/P	40 - 150
2342488	Mandestrobin	79.8	85.4	P/P	40 - 150
2342488	MCP	79.1	78.8	P/P	40 - 150
2342488	Naproxen	74.4	67.7	P/P	40 - 150
2342488	Primidone	84.8	85.3	P/P	40 - 150
2342488	Pyraclostrobin	74.4	76.0	P/P	40 - 150
2342488	Silvex	59.0	65.8	P/P	40 - 150
2342488	Thiamethoxam	84.9	87.1	P/P	40 - 150
2342488	Tolfenpyrad	47.5	49.4	P/P	30 - 150
2342488	Triclopyr	64.1	68.1	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P417088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342220	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P417151

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2342503	Organic Carbon	101	98.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P416853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342200	Color (true)	3.79	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416869

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342105	Turbidity	2.29	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417208

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342439	Chloride	0.618	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P417211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342439	Sulfate	0.438	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P417122

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342221	Ammonia-N	3.36	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342258	Kjeldahl Nitrogen	1.79	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P417035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342258	NO2NO3-N	0.350	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342218	Total-P	0.272	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P416766

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342074	Aldrin	10.6	Spike	P	0 - 41
2342074	Alpha-BHC	3.90	Spike	P	0 - 25
2342074	Alpha-Chlordane	1.27	Spike	P	0 - 33
2342074	Beta-BHC	3.91	Spike	P	0 - 36
2342074	Beta-Cyfluthrin	17.8	Spike	P	0 - 42
2342074	Bifenthrin	13.0	Spike	P	0 - 53
2342074	Carbophenothion	15.3	Spike	P	0 - 30
2342074	Chlorothalonil	12.1	Spike	P	0 - 71
2342074	Cis-Nonachlor	11.9	Spike	P	0 - 29
2342074	Cypermethrin	18.0	Spike	P	0 - 40
2342074	Dacthal	6.19	Spike	P	0 - 26
2342074	DDD-p,p'	5.21	Spike	P	0 - 39
2342074	DDE-p,p'	1.12	Spike	P	0 - 33
2342074	DDT-p,p'	5.63	Spike	P	0 - 40
2342074	Delta-BHC	2.34	Spike	P	0 - 37
2342074	Deltamethrin	9.11	Spike	P	0 - 100
2342074	Dichlobenil	11.4	Spike	P	0 - 40
2342074	Dicofol	6.30	Spike	P	0 - 31
2342074	Dieldrin	1.18	Spike	P	0 - 27
2342074	Endosulfan I	0.127	Spike	P	0 - 23
2342074	Endosulfan II	2.46	Spike	P	0 - 28
2342074	Endosulfan Sulfate	6.65	Spike	P	0 - 38
2342074	Endrin	2.27	Spike	P	0 - 63
2342074	Endrin Aldehyde	5.82	Spike	P	0 - 60
2342074	Endrin Ketone	4.65	Spike	P	0 - 37
2342074	Esfenvalerate	15.5	Spike	P	0 - 52
2342074	Ethalfuralin	2.19	Spike	P	0 - 23
2342074	Fenpropathrin	19.2	Spike	P	0 - 32
2342074	Gamma-BHC	3.16	Spike	P	0 - 17
2342074	Gamma-Chlordane	6.18	Spike	P	0 - 40
2342074	Heptachlor	2.37	Spike	P	0 - 29
2342074	Heptachlor Epoxide	7.13	Spike	P	0 - 25
2342074	Hexachlorobenzene	7.57	Spike	P	0 - 36
2342074	Kepone	10.6	Spike	P	0 - 93
2342074	Lambda-Cyhalothrin	13.7	Spike	P	0 - 55
2342074	Methoprene	11.4	Spike	P	0 - 53
2342074	Methoxychlor	8.74	Spike	P	0 - 29
2342074	MGK-264	8.73	Spike	P	0 - 35
2342074	Mirex	9.13	Spike	P	0 - 46
2342074	Oxychlordane	13.7	Spike	P	0 - 29
2342074	Permethrin	17.1	Spike	P	0 - 44
2342074	Phenothrin	23.8	Spike	P	0 - 56
2342074	Piperonyl Butoxide	4.23	Spike	P	0 - 100
2342074	Prallethrin	19.8	Spike	P	0 - 42
2342074	Tau-Fluvalinate	15.6	Spike	P	0 - 54
2342074	Tetramethrin	21.6	Spike	P	0 - 51
2342074	Trans-Nonachlor	2.10	Spike	P	0 - 37
2342074	Triclosan Methyl	0.570	Spike	P	0 - 31
2342074	Trifluralin	2.90	Spike	P	0 - 30
2342080	PCB-1016	2.21	Spike	P	0 - 32
2342080	PCB-1260	9.86	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P416766

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342080	Chlordane	1.83	Spike	P	0 - 25
2342080	Toxaphene	1.36	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P416713

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342112	Acesulfame K	4.01	Spike	P	0 - 30
2342112	AMPA	1.43	Spike	P	0 - 30
2342112	Endothall	7.17	Spike	P	0 - 30
2342112	Glufosinate	0.539	Spike	P	0 - 30
2342112	Glyphosate	7.69	Spike	P	0 - 30
2342112	Sucralose	2.96	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P416992

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342488	2,4-D	5.91	Spike	P	0 - 30
2342488	2,4,5-T	8.79	Spike	P	0 - 30
2342488	Acetaminophen	2.14	Spike	P	0 - 30
2342488	Acetamiprid	8.76	Spike	P	0 - 30
2342488	Afidopyropen	2.46	Spike	P	0 - 30
2342488	Bentazon	14.2	Spike	P	0 - 30
2342488	Benzovindiflupyr	21.3	Spike	P	0 - 30
2342488	Carbamazepine	3.87	Spike	P	0 - 30
2342488	Clothianidin	1.10	Spike	P	0 - 30
2342488	Dinotefuran	5.69	Spike	P	0 - 30
2342488	Diuron	2.17	Spike	P	0 - 30
2342488	Fenuron	2.48	Spike	P	0 - 30
2342488	Fluridone	6.89	Spike	P	0 - 30
2342488	Hydrocodone	4.15	Spike	P	0 - 30
2342488	Ibuprofen	0.292	Spike	P	0 - 30
2342488	Imazapyr	7.95	Spike	P	0 - 30
2342488	Imidacloprid	1.70	Spike	P	0 - 30
2342488	Linuron	12.8	Spike	P	0 - 30
2342488	Mandestrobin	6.73	Spike	P	0 - 30
2342488	MCPP	0.342	Spike	P	0 - 30
2342488	Naproxen	9.37	Spike	P	0 - 30
2342488	Primidone	0.636	Spike	P	0 - 30
2342488	Pyraclostrobin	2.16	Spike	P	0 - 30
2342488	Silvex	10.9	Spike	P	0 - 30
2342488	Thiamethoxam	2.59	Spike	P	0 - 30
2342488	Tolfenpyrad	3.91	Spike	P	0 - 30
2342488	Triclopyr	6.00	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P417082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342220	Total Alkalinity	0.278	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P417298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342220	TDS	2.87	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P417088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342220	Fluoride	0.476	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P417151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2342503	Organic Carbon	1.59	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2342266

Field Sample ID: G2SE0057

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	109	P	29 - 130
EPA 8270E	Decachlorobiphenyl	60.5	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	68.9	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	66.5	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	87.5	P	30 - 101
EPA 8276	PCNB	98.6	P	48 - 121

Lab Sample ID: 2342267

Field Sample ID: G3SE0024

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	78.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.5	P	30 - 160
EPA 8321B	Diuron-d6	73.4	P	30 - 160
EPA 8321B	Endothall-d6	124	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	55.6	P	30 - 160
EPA 8321B	Primidone-d5	93.8	P	30 - 160
EPA 8321B	Sucralose-d6	98.2	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A113584

Included Lab Sample IDs: 2342257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A113588

Included Lab Sample IDs: 2342257

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

Reference Method: EPA 8321B

Run ID: A113640

Included Lab Sample IDs: 2342267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	82.7	81.8	P/P	60 - 160
Sucralose	98.1	98.0	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A113642

Included Lab Sample IDs: 2342267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	109	108	P/P	60 - 160
Endothall	104	100	P/P	60 - 160
Glufosinate	100	97.1	P/P	60 - 160
Glyphosate	102	103	P/P	60 - 160

Reference Method: EPA 8270E

Run ID: A113655

Included Lab Sample IDs: 2342266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.4		P	80 - 120
PCB-1260	100		P	80 - 120

Reference Method: EPA 8321B

Run ID: A113656

Included Lab Sample IDs: 2342267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.2	89.2	P/P	50 - 150
2,4,5-T	105	100	P/P	50 - 150
Acetaminophen	92.9	96.6	P/P	60 - 160
Acetamiprid	92.1	101	P/P	50 - 150
Afidopyropen	91.6	93.6	P/P	50 - 150
Bentazon	99.2	102	P/P	50 - 160
Benzovindiflupyr	98.7	107	P/P	50 - 150
Carbamazepine	99.2	97.5	P/P	60 - 150
Clothianidin	96.4	103	P/P	60 - 150
Dinotefuran	94.2	95.0	P/P	50 - 150
Diuron	85.7	97.2	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A113656
Included Lab Sample IDs: 2342267

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	94.2	95.7	P/P	60 - 150
Fluridone	107	109	P/P	60 - 160
Hydrocodone	94.7	101	P/P	60 - 150
Ibuprofen	89.4	92.2	P/P	50 - 160
Imazapyr	85.7	82.4	P/P	50 - 150
Imidacloprid	88.6	91.4	P/P	60 - 150
Linuron	100	109	P/P	60 - 150
Mandestrobin	101	100	P/P	50 - 150
MCPP	97.5	93.5	P/P	50 - 150
Naproxen	76.4	86.0	P/P	50 - 160
Primidone	96.0	95.4	P/P	60 - 150
Pyraclostrobin	96.4	95.3	P/P	60 - 150
Silvex	82.3	87.3	P/P	50 - 150
Thiamethoxam	98.0	99.0	P/P	50 - 150
Tolfenpyrad	97.3	91.2	P/P	60 - 150
Triclopyr	92.3	94.2	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113662
Included Lab Sample IDs: 2342258

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

Reference Method: EPA 8270E
Run ID: A113673
Included Lab Sample IDs: 2342266

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

Reference Method: EPA 8270E
Run ID: A113674
Included Lab Sample IDs: 2342266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.8		P	80 - 120
Alpha-BHC	98.3		P	80 - 120
Alpha-Chlordane	94.5		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	94.9		P	80 - 120
Bifenthrin	90.5		P	80 - 120
Carbophenothion	104		P	80 - 120
Chlorothalonil	101		P	80 - 120
Cis-Nonachlor	99.6		P	80 - 120
Cypermethrin	97.1		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	98.1		P	80 - 120
DDE-p,p'	93.6		P	80 - 120
DDT-p,p'	98.9		P	80 - 120
Delta-BHC	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113674
Included Lab Sample IDs: 2342266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Deltamethrin	91.1		P	80 - 120
Dichlobenil	91.7		P	80 - 120
Dicofol	108		P	80 - 120
Dieldrin	94.3		P	80 - 120
Endosulfan I	95.4		P	80 - 120
Endosulfan II	94.5		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	98.8		P	80 - 120
Endrin Ketone	98.0		P	80 - 120
Esfenvalerate	89.2		P	80 - 120
Ethalfuralin	102		P	80 - 120
Fenpropathrin	104		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	92.8		P	80 - 120
Heptachlor	99.4		P	80 - 120
Heptachlor Epoxide	92.6		P	80 - 120
Hexachlorobenzene	97.2		P	80 - 120
Kepone	79.4*		F	80 - 120
Lambda-Cyhalothrin	95.5		P	80 - 120
Methoprene	90.5		P	80 - 120
Methoxychlor	95.0		P	80 - 120
MGK-264	93.8		P	80 - 120
Mirex	93.2		P	80 - 120
Oxychlordane	103		P	80 - 120
Permethrin	89.1		P	80 - 120
Phenothrin	92.3		P	80 - 120
Piperonyl Butoxide	92.7		P	80 - 120
Prallethrin	90.6		P	80 - 120
Tau-Fluvalinate	94.3		P	80 - 120
Tetramethrin	85.2		P	80 - 120
Trans-Nonachlor	99.1		P	80 - 120
Triclosan Methyl	97.7		P	80 - 120
Trifluralin	103		P	80 - 120

Reference Method: EPA 8276
Run ID: A113680
Included Lab Sample IDs: 2342266

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

Reference Method: SM 2320 B-2011
Run ID: A113683
Included Lab Sample IDs: 2342257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.3	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A113683

Included Lab Sample IDs: 2342257

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A113685

Included Lab Sample IDs: 2342258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.6	99.0	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A113701

Included Lab Sample IDs: 2342258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.9	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113708

Included Lab Sample IDs: 2342258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.7	97.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113720

Included Lab Sample IDs: 2342258

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	98.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A113721

Included Lab Sample IDs: 2342257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Sulfate	99.3	99.6	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)	102				3.79	
EPA 180.1 Rev. 2.0	Turbidity	97.0				2.29	
EPA 300.0 Rev. 2.1	Chloride	99.0	97.1	95.9		0.618	
	Sulfate	98.4	96.7	96.9		0.438	
EPA 350.1 Rev. 2.0	Ammonia-N	93.4	99.6	103			3.36
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	108	105			1.79
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	98.1	97.6			0.350
EPA 365.1 Rev. 2.0	Total-P	102	104	104			0.272
EPA 8270E	Aldrin	56.2	60.3	67.1			10.6
	Alpha-BHC	100	96.9	93.2			3.90
	Alpha-Chlordane	73.1	80.2	81.2			1.27
	Beta-BHC	119	113	109			3.91
	Beta-Cyfluthrin	69.7	79.1	94.5			17.8
	Bifenthrin	54.9	65.1	74.1			13.0
	Carbophenothion	50.0	64.4	75.1			15.3
	Chlorothalonil	101	120	106			12.1
	Cis-Nonachlor	63.1	63.9	71.9			11.9
	Cypermethrin	72.4	84.1	101			18.0
	Dacthal	96.5	92.5	98.4			6.19
	DDD-p,p'	66.0	70.6	74.4			5.21
	DDE-p,p'	67.5	77.9	78.8			1.12
	DDT-p,p'	67.6	76.6	81.1			5.63
	Delta-BHC	128	127	124			2.34
	Deltamethrin	78.0	93.7	103			9.11
	Dichlobenil	94.0	87.6	78.1			11.4
	Dicofol	72.3	73.5	78.3			6.30
	Dieldrin	78.3	80.3	81.2			1.18
	Endosulfan I	80.2	86.6	86.7			0.127
	Endosulfan II	78.2	81.6	83.6			2.46
	Endosulfan Sulfate	87.3	88.4	94.5			6.65
	Endrin	71.9	74.5	76.2			2.27
	Endrin Aldehyde	77.1	75.0	70.8			5.82
	Endrin Ketone	87.0	88.5	92.8			4.65
	Esfenvalerate	69.0	79.3	92.6			15.5
	Ethalfuralin	78.0	80.1	81.9			2.19
	Fenpropathrin	69.8	69.0	83.7			19.2
	Gamma-BHC	107	101	97.8			3.16
	Gamma-Chlordane	70.8	73.2	77.9			6.18
	Heptachlor	69.0	71.5	73.2			2.37
	Heptachlor Epoxide	75.8	79.9	85.8			7.13
	Hexachlorobenzene	69.0	77.5	71.8			7.57
	Kepone	55.3	53.7	48.2			10.6
	Lambda-Cyhalothrin	63.5	72.4	83.0			13.7
	Methoprene	60.0	59.7	66.9			11.4
	Methoxychlor	90.0	85.8	93.7			8.74
	MGK-264	89.6	87.8	95.8			8.73
	Mirex	46.6	55.2	60.5			9.13
	Oxychlordane	67.4	73.4	84.2			13.7
	PCB-1016	95.3	95.0	97.1			2.21
	PCB-1260	95.8	88.7	97.9			9.86
	Permethrin	65.4	72.5	86.1			17.1
	Phenothrin	51.6	54.0	68.6			23.8
	Piperonyl Butoxide	126	125	120			4.23
	Prallethrin	80.2	76.6	93.5			19.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Tau-Fluvalinate	67.6	81.8	95.7			15.6
	Tetramethrin	92.8	90.7	113			21.6
	Trans-Nonachlor	66.5	73.7	75.3			2.10
	Triclosan Methyl	81.0	86.1	85.6			0.570
	Trifluralin	74.8	83.4	81.0			2.90
EPA 8276	Chlordane	105	105	107			1.83
	Toxaphene	106	109	110			1.36
EPA 8321B	2,4-D	72.9	78.5	74.0			5.91
	2,4,5-T	64.6	58.5	63.9			8.79
	Acesulfame K	80.2	67.2	64.6			4.01
	Acetaminophen	85.8	81.5	83.3			2.14
	Acetamiprid	63.4	76.2	69.8			8.76
	Afidopyropen	66.2	61.9	63.4			2.46
	AMPA	112	87.5	88.8			1.43
	Bentazon	104	94.7	109			14.2
	Benzovindiflupyr	93.8	75.0	92.8			21.3
	Carbamazepine	92.5	84.4	87.8			3.87
	Clothianidin	101	95.5	94.4			1.10
	Dinotefuran	90.9	83.0	87.9			5.69
	Diuron	80.7	72.6	74.2			2.17
	Endothall	102	158	148			7.17
	Fenuron	93.0	87.0	89.2			2.48
	Fluridone	100	88.2	94.5			6.89
	Glufosinate	128	84.7	85.2			0.539
	Glyphosate	103	88.0	81.5			7.69
	Hydrocodone	90.6	81.8	85.3			4.15
	Ibuprofen	89.2	68.7	68.9			0.292
	Imazapyr	89.8	75.6	81.9			7.95
	Imidacloprid	92.2	89.0	90.5			1.70
	Linuron	87.9	83.9	73.8			12.8
	Mandestrobin	90.7	79.8	85.4			6.73
	MCPP	87.6	79.1	78.8			0.342
	Naproxen	66.2	74.4	67.7			9.37
	Primidone	79.7	84.8	85.3			0.636
	Pyraclostrobin	77.1	74.4	76.0			2.16
	Silvex	55.3	59.0	65.8			10.9
	Sucralose	102	98.9	96.0			2.96
	Thiamethoxam	90.4	84.9	87.1			2.59
	Tolfenpyrad	44.8	47.5	49.4			3.91
	Triclopyr	66.5	64.1	68.1			6.00
SM 2320 B-2011	Total Alkalinity	99.4				0.278	
SM 2540 C-2011	TDS					2.87	
SM 4500-F- C-2011	Fluoride	103	101	100			0.476
SM 5310 B-2011	Organic Carbon	97.0	101	98.1			1.59

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2342257
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2342257
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2342257
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2342257
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2342258

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2342258
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2342258
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2342258
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2342266
EPA 8270E	PCBs in water matrices by GC/MS/MS	2342266
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2342266
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2342267
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2342257
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2342257
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2342257
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2342257
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2342258

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	07/19/2022			07/19/2022 14:43	Samantha L Bates	2342257
EPA 180.1 Rev. 2.0	07/19/2022			07/19/2022 13:47	Anna M. Plaviak	2342257
EPA 300.0 Rev. 2.1	07/19/2022			07/26/2022 18:53	Anna M. Plaviak	2342257
EPA 350.1 Rev. 2.0	07/19/2022			07/25/2022 13:35	Judith K. Clark	2342258
EPA 351.2 Rev. 2.0	07/19/2022	07/25/2022 15:00	Simonne.V. Calhoun	07/26/2022 14:46	Samantha L Bates	2342258
EPA 353.2 Rev. 2.0	07/19/2022			07/22/2022 11:20	Beverly Y. Sanders	2342258
EPA 365.1 Rev. 2.0	07/19/2022	07/22/2022 16:03	Adam P Silver	07/25/2022 10:41	James L Waggerby	2342258
EPA 8270E	07/19/2022	07/19/2022 11:30	Fe-Val Siddell	07/21/2022 23:32	Michael Poppell	2342266
	07/19/2022	07/19/2022 11:30	Fe-Val Siddell	07/22/2022 00:42	Arthur Maknenko	2342266
	07/19/2022	07/19/2022 11:30	Fe-Val Siddell	07/24/2022 02:51	Michael Poppell	2342266
EPA 8276	07/19/2022	07/19/2022 11:30	Fe-Val Siddell	07/23/2022 04:17	Arthur Maknenko	2342266
EPA 8321B	07/19/2022	07/20/2022 14:30	Umesh Chiluwal	07/20/2022 17:43	Umesh Chiluwal	2342267
	07/19/2022	07/20/2022 14:30	Umesh Chiluwal	07/21/2022 02:41	Umesh Chiluwal	2342267
	07/19/2022	07/22/2022 09:30	June Rhew	07/23/2022 05:33	Juyoung Kim	2342267
SM 2320 B-2011	07/19/2022			07/23/2022 13:49	Dale L. Simmons	2342257
SM 2540 C-2011	07/19/2022			07/22/2022 15:32	Yijie Li	2342257
SM 2540 D-2011	07/19/2022			07/22/2022 15:32	Yijie Li	2342257
SM 4500-F- C-2011	07/19/2022			07/23/2022 13:49	Dale L. Simmons	2342257
SM 5310 B-2011	07/19/2022			07/25/2022 17:03	Khloe J Berg	2342258