

Chemical Analysis Report

CEN-DIST-2023-02-16-02

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

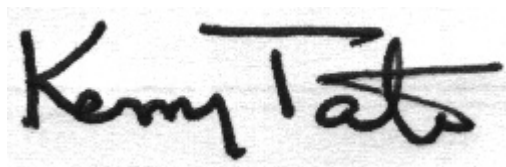
Event Description: **Run 1**
Request ID: **RQ-2023-02-13-19**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 10-MAR-2023 09:29

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the 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: Unnamed Ditch @ 100m US of Madeline Ave

Collection Date/Time: 02/15/2023 10:50

Field ID: G5CE0092

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388154	EPA 8270E	Aldrin	0.66	UQ	ng/L	P426421	LCS, MS
		Alpha-BHC	0.10	UQJ	ng/L	P426421	
		Alpha-Chlordane	0.20	UQ	ng/L	P426421	
		PCB-1016	2.0	UQ	ng/L	P426421	
		Beta-BHC	0.10	UQ	ng/L	P426421	MS
		PCB-1221	2.0	UQ	ng/L	P426421	
		Beta-Cyfluthrin	1.3	UQ	ng/L	P426421	
		PCB-1232	2.0	UQ	ng/L	P426421	
		Bifenthrin	0.51	UQ	ng/L	P426421	
		PCB-1242	2.0	UQ	ng/L	P426421	
		PCB-1248	2.0	UQ	ng/L	P426421	
		Chlorothalonil	3.7	UQ	ng/L	P426421	
		PCB-1254	2.0	UQ	ng/L	P426421	
		Cis-Nonachlor	0.20	UQ	ng/L	P426421	
		PCB-1260	2.0	UQ	ng/L	P426421	
		Cypermethrin	1.5	UQ	ng/L	P426421	
		Dacthal	0.15	UQ	ng/L	P426421	
		DDD-p,p'	0.26	UQ	ng/L	P426421	
		DDE-p,p'	0.20	UQ	ng/L	P426421	
		DDT-p,p'	0.26	UQ	ng/L	P426421	
		Delta-BHC	0.41	UQ	ng/L	P426421	
		Deltamethrin	1.3	UQ	ng/L	P426421	
		Dichlobenil	0.26	UQ	ng/L	P426421	
		Dicofol	1.3	UQ	ng/L	P426421	
		Dieldrin	0.41	UQ	ng/L	P426421	
		Endosulfan I	0.41	UQ	ng/L	P426421	
		Endosulfan II	0.41	UQ	ng/L	P426421	
		Endosulfan Sulfate	0.31	UQ	ng/L	P426421	
		Endrin	0.41	UQ	ng/L	P426421	
		Endrin Aldehyde	0.77	UQ	ng/L	P426421	
		Endrin Ketone	0.41	UQJ	ng/L	P426421	
		Esfenvalerate	0.77	UQ	ng/L	P426421	
		Ethalfuralin	0.15	UQ	ng/L	P426421	
		Fenpropathrin	0.26	UQ	ng/L	P426421	
		Gamma-BHC	0.13	UQ	ng/L	P426421	
		Gamma-Chlordane	0.20	UQ	ng/L	P426421	
		Heptachlor	0.20	UQ	ng/L	P426421	
		Heptachlor Epoxide	0.26	UQ	ng/L	P426421	
		Hexachlorobenzene**	1.0	UQ	ng/L	P426421	
		Kepone	5.1	UQ	ng/L	P426421	
		Lambda-Cyhalothrin	0.77	UQ	ng/L	P426421	
		Methoprene	0.77	UQ	ng/L	P426421	
		Methoxychlor	0.31	UQ	ng/L	P426421	
		MGK-264	0.20	UQ	ng/L	P426421	

Field ID: G5CE0092

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388154	EPA 8270E	Mirex	0.36	UQ	ng/L	P426421	
		Oxychlordane	0.31	UQ	ng/L	P426421	
		Permethrin	1.6	UQ	ng/L	P426421	
		Phenothrin	0.92	UQ	ng/L	P426421	
		Piperonyl Butoxide	0.15	UQ	ng/L	P426421	
		Prallethrin	2.0	UQ	ng/L	P426421	
		Tau-Fluvalinate	0.26	UQ	ng/L	P426421	
		Tetramethrin	0.77	UQ	ng/L	P426421	
		Trans-Nonachlor	0.20	UQ	ng/L	P426421	
		Triclosan Methyl	0.15	UQ	ng/L	P426421	
		Trifluralin	0.20	UQ	ng/L	P426421	
	EPA 8276	Chlordane	2.0	UQ	ng/L	P426421	
		Toxaphene	15	UQ	ng/L	P426421	MS

Ref. Method and Comment:
EPA 8270E: Sample expired due to need for re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: Sample expired for preparation due to need for re-extraction.
EPA 8276: Sample expired for preparation due to need for re-extraction.

Sample Location: Reed Canal @ Reed Canal Park

Collection Date/Time: 02/15/2023 10:02

Field ID: G5CE0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388147	DEP SOP: NU-094-1	Color (true)	41	A	PCU	P425969	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P425972	
	EPA 300.0 Rev. 2.1	Chloride	59		mg Cl/L	P426519	
		Sulfate	16		mg SO4/L	P426521	
	SM 2320 B-2011	Total Alkalinity	236		mg CaCO3/L	P426394	
	SM 2540 C-2015	TDS	369		mg/L	P426485	
	SM 2540 D-2015	TSS	3	I	mg/L	P426376	
	SM 4500-F- C-2011	Fluoride	0.091	I	mg F/L	P426397	
2388148	EPA 350.1 Rev. 2.0	Ammonia-N	0.082		mg N/L	P426417	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P426330	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P426137	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P426349	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P426274	
2388155	EPA 8321B	2,4-D	0.0070	I	ug/L	P426017	
		Acesulfame K	0.19	I J	ug/L	P425983	MS
		2,4,5-T	0.0040	U	ug/L	P426017	
		AMPA	11		ug/L	P425983	
		Acetaminophen	0.0080	U	ug/L	P426017	
		Acetamiprid	0.0020	U	ug/L	P426017	
		Endothall	0.25	U	ug/L	P425983	
		Glufosinate	0.10	UJ	ug/L	P425983	MS
		Glyphosate	760		ug/L	P425983	
		Afidopyropen	0.0020	U	ug/L	P426017	
		Bentazon	0.66		ug/L	P426017	
		Sucralose	1.1		ug/L	P425983	
		Benzovindiflupyr	0.0020	U	ug/L	P426017	
		Carbamazepine	0.0029	I	ug/L	P426017	
		Clothianidin	0.0028	I	ug/L	P426017	
		Dinotefuran	0.0020	I	ug/L	P426017	
		Diuron	0.0049	I	ug/L	P426017	
		Fenuron	0.032	U	ug/L	P426017	
		Fluridone	0.012		ug/L	P426017	
		Imazapyr	0.11		ug/L	P426017	
		Hydrocodone	0.0020	U	ug/L	P426017	
		Ibuprofen	0.080	U	ug/L	P426017	
		Imidacloprid	0.0061	I	ug/L	P426017	
		Linuron	0.0040	U	ug/L	P426017	
		Mandestrobin	0.0020	U	ug/L	P426017	
		MCPP	0.0026	I	ug/L	P426017	
		Naproxen	0.0080	U	ug/L	P426017	
		Primidone	0.0060	I	ug/L	P426017	
		Pyraclostrobin	0.0020	U	ug/L	P426017	
		Silvex	0.0040	U	ug/L	P426017	
		Thiamethoxam	0.0020	U	ug/L	P426017	

Field ID: G5CE0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388155	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P426017	
		Triclopyr	0.0040	U	ug/L	P426017	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample. 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: P425969

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425972

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426417

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426330

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426137

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426349

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

Reference Method: EPA 8270E
Batch ID: P426421

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: P426421

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
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P426421

Component	Result	Code	Units
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
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P426421

Component	Result	Code	Units
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P426421

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: P425983

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: P426017

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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P426017

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

Reference Method: SM 2320 B-2011
Batch ID: P426394

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

Reference Method: SM 2540 C-2015
Batch ID: P426485

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P426376

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P426274

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: P425969

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: P425972

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426417

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426137

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: P426349

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

Reference Method: EPA 8270E
Batch ID: P426421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.1		P	10 - 92.0
Alpha-BHC	73.8		F	75 - 107
Alpha-Chlordane	69.9		P	50 - 108
Beta-BHC	78.4		P	36 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P426421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	78.4		P	20 - 161
Bifenthrin	63.1		P	10 - 119
Chlorothalonil	91.3		P	26 - 186
Cis-Nonachlor	65.5		P	42 - 119
Cypermethrin	72.5		P	22 - 150
Dacthal	78.7		P	72 - 119
DDD-p,p'	65.1		P	45 - 107
DDE-p,p'	67.5		P	48 - 106
DDT-p,p'	65.4		P	48 - 110
Delta-BHC	82.4		P	54 - 140
Deltamethrin	90.7		P	22 - 189
Dichlobenil	66.4		P	36 - 117
Dicofol	67.4		P	46 - 155
Dieldrin	73.4		P	54 - 110
Endosulfan I	70.9		P	59 - 105
Endosulfan II	80.0		P	51 - 118
Endosulfan Sulfate	79.1		P	57 - 121
Endrin	72.3		P	10 - 120
Endrin Aldehyde	73.7		P	34 - 118
Endrin Ketone	67.1		F	69 - 177
Esfenvalerate	80.9		P	23 - 168
Ethalfuralin	68.0		P	49 - 99.0
Fenpropathrin	76.7		P	34 - 117
Gamma-BHC	82.0		P	72 - 117
Gamma-Chlordane	65.0		P	43 - 106
Heptachlor	57.2		P	41 - 98.0
Heptachlor Epoxide	70.7		P	57 - 106
Hexachlorobenzene	57.8		P	36 - 99.0
Kepone	55.3		P	16 - 215
Lambda-Cyhalothrin	40.3		P	21 - 177
Methoprene	65.5		P	10 - 119
Methoxychlor	73.5		P	60 - 112
MGK-264	66.8		P	26 - 122
Mirex	59.1		P	10 - 169
Oxychlordane	63.4		P	43 - 105
PCB-1016	70.6		P	48 - 112
PCB-1260	70.8		P	44 - 118
Permethrin	45.3		P	24 - 148
Phenothrin	62.2		P	10 - 106
Piperonyl Butoxide	81.8		P	10 - 139
Prallethrin	65.2		P	17 - 109
Tau-Fluvalinate	76.8		P	13 - 131
Tetramethrin	101		P	10 - 132
Trans-Nonachlor	63.5		P	44 - 106
Triclosan Methyl	74.8		P	59 - 109
Trifluralin	67.0		P	44 - 101

Reference Method: EPA 8276
Batch ID: P426421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.1		P	53 - 126

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P426421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	85.0		P	56 - 211

Reference Method: EPA 8321B
Batch ID: P425983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	119		P	40 - 150
AMPA	107		P	40 - 150
Endothall	105		P	40 - 150
Glufosinate	101		P	40 - 150
Glyphosate	105		P	40 - 150
Sucralose	111		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P426017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	117		P	40 - 150
2,4,5-T	95.6		P	40 - 150
Acetaminophen	97.0		P	30 - 150
Acetamiprid	98.7		P	40 - 150
Afidopyropen	74.2		P	30 - 150
Bentazon	120		P	30 - 150
Benzovindiflupyr	87.3		P	40 - 150
Carbamazepine	84.1		P	40 - 150
Clothianidin	98.3		P	40 - 150
Dinotefuran	103		P	40 - 150
Diuron	72.4		P	40 - 150
Fenuron	95.2		P	40 - 150
Fluridone	74.2		P	40 - 150
Hydrocodone	82.4		P	40 - 150
Ibuprofen	106		P	40 - 150
Imazapyr	95.6		P	40 - 150
Imidacloprid	97.2		P	40 - 150
Linuron	82.7		P	40 - 150
Mandestrobin	90.4		P	40 - 150
MCPP	94.8		P	40 - 150
Naproxen	91.0		P	40 - 150
Primidone	96.3		P	40 - 150
Pyraclostrobin	82.9		P	40 - 150
Silvex	102		P	40 - 150
Thiamethoxam	102		P	40 - 150
Tolfenpyrad	62.9		P	30 - 150
Triclopyr	86.1		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P426394

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P426485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	104		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P426376

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426274

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387929	Chloride	96.8		P	90 - 110
2387931	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387929	Sulfate	101		P	90 - 110
2387931	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387936	Ammonia-N	97.8	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388308	Kjeldahl Nitrogen	94.2	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388148	NO2NO3-N	96.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426349

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388064	Total-P	103	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P426421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389580	Aldrin	53.9	58.1	P/P	20 - 82.0
2389580	Alpha-BHC	67.0	70.5	F/F	71 - 109
2389580	Alpha-Chlordane	79.0	81.0	P/P	42 - 106
2389580	Beta-BHC	68.7	83.9	F/P	69 - 180
2389580	Beta-Cyfluthrin	93.3	98.3	P/P	18 - 175
2389580	Bifenthrin	81.6	78.0	P/P	21 - 128
2389580	Chlorothalonil	86.4	108	P/P	10 - 300
2389580	Cis-Nonachlor	76.7	75.8	P/P	34 - 106
2389580	Cypermethrin	92.6	88.5	P/P	22 - 158
2389580	Dacthal	83.0	88.5	P/P	54 - 116
2389580	DDD-p,p'	80.5	74.0	P/P	34 - 107
2389580	DDE-p,p'	78.5	77.2	P/P	33 - 110
2389580	DDT-p,p'	70.6	77.6	P/P	50 - 122
2389580	Delta-BHC	86.0	95.2	P/P	77 - 193

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P426421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389580	Deltamethrin	113	121	P/P	10 - 195
2389580	Dichlobenil	43.3	50.0	P/P	25 - 113
2389580	Dicofol	75.2	79.7	P/P	38 - 247
2389580	Dieldrin	85.8	82.4	P/P	45 - 118
2389580	Endosulfan I	81.7	85.8	P/P	51 - 106
2389580	Endosulfan II	85.6	88.7	P/P	37 - 122
2389580	Endosulfan Sulfate	76.3	81.5	P/P	43 - 132
2389580	Endrin	82.5	87.2	P/P	29 - 101
2389580	Endrin Aldehyde	65.9	71.1	P/P	19 - 110
2389580	Endrin Ketone	68.9	74.1	P/P	60 - 140
2389580	Esfenvalerate	99.3	105	P/P	26 - 199
2389580	Ethalfuralin	66.8	71.4	P/P	45 - 99.0
2389580	Fenpropathrin	88.2	86.6	P/P	35 - 120
2389580	Gamma-BHC	75.9	80.8	P/P	63 - 128
2389580	Gamma-Chlordane	75.5	76.8	P/P	40 - 104
2389580	Heptachlor	58.3	65.6	P/P	36 - 97.0
2389580	Heptachlor Epoxide	79.1	83.1	P/P	49 - 184
2389580	Hexachlorobenzene	44.4	56.3	P/P	39 - 96.0
2389580	Kepone	78.3	83.1	P/P	10 - 217
2389580	Lambda-Cyhalothrin	53.3	50.4	P/P	21 - 193
2389580	Methoprene	74.6	77.6	P/P	20 - 106
2389580	Methoxychlor	79.9	90.9	P/P	53 - 118
2389580	MGK-264	77.7	73.6	P/P	40 - 118
2389580	Mirex	70.8	70.0	P/P	26 - 92.0
2389580	Oxychlordane	73.4	75.7	P/P	44 - 99.0
2389580	Permethrin	59.0	55.3	P/P	33 - 182
2389580	Phenothrin	76.5	77.1	P/P	10 - 129
2389580	Piperonyl Butoxide	92.5	85.4	P/P	10 - 211
2389580	Prallethrin	61.2	66.4	P/P	24 - 113
2389580	Tau-Fluvalinate	92.4	98.5	P/P	14 - 149
2389580	Tetramethrin	109	114	P/P	17 - 151
2389580	Trans-Nonachlor	82.2	80.1	P/P	42 - 102
2389580	Triclosan Methyl	82.0	86.0	P/P	48 - 108
2389580	Trifluralin	71.0	72.0	P/P	47 - 96.0
2389595	PCB-1016	54.0	58.0	P/P	46 - 111
2389595	PCB-1260	48.6	50.0	P/P	45 - 114

Reference Method: EPA 8276
Batch ID: P426421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389595	Chlordane	59.5	60.6	P/P	53 - 126
2389595	Toxaphene	40.7	45.2	F/F	56 - 211

Reference Method: EPA 8321B
Batch ID: P425983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388155	Acesulfame K	150	151	F/F	40 - 150
2388155	Endothall	110	113	P/P	40 - 150
2388155	Glufosinate	232	184	F/F	40 - 150
2388155	Sucralose	108	113	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P426017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388286	2,4-D	105	109	P/P	40 - 150
2388286	2,4,5-T	107	116	P/P	40 - 150
2388286	Acetaminophen	108	117	P/P	30 - 150
2388286	Acetamiprid	56.4	56.6	P/P	40 - 150
2388286	Afidopyropen	55.6	54.8	P/P	30 - 150
2388286	Benzovindiflupyr	89.9	86.3	P/P	40 - 150
2388286	Carbamazepine	51.0	53.1	P/P	40 - 150
2388286	Clothianidin	69.9	77.7	P/P	40 - 150
2388286	Dinotefuran	65.0	81.5	P/P	40 - 150
2388286	Diuron	44.4	47.9	P/P	40 - 150
2388286	Fenuron	41.2	53.6	P/P	40 - 150
2388286	Fluridone	81.3	72.1	P/P	40 - 150
2388286	Hydrocodone	59.6	67.6	P/P	40 - 150
2388286	Ibuprofen	74.4	69.7	P/P	40 - 150
2388286	Imidacloprid	96.2	109	P/P	40 - 150
2388286	Linuron	60.4	71.2	P/P	40 - 150
2388286	Mandestrobin	80.4	74.8	P/P	40 - 150
2388286	MCPP	96.0	105	P/P	40 - 150
2388286	Naproxen	59.1	69.4	P/P	40 - 150
2388286	Primidone	70.3	93.4	P/P	40 - 150
2388286	Pyraclostrobin	73.4	78.3	P/P	40 - 150
2388286	Silvex	115	108	P/P	40 - 150
2388286	Thiamethoxam	72.0	84.0	P/P	40 - 150
2388286	Tolfenpyrad	54.2	53.1	P/P	30 - 150
2388286	Triclopyr	108	100	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P426397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388643	Fluoride	102	99.7	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P426274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387936	Organic Carbon	94.6	96.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P425969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388147	Color (true)	2.32	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387918	Turbidity	4.23	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387929	Chloride	1.21	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387929	Sulfate	1.32	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387936	Ammonia-N	0.935	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388308	Kjeldahl Nitrogen	7.50	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388148	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426349

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388064	Total-P	0.253	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P426421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389580	Aldrin	7.51	Spike	P	0 - 41
2389580	Alpha-BHC	5.08	Spike	P	0 - 25
2389580	Alpha-Chlordane	2.53	Spike	P	0 - 33
2389580	Beta-BHC	19.8	Spike	P	0 - 36
2389580	Beta-Cyfluthrin	5.27	Spike	P	0 - 42
2389580	Bifenthrin	4.43	Spike	P	0 - 53
2389580	Chlorothalonil	22.1	Spike	P	0 - 71
2389580	Cis-Nonachlor	1.17	Spike	P	0 - 29
2389580	Cypermethrin	4.63	Spike	P	0 - 40
2389580	Dacthal	6.38	Spike	P	0 - 26
2389580	DDD-p,p'	8.37	Spike	P	0 - 39
2389580	DDE-p,p'	1.59	Spike	P	0 - 33
2389580	DDT-p,p'	9.56	Spike	P	0 - 40
2389580	Delta-BHC	10.2	Spike	P	0 - 37
2389580	Deltamethrin	6.79	Spike	P	0 - 100
2389580	Dichlobenil	14.4	Spike	P	0 - 40
2389580	Dicofol	5.70	Spike	P	0 - 31
2389580	Dieldrin	3.98	Spike	P	0 - 27
2389580	Endosulfan I	4.84	Spike	P	0 - 23
2389580	Endosulfan II	3.56	Spike	P	0 - 28
2389580	Endosulfan Sulfate	6.55	Spike	P	0 - 38
2389580	Endrin	5.56	Spike	P	0 - 63
2389580	Endrin Aldehyde	7.70	Spike	P	0 - 60
2389580	Endrin Ketone	7.31	Spike	P	0 - 37
2389580	Esfenvalerate	5.88	Spike	P	0 - 52
2389580	Ethalfuralin	6.78	Spike	P	0 - 23
2389580	Fenpropathrin	1.80	Spike	P	0 - 32
2389580	Gamma-BHC	6.28	Spike	P	0 - 17
2389580	Gamma-Chlordane	1.81	Spike	P	0 - 40
2389580	Heptachlor	11.9	Spike	P	0 - 29
2389580	Heptachlor Epoxide	4.94	Spike	P	0 - 25
2389580	Hexachlorobenzene	23.6	Spike	P	0 - 36
2389580	Kepone	5.94	Spike	P	0 - 93
2389580	Lambda-Cyhalothrin	5.63	Spike	P	0 - 55
2389580	Methoprene	3.96	Spike	P	0 - 53
2389580	Methoxychlor	12.9	Spike	P	0 - 29
2389580	MGK-264	5.46	Spike	P	0 - 35
2389580	Mirex	1.13	Spike	P	0 - 46
2389580	Oxychlordane	3.01	Spike	P	0 - 29
2389580	Permethrin	6.56	Spike	P	0 - 44
2389580	Phenothrin	0.768	Spike	P	0 - 56
2389580	Piperonyl Butoxide	8.01	Spike	P	0 - 100
2389580	Prallethrin	8.15	Spike	P	0 - 42
2389580	Tau-Fluvalinate	6.33	Spike	P	0 - 54
2389580	Tetramethrin	4.46	Spike	P	0 - 51
2389580	Trans-Nonachlor	2.57	Spike	P	0 - 37
2389580	Triclosan Methyl	4.72	Spike	P	0 - 31
2389580	Trifluralin	1.39	Spike	P	0 - 30
2389595	PCB-1016	7.10	Spike	P	0 - 32
2389595	PCB-1260	2.90	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276
 Batch ID: P426421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389595	Chlordane	1.81	Spike	P	0 - 25
2389595	Toxaphene	5.98	Spike	P	0 - 26

Reference Method: EPA 8321B
 Batch ID: P425983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388155	Acesulfame K	0.853	Spike	P	0 - 30
2388155	AMPA	2.29	Spike	P	0 - 30
2388155	Endothall	2.28	Spike	P	0 - 30
2388155	Glufosinate	23.4	Spike	P	0 - 30
2388155	Glyphosate	1.90	Spike	P	0 - 30
2388155	Sucralose	2.95	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P426017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388286	2,4-D	4.37	Spike	P	0 - 30
2388286	2,4,5-T	8.26	Spike	P	0 - 30
2388286	Acetaminophen	7.69	Spike	P	0 - 30
2388286	Acetamiprid	0.293	Spike	P	0 - 30
2388286	Afidopyropen	1.52	Spike	P	0 - 30
2388286	Bentazon	15.6	Spike	P	0 - 30
2388286	Benzovindiflupyr	4.07	Spike	P	0 - 30
2388286	Carbamazepine	4.04	Spike	P	0 - 30
2388286	Clothianidin	10.6	Spike	P	0 - 30
2388286	Dinotefuran	22.5	Spike	P	0 - 30
2388286	Diuron	7.58	Spike	P	0 - 30
2388286	Fenuron	26.3	Spike	P	0 - 30
2388286	Fluridone	12.0	Spike	P	0 - 30
2388286	Hydrocodone	12.7	Spike	P	0 - 30
2388286	Ibuprofen	6.54	Spike	P	0 - 30
2388286	Imazapyr	2.39	Spike	P	0 - 30
2388286	Imidacloprid	12.7	Spike	P	0 - 30
2388286	Linuron	16.4	Spike	P	0 - 30
2388286	Mandestrobin	7.26	Spike	P	0 - 30
2388286	MCPP	8.96	Spike	P	0 - 30
2388286	Naproxen	16.2	Spike	P	0 - 30
2388286	Primidone	28.2	Spike	P	0 - 30
2388286	Pyraclostrobin	6.49	Spike	P	0 - 30
2388286	Silvex	5.67	Spike	P	0 - 30
2388286	Thiamethoxam	15.3	Spike	P	0 - 30
2388286	Tolfenpyrad	1.97	Spike	P	0 - 30
2388286	Triclopyr	7.14	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P426394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388643	Total Alkalinity	1.19	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P426485

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387726	TDS	4.89	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P426397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388643	Fluoride	1.49	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P426274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387936	Organic Carbon	2.10	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2388154

Field Sample ID: G5CE0092

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	61.4	P	29 - 130
EPA 8270E	Decachlorobiphenyl	66.3	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	46.4	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	50.6	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	40.3	P	30 - 101
EPA 8276	PCNB	69.0	P	48 - 121

Lab Sample ID: 2388155

Field Sample ID: G5CE0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	119	P	30 - 160
EPA 8321B	Acetaminophen-d4	121	P	30 - 160
EPA 8321B	Carbamazepine-d10	63.4	P	30 - 160
EPA 8321B	Diuron-d6	50.5	P	30 - 160
EPA 8321B	Endothall-d6	119	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	147	P	30 - 160
EPA 8321B	Ibuprofen-d3	82.2	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117491

Included Lab Sample IDs: 2388147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117492

Included Lab Sample IDs: 2388147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117560

Included Lab Sample IDs: 2388148

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

Reference Method: EPA 8321B

Run ID: A117585

Included Lab Sample IDs: 2388155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	109	P/P	60 - 160
Endothall	111	116	P/P	60 - 160
Glufosinate	91.9	111	P/P	60 - 160
Glyphosate	93.7	112	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117586

Included Lab Sample IDs: 2388155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	124	130	P/P	60 - 160
Sucralose	116	119	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A117617

Included Lab Sample IDs: 2388148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.8	96.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117648

Included Lab Sample IDs: 2388155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.3	96.0	P/P	50 - 150
2,4,5-T	114	106	P/P	50 - 150
Acetaminophen	109	112	P/P	60 - 160
Acetamiprid	111	117	P/P	50 - 150
Afidopyropen	72.7	98.9	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A117648
Included Lab Sample IDs: 2388155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	128	113	P/P	50 - 160
Benzovindiflupyr	106	108	P/P	50 - 150
Carbamazepine	114	108	P/P	60 - 150
Clothianidin	111	108	P/P	60 - 150
Dinotefuran	108	111	P/P	50 - 150
Diuron	109	107	P/P	60 - 160
Fenuron	108	113	P/P	60 - 150
Fluridone	115	109	P/P	60 - 160
Hydrocodone	118	110	P/P	60 - 150
Ibuprofen	99.5	103	P/P	50 - 160
Imazapyr	103	98.9	P/P	50 - 150
Imidacloprid	107	105	P/P	60 - 150
Linuron	114	105	P/P	60 - 150
Mandestrobin	106	104	P/P	50 - 150
MCPP	108	94.7	P/P	50 - 150
Naproxen	83.1	141	P/P	50 - 160
Primidone	119	104	P/P	60 - 150
Pyraclostrobin	110	108	P/P	60 - 150
Silvex	97.7	101	P/P	50 - 150
Thiamethoxam	119	117	P/P	50 - 150
Tolfenpyrad	110	108	P/P	60 - 150
Triclopyr	117	108	P/P	50 - 150

Reference Method: SM 2320 B-2011
Run ID: A117667
Included Lab Sample IDs: 2388147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.1	96.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A117667
Included Lab Sample IDs: 2388147

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A117676
Included Lab Sample IDs: 2388148

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A117685
Included Lab Sample IDs: 2388148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117687

Included Lab Sample IDs: 2388147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.7	98.3	P/P	90 - 110
Sulfate	99.1	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117796

Included Lab Sample IDs: 2388148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	98.7	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A117816

Included Lab Sample IDs: 2388154

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.6		P	80 - 120
Toxaphene	95.1		P	80 - 120

Reference Method: EPA 8270E

Run ID: A117817

Included Lab Sample IDs: 2388154

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.1		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	95.3		P	80 - 120
Beta-Cyfluthrin	93.7		P	80 - 120
Bifenthrin	96.2		P	80 - 120
Chlorothalonil	107		P	80 - 120
Cis-Nonachlor	103		P	80 - 120
Cypermethrin	92.8		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	97.2		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	99.5		P	80 - 120
Deltamethrin	96.8		P	80 - 120
Dichlobenil	98.3		P	80 - 120
Dicofol	98.1		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	96.6		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	103		P	80 - 120
Endrin Ketone	129*		F	80 - 120
Esfenvalerate	99.3		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	97.1		P	80 - 120
Gamma-BHC	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117817
Included Lab Sample IDs: 2388154

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-Chlordane	100		P	80 - 120
Heptachlor	97.8		P	80 - 120
Heptachlor Epoxide	103		P	80 - 120
Hexachlorobenzene	99.3		P	80 - 120
Kepone	84.9		P	80 - 120
Lambda-Cyhalothrin	97.1		P	80 - 120
Methoprene	101		P	80 - 120
Methoxychlor	99.5		P	80 - 120
MGK-264	98.7		P	80 - 120
Mirex	100		P	80 - 120
Oxychlordane	101		P	80 - 120
Permethrin	98.0		P	80 - 120
Phenothrin	94.7		P	80 - 120
Piperonyl Butoxide	102		P	80 - 120
Prallethrin	99.9		P	80 - 120
Tau-Fluvalinate	95.8		P	80 - 120
Tetramethrin	102		P	80 - 120
Trans-Nonachlor	104		P	80 - 120
Triclosan Methyl	104		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8270E
Run ID: A117867
Included Lab Sample IDs: 2388154

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	96.6		P	80 - 120
PCB-1260	97.9		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	102			2.32	
EPA 180.1 Rev. 2.0	Turbidity	101			4.23	
EPA 300.0 Rev. 2.1	Chloride	103	96.8	102	1.21	
	Sulfate	106	101	106	1.32	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	97.8	98.8		0.935
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.8	94.2	104		7.50
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0	96.0	96.0		0.0
EPA 365.1 Rev. 2.0	Total-P	100	103	103		0.253
EPA 8270E	Aldrin	49.1	53.9	58.1		7.51
	Alpha-BHC	73.8	67.0	70.5		5.08
	Alpha-Chlordane	69.9	79.0	81.0		2.53
	Beta-BHC	78.4	68.7	83.9		19.8
	Beta-Cyfluthrin	78.4	93.3	98.3		5.27
	Bifenthrin	63.1	81.6	78.0		4.43
	Chlorothalonil	91.3	86.4	108		22.1
	Cis-Nonachlor	65.5	76.7	75.8		1.17
	Cypermethrin	72.5	92.6	88.5		4.63
	Dacthal	78.7	83.0	88.5		6.38
	DDD-p,p'	65.1	80.5	74.0		8.37
	DDE-p,p'	67.5	78.5	77.2		1.59
	DDT-p,p'	65.4	70.6	77.6		9.56
	Delta-BHC	82.4	86.0	95.2		10.2
	Deltamethrin	90.7	113	121		6.79
	Dichlobenil	66.4	43.3	50.0		14.4
	Dicofol	67.4	75.2	79.7		5.70
	Dieldrin	73.4	85.8	82.4		3.98
	Endosulfan I	70.9	81.7	85.8		4.84
	Endosulfan II	80.0	85.6	88.7		3.56
	Endosulfan Sulfate	79.1	76.3	81.5		6.55
	Endrin	72.3	82.5	87.2		5.56
	Endrin Aldehyde	73.7	65.9	71.1		7.70
	Endrin Ketone	67.1	68.9	74.1		7.31
	Esfenvalerate	80.9	99.3	105		5.88
	Ethalfuralin	68.0	66.8	71.4		6.78
	Fenpropathrin	76.7	88.2	86.6		1.80
	Gamma-BHC	82.0	75.9	80.8		6.28
	Gamma-Chlordane	65.0	75.5	76.8		1.81
	Heptachlor	57.2	58.3	65.6		11.9
	Heptachlor Epoxide	70.7	79.1	83.1		4.94
	Hexachlorobenzene	57.8	44.4	56.3		23.6
	Kepone	55.3	78.3	83.1		5.94
	Lambda-Cyhalothrin	40.3	53.3	50.4		5.63
	Methoprene	65.5	74.6	77.6		3.96
	Methoxychlor	73.5	79.9	90.9		12.9
	MGK-264	66.8	77.7	73.6		5.46
	Mirex	59.1	70.8	70.0		1.13
	Oxychlordane	63.4	73.4	75.7		3.01
	PCB-1016	70.6	54.0	58.0		7.10
	PCB-1260	70.8	48.6	50.0		2.90
	Permethrin	45.3	59.0	55.3		6.56
	Phenothrin	62.2	76.5	77.1		0.768
	Piperonyl Butoxide	81.8	92.5	85.4		8.01
	Prallethrin	65.2	61.2	66.4		8.15
	Tau-Fluvalinate	76.8	92.4	98.5		6.33

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8270E	Tetramethrin	101	109	114		4.46
	Trans-Nonachlor	63.5	82.2	80.1		2.57
	Triclosan Methyl	74.8	82.0	86.0		4.72
	Trifluralin	67.0	71.0	72.0		1.39
EPA 8276	Chlordane	79.1	59.5	60.6		1.81
	Toxaphene	85.0	40.7	45.2		5.98
EPA 8321B	2,4-D	117	105	109		4.37
	2,4,5-T	95.6	107	116		8.26
	Acesulfame K	119	150	151		0.853
	Acetaminophen	97.0	117	108		7.69
	Acetamiprid	98.7	56.6	56.4		0.293
	Afidopyropen	74.2	55.6	54.8		1.52
	AMPA	107				2.29
	Bentazon	120				15.6
	Benzovindiflupyr	87.3	89.9	86.3		4.07
	Carbamazepine	84.1	53.1	51.0		4.04
	Clothianidin	98.3	77.7	69.9		10.6
	Dinotefuran	103	81.5	65.0		22.5
	Diuron	72.4	47.9	44.4		7.58
	Endothall	105	110	113		2.28
	Fenuron	95.2	53.6	41.2		26.3
	Fluridone	74.2	81.3	72.1		12.0
	Glufosinate	101	232	184		23.4
	Glyphosate	105				1.90
	Hydrocodone	82.4	67.6	59.6		12.7
	Ibuprofen	106	74.4	69.7		6.54
	Imazapyr	95.6				2.39
	Imidacloprid	97.2	109	96.2		12.7
	Linuron	82.7	60.4	71.2		16.4
	Mandestrobin	90.4	80.4	74.8		7.26
	MCPP	94.8	96.0	105		8.96
	Naproxen	91.0	59.1	69.4		16.2
	Primidone	96.3	93.4	70.3		28.2
	Pyraclostrobin	82.9	73.4	78.3		6.49
	Silvex	102	115	108		5.67
	Sucralose	111	108	113		2.95
	Thiamethoxam	102	84.0	72.0		15.3
	Tolfenpyrad	62.9	54.2	53.1		1.97
	Triclopyr	86.1	108	100		7.14
SM 2320 B-2011	Total Alkalinity	98.1				1.19
SM 2540 C-2015	TDS	104				4.89
SM 2540 D-2015	TSS	95.3				
SM 4500-F- C-2011	Fluoride	101	102	99.7		1.49
SM 5310 B-2011	Organic Carbon	95.8	94.6	96.8		2.10

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2388147
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2388147
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2388147
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2388147
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2388148

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2388148
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2388148
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2388148
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2388154
EPA 8270E	PCBs in water matrices by GC/MS/MS	2388154
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2388154
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2388155
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2388147
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2388147
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2388147
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2388147
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2388148

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	02/16/2023			02/16/2023 15:12	Alexis Price	2388147
EPA 180.1 Rev. 2.0	02/16/2023			02/16/2023 15:14	Khloe J Berg	2388147
EPA 300.0 Rev. 2.1	02/16/2023			03/01/2023 06:37	Judith K. Clark	2388147
EPA 350.1 Rev. 2.0	02/16/2023			02/27/2023 11:34	Ping Hua	2388148
EPA 351.2 Rev. 2.0	02/16/2023	02/24/2023 12:50	Simonne.V. Calhoun	03/03/2023 14:31	Judith K. Clark	2388148
EPA 353.2 Rev. 2.0	02/16/2023			02/20/2023 12:12	Beverly Y. Sanders	2388148
EPA 365.1 Rev. 2.0	02/16/2023	02/24/2023 12:02	Adam P Silver	02/27/2023 10:20	James L Waggerby	2388148
EPA 8270E	02/16/2023	02/28/2023 09:00	Julie Wi	03/02/2023 18:40	Vandana T. Nagar	2388154
	02/16/2023	02/28/2023 09:00	Julie Wi	03/02/2023 21:07	Vandana T. Nagar	2388154
EPA 8276	02/16/2023	02/28/2023 09:00	Julie Wi	03/04/2023 07:49	Lipi Saha	2388154
EPA 8321B	02/16/2023	02/20/2023 10:00	Hoor Shaik	02/21/2023 03:17	Juyoung Kim	2388155
	02/16/2023	02/20/2023 10:00	Hoor Shaik	02/21/2023 12:09	Juyoung Kim	2388155
	02/16/2023	02/21/2023 12:00	Manjita Shrestha	02/21/2023 13:09	Manjita Shrestha	2388155
	02/16/2023	02/21/2023 12:00	Manjita Shrestha	02/21/2023 17:05	Manjita Shrestha	2388155
	02/16/2023	02/21/2023 12:00	Manjita Shrestha	02/21/2023 17:18	Manjita Shrestha	2388155
	02/16/2023	02/21/2023 12:00	Manjita Shrestha	02/21/2023 21:11	Manjita Shrestha	2388155
SM 2320 B-2011	02/16/2023			02/25/2023 06:45	Dale L. Simmons	2388147
SM 2540 C-2015	02/16/2023			02/20/2023 15:46	Yijie Li	2388147
SM 2540 D-2015	02/16/2023			02/20/2023 15:46	Yijie Li	2388147
SM 4500-F- C-2011	02/16/2023			02/25/2023 06:45	Dale L. Simmons	2388147
SM 5310 B-2011	02/16/2023			02/22/2023 17:20	Elise M. Gillis	2388148