

Chemical Analysis Report

SW-DIST-2023-05-24-01

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

Event Description: **Run 10**
Request ID: **RQ-2023-05-22-60**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
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13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 14-JUN-2023 14:20



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: WHITE TROUT LAKE AT CENTER

Collection Date/Time: 05/23/2023 11:00

Field ID: G1SW0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2412213	DEP SOP: NU-094-1	Color (true)	11		PCU	P430343	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I	NTU	P430333	
	EPA 300.0 Rev. 2.1	Chloride	34		mg Cl/L	P430755	
		Sulfate	22		mg SO4/L	P430761	
	SM 2320 B-2011	Total Alkalinity	37	A	mg CaCO3/L	P430652	
	SM 2540 C-2015	TDS	143		mg/L	P430791	
	SM 2540 D-2015	TSS	2	I	mg/L	P430858	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P430655	
2412216	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P430660	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.53		mg N/L	P430393	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430735	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P430418	
	SM 5310 B-2011	Organic Carbon	6.5		mg C/L	P430448	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LITTLE LAKE WILSON CENTER

Collection Date/Time: 05/23/2023 12:00

Field ID: G1SW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2412219	DEP SOP: NU-094-1	Color (true)	33		PCU	P430343	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P430333	
	EPA 300.0 Rev. 2.1	Chloride	83		mg Cl/L	P430755	
		Sulfate	1.4		mg SO4/L	P430761	
	SM 2320 B-2011	Total Alkalinity	74		mg CaCO3/L	P430652	
	SM 2540 C-2015	TDS	252		mg/L	P430791	
	SM 2540 D-2015	TSS	4	I	mg/L	P430858	
2412220	SM 4500-F- C-2011	Fluoride	0.083	I	mg F/L	P430655	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P430661	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P430394	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430984	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P430418	
2412227	SM 5310 B-2011	Organic Carbon	14		mg C/L	P430448	
	EPA 8270E	Aldrin	0.70	U	ng/L	P430360	
		Alpha-BHC	0.11	U	ng/L	P430360	
		Alpha-Chlordane	0.22	U	ng/L	P430360	
		PCB-1016	2.2	U	ng/L	P430360	
		Beta-BHC	0.11	U	ng/L	P430360	
		PCB-1221	2.2	U	ng/L	P430360	
		Beta-Cyfluthrin	1.4	U	ng/L	P430360	
		PCB-1232	2.2	U	ng/L	P430360	
		Bifenthrin	0.54	U	ng/L	P430360	
		PCB-1242	2.2	U	ng/L	P430360	
		Carbophenothion	0.97	U	ng/L	P430360	
		PCB-1248	2.2	U	ng/L	P430360	
		Chlorothalonil	3.9	U	ng/L	P430360	
		PCB-1254	2.2	U	ng/L	P430360	
		Cis-Nonachlor	0.22	U	ng/L	P430360	
		PCB-1260	2.2	U	ng/L	P430360	
		Cypermethrin	1.6	U	ng/L	P430360	
		Dacthal	0.16	U	ng/L	P430360	
		DDD-p,p'	0.27	U	ng/L	P430360	
		DDE-p,p'	0.22	U	ng/L	P430360	
		DDT-p,p'	0.27	U	ng/L	P430360	
		Delta-BHC	0.43	U	ng/L	P430360	
		Deltamethrin	1.4	U	ng/L	P430360	
		Dichlobenil	0.27	U	ng/L	P430360	
		Dicofol	1.4	U	ng/L	P430360	
		Dieldrin	0.43	U	ng/L	P430360	
		Endosulfan I	0.43	U	ng/L	P430360	
		Endosulfan II	0.43	U	ng/L	P430360	
		Endosulfan Sulfate	0.32	U	ng/L	P430360	
		Endrin	0.43	U	ng/L	P430360	
		Endrin Aldehyde	0.81	U	ng/L	P430360	

Field ID: G1SW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2412227	EPA 8270E	Endrin Ketone	0.43	U	ng/L	P430360	
		Esfenvalerate	0.81	U	ng/L	P430360	
		Ethalfuralin	0.16	U	ng/L	P430360	
		Fenpropathrin	0.27	U	ng/L	P430360	
		Gamma-BHC	0.14	U	ng/L	P430360	
		Gamma-Chlordane	0.22	U	ng/L	P430360	
		Heptachlor	0.22	U	ng/L	P430360	
		Heptachlor Epoxide	0.27	U	ng/L	P430360	
		Hexachlorobenzene**	1.1	U	ng/L	P430360	
		Kepone	5.4	U	ng/L	P430360	
		Lambda-Cyhalothrin	0.81	U	ng/L	P430360	
		Methoprene	0.81	U	ng/L	P430360	
		Methoxychlor	0.32	U	ng/L	P430360	
		MGK-264	0.22	U	ng/L	P430360	
		Mirex	0.38	U	ng/L	P430360	
		Oxychlordane	0.32	U	ng/L	P430360	
		Permethrin	1.7	U	ng/L	P430360	
		Phenothrin	0.97	U	ng/L	P430360	
		Piperonyl Butoxide	0.72	I	ng/L	P430360	
		Prallethrin	2.2	U	ng/L	P430360	
		Tau-Fluvalinate	0.27	U	ng/L	P430360	
		Tetramethrin	0.81	U	ng/L	P430360	
		Trans-Nonachlor	0.22	U	ng/L	P430360	
		Triclosan Methyl	0.16	U	ng/L	P430360	
		Trifluralin	0.22	U	ng/L	P430360	
	EPA 8276	Chlordane	2.2	U	ng/L	P430360	
		Toxaphene	16	U	ng/L	P430360	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LAKE DAN AT CENTER

Collection Date/Time: 05/23/2023 13:15

Field ID: G5SW0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2412214	DEP SOP: NU-094-1	Color (true)	37	A	PCU	P430343	
	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P430333	
	EPA 300.0 Rev. 2.1	Chloride	8.2		mg Cl/L	P430755	
		Sulfate	3.8		mg SO4/L	P430761	
	SM 2320 B-2011	Total Alkalinity	49		mg CaCO3/L	P430652	
	SM 2540 C-2015	TDS	97		mg/L	P430791	
	SM 2540 D-2015	TSS	5	I	mg/L	P430858	
	SM 4500-F- C-2011	Fluoride	0.084	I	mg F/L	P430655	
2412217	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P430660	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P430394	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430984	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P430418	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P430448	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: LAKE JACKSON AT CENTER

Collection Date/Time: 05/23/2023 12:45

Field ID: G1SW0124

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2412215	DEP SOP: NU-094-1	Color (true)	100		PCU	P430343	
	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P430333	
	EPA 300.0 Rev. 2.1	Chloride	38	A	mg Cl/L	P430755	
		Sulfate	3.2	A	mg SO4/L	P430761	
	SM 2320 B-2011	Total Alkalinity	11		mg CaCO3/L	P430652	
	SM 2540 C-2015	TDS	152	A	mg/L	P430791	
	SM 2540 D-2015	TSS	3	IA	mg/L	P430858	
	SM 4500-F- C-2011	Fluoride	0.081	I	mg F/L	P430655	
2412218	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P430660	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P430394	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430984	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P430418	
	SM 5310 B-2011	Organic Carbon	19		mg C/L	P430448	

Ref. Method and Comment:

SM 2540 D-2015: 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: P430343

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430333

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430755

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430660

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430661

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430393

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430394

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430735

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430984

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430418

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

Reference Method: EPA 8270E
Batch ID: P430360

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430360

Component	Result	Code	Units
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430360

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

Reference Method: EPA 8276

Batch ID: P430360

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: SM 2320 B-2011

Batch ID: P430652

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

Reference Method: SM 2540 C-2015

Batch ID: P430791

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P430858

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P430655

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P430655

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P430448

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: P430343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430755

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430660

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430661

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430393

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430394

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430735

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P430984

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P430418

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

Reference Method: EPA 8270E

Batch ID: P430360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.2		P	10 - 92.0
Alpha-BHC	76.6		P	75 - 107
Alpha-Chlordane	69.8		P	50 - 108
Beta-BHC	75.7		P	36 - 138
Beta-Cyfluthrin	69.2		P	20 - 161
Bifenthrin	45.8		P	10 - 119
Carbophenothion	51.6		P	19 - 94.0
Chlorothalonil	76.3		P	26 - 186
Cis-Nonachlor	75.2		P	42 - 119
Cypermethrin	74.4		P	22 - 150
Dacthal	77.2		P	72 - 119
DDD-p,p'	68.6		P	45 - 107
DDE-p,p'	65.6		P	48 - 106
DDT-p,p'	62.1		P	48 - 110
Delta-BHC	87.7		P	54 - 140
Deltamethrin	75.2		P	22 - 189
Dichlobenil	62.8		P	36 - 117
Dicofol	62.4		P	46 - 155
Dieldrin	73.1		P	54 - 110
Endosulfan I	73.8		P	59 - 105
Endosulfan II	77.3		P	51 - 118
Endosulfan Sulfate	77.7		P	57 - 121
Endrin	68.4		P	10 - 120
Endrin Aldehyde	80.0		P	34 - 118
Endrin Ketone	80.5		P	69 - 177
Esfenvalerate	67.1		P	23 - 168
Ethalfuralin	70.2		P	49 - 99.0
Fenpropathrin	72.0		P	34 - 117
Gamma-BHC	84.6		P	72 - 117
Gamma-Chlordane	62.9		P	43 - 106
Heptachlor	56.5		P	41 - 98.0
Heptachlor Epoxide	71.2		P	57 - 106
Hexachlorobenzene	57.0		P	36 - 99.0
Kepone	136		P	16 - 215
Lambda-Cyhalothrin	60.9		P	21 - 177
Methoprene	55.4		P	10 - 119
Methoxychlor	70.7		P	60 - 112
MGK-264	75.9		P	26 - 122
Mirex	54.0		P	10 - 169
Oxychlordane	64.1		P	43 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P430360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1016	69.0		P	48 - 112
PCB-1260	88.1		P	44 - 118
Permethrin	59.6		P	24 - 148
Phenothrin	46.1		P	10 - 106
Piperonyl Butoxide	76.1		P	10 - 139
Prallethrin	70.0		P	17 - 109
Tau-Fluvalinate	58.4		P	13 - 131
Tetramethrin	77.3		P	10 - 132
Trans-Nonachlor	72.6		P	44 - 106
Triclosan Methyl	73.1		P	59 - 109
Trifluralin	64.7		P	44 - 101

Reference Method: EPA 8276

Batch ID: P430360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	95.2		P	61 - 116
Toxaphene	99.6		P	48 - 124

Reference Method: SM 2320 B-2011

Batch ID: P430652

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.9		P	92 - 105

Reference Method: SM 2540 C-2015

Batch ID: P430791

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

Reference Method: SM 2540 D-2015

Batch ID: P430858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	88.1		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P430655

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P430448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412215	Chloride	94.8		P	90 - 110
2412322	Chloride	94.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412215	Sulfate	97.4		P	90 - 110
2412322	Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430660

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412100	Ammonia-N	97.6	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430661

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412220	Ammonia-N	97.6	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430393

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412109	Kjeldahl Nitrogen	110	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412265	Kjeldahl Nitrogen	96.1	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430735

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412188	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412217	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412216	Total-P	106	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P430360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412203	PCB-1016	71.9	66.9	P/P	46 - 111
2412203	PCB-1260	78.2	66.0	P/P	45 - 114
2412722	Aldrin	45.7	45.3	P/P	20 - 82.0
2412722	Alpha-BHC	86.3	81.5	P/P	71 - 109
2412722	Alpha-Chlordane	71.1	81.9	P/P	42 - 106
2412722	Beta-BHC	82.6	84.7	P/P	69 - 180
2412722	Beta-Cyfluthrin	74.0	78.5	P/P	18 - 175
2412722	Bifenthrin	49.6	41.0	P/P	21 - 128
2412722	Carbophenothion	66.0	68.2	P/P	10 - 126
2412722	Chlorothalonil	100	100	P/P	10 - 300
2412722	Cis-Nonachlor	74.3	73.6	P/P	34 - 106
2412722	Cypermethrin	81.2	80.0	P/P	22 - 158
2412722	Dacthal	82.7	86.4	P/P	54 - 116
2412722	DDD-p,p'	72.6	75.5	P/P	34 - 107
2412722	DDE-p,p'	71.5	74.3	P/P	33 - 110
2412722	DDT-p,p'	68.2	61.3	P/P	50 - 122
2412722	Delta-BHC	97.0	98.6	P/P	77 - 193
2412722	Deltamethrin	92.6	88.5	P/P	10 - 195
2412722	Dichlobenil	44.1	38.4	P/P	25 - 113
2412722	Dicofol	70.9	65.8	P/P	38 - 247
2412722	Dieldrin	79.6	79.9	P/P	45 - 118
2412722	Endosulfan I	80.3	80.3	P/P	51 - 106
2412722	Endosulfan II	79.0	86.9	P/P	37 - 122
2412722	Endosulfan Sulfate	73.3	81.4	P/P	43 - 132
2412722	Endrin	74.3	72.4	P/P	29 - 101
2412722	Endrin Aldehyde	90.4	93.6	P/P	19 - 110
2412722	Endrin Ketone	78.1	92.4	P/P	60 - 140
2412722	Esfenvalerate	76.4	72.9	P/P	26 - 199
2412722	Ethalfuralin	70.9	67.1	P/P	45 - 99.0
2412722	Fenpropathrin	77.9	75.4	P/P	35 - 120
2412722	Gamma-BHC	122	116	P/P	63 - 128
2412722	Gamma-Chlordane	70.5	71.1	P/P	40 - 104
2412722	Heptachlor	59.9	58.8	P/P	36 - 97.0
2412722	Heptachlor Epoxide	71.5	70.4	P/P	49 - 184
2412722	Hexachlorobenzene	49.1	43.3	P/P	39 - 96.0
2412722	Kepone	138	140	P/P	10 - 217
2412722	Lambda-Cyhalothrin	67.1	66.8	P/P	21 - 193
2412722	Methoprene	58.6	56.6	P/P	20 - 106
2412722	Methoxychlor	79.7	71.2	P/P	53 - 118
2412722	MGK-264	78.3	84.7	P/P	40 - 118
2412722	Mirex	63.2	58.9	P/P	26 - 92.0
2412722	Oxychlordane	74.6	71.3	P/P	44 - 99.0
2412722	Permethrin	69.1	59.0	P/P	33 - 182
2412722	Phenothrin	60.1	52.2	P/P	10 - 129
2412722	Piperonyl Butoxide	80.3	69.4	P/P	10 - 211
2412722	Prallethrin	71.5	71.4	P/P	24 - 113
2412722	Tau-Fluvalinate	67.8	65.3	P/P	14 - 149
2412722	Tetramethrin	83.9	75.8	P/P	17 - 151
2412722	Trans-Nonachlor	74.5	77.9	P/P	42 - 102
2412722	Triclosan Methyl	78.4	79.1	P/P	48 - 108
2412722	Trifluralin	74.8	68.9	P/P	47 - 96.0

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P430360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412203	Chlordane	84.9	80.0	P/P	53 - 126
2412203	Toxaphene	100	95.8	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P430655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412213	Fluoride	102	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P430448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412099	Organic Carbon	92.6	95.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P430343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412214	Color (true)	0.752	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412108	Turbidity	0.396	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412215	Chloride	0.265	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412215	Sulfate	0.961	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412100	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412220	Ammonia-N	0.362	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430393

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412109	Kjeldahl Nitrogen	7.14	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412265	Kjeldahl Nitrogen	2.32	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P430735

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412188	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P430984

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412217	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P430418

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412216	Total-P	0.118	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P430360

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412203	PCB-1016	7.17	Spike	P	0 - 32
2412203	PCB-1260	16.9	Spike	P	0 - 31
2412722	Aldrin	0.790	Spike	P	0 - 41
2412722	Alpha-BHC	5.79	Spike	P	0 - 25
2412722	Alpha-Chlordane	14.1	Spike	P	0 - 33
2412722	Beta-BHC	2.57	Spike	P	0 - 36
2412722	Beta-Cyfluthrin	5.91	Spike	P	0 - 42
2412722	Bifenthrin	19.0	Spike	P	0 - 53
2412722	Carbophenothion	3.31	Spike	P	0 - 49
2412722	Chlorothalonil	0.222	Spike	P	0 - 71
2412722	Cis-Nonachlor	0.960	Spike	P	0 - 29
2412722	Cypermethrin	1.60	Spike	P	0 - 40
2412722	Dacthal	4.46	Spike	P	0 - 26
2412722	DDD-p,p'	3.97	Spike	P	0 - 39
2412722	DDE-p,p'	3.93	Spike	P	0 - 33
2412722	DDT-p,p'	10.7	Spike	P	0 - 40
2412722	Delta-BHC	1.61	Spike	P	0 - 37
2412722	Deltamethrin	4.54	Spike	P	0 - 100
2412722	Dichlobenil	14.0	Spike	P	0 - 40
2412722	Dicofol	7.52	Spike	P	0 - 31
2412722	Dieldrin	0.175	Spike	P	0 - 27
2412722	Endosulfan I	0.0151	Spike	P	0 - 23
2412722	Endosulfan II	9.57	Spike	P	0 - 28
2412722	Endosulfan Sulfate	10.5	Spike	P	0 - 38
2412722	Endrin	2.69	Spike	P	0 - 63
2412722	Endrin Aldehyde	3.57	Spike	P	0 - 60
2412722	Endrin Ketone	16.8	Spike	P	0 - 37
2412722	Esfenvalerate	4.67	Spike	P	0 - 52
2412722	Ethalfuralin	5.52	Spike	P	0 - 23
2412722	Fenpropathrin	3.27	Spike	P	0 - 32

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P430360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412722	Gamma-BHC	5.19	Spike	P	0 - 17
2412722	Gamma-Chlordane	0.843	Spike	P	0 - 40
2412722	Heptachlor	1.82	Spike	P	0 - 29
2412722	Heptachlor Epoxide	0.796	Spike	P	0 - 25
2412722	Hexachlorobenzene	12.5	Spike	P	0 - 36
2412722	Kepone	1.65	Spike	P	0 - 93
2412722	Lambda-Cyhalothrin	0.473	Spike	P	0 - 55
2412722	Methoprene	3.43	Spike	P	0 - 53
2412722	Methoxychlor	11.2	Spike	P	0 - 29
2412722	MGK-264	7.83	Spike	P	0 - 35
2412722	Mirex	7.09	Spike	P	0 - 46
2412722	Oxychlordane	4.44	Spike	P	0 - 29
2412722	Permethrin	15.8	Spike	P	0 - 44
2412722	Phenothrin	14.1	Spike	P	0 - 56
2412722	Piperonyl Butoxide	14.6	Spike	P	0 - 100
2412722	Prallethrin	0.146	Spike	P	0 - 42
2412722	Tau-Fluvalinate	3.75	Spike	P	0 - 54
2412722	Tetramethrin	10.1	Spike	P	0 - 51
2412722	Trans-Nonachlor	4.53	Spike	P	0 - 37
2412722	Triclosan Methyl	0.922	Spike	P	0 - 31
2412722	Trifluralin	8.11	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P430360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412203	Chlordane	5.87	Spike	P	0 - 25
2412203	Toxaphene	4.32	Spike	P	0 - 26

Reference Method: SM 2320 B-2011

Batch ID: P430652

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412213	Total Alkalinity	0.638	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P430791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412215	TDS	3.28	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P430655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412213	Fluoride	0.0	Spike	P	0 - 1.9

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P430448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412099	Organic Carbon	1.99	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2412227

Field Sample ID: G1SW0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	78.4	P	29 - 130
EPA 8270E	Decachlorobiphenyl	88.5	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	60.2	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	54.2	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	67.4	P	30 - 101
EPA 8276	PCNB	104	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119380

Included Lab Sample IDs: 2412213, 2412214, 2412215, 2412219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	97.5	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A119382

Included Lab Sample IDs: 2412213, 2412214, 2412215, 2412219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.2	99.7	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A119426

Included Lab Sample IDs: 2412216, 2412217, 2412218, 2412220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	98.8	P/P	90 - 110
Organic Carbon	96.9	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119434

Included Lab Sample IDs: 2412216, 2412217, 2412218, 2412220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	97.8	P/P	90 - 110
Total-P	98.2	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119470

Included Lab Sample IDs: 2412216, 2412217, 2412218, 2412220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	107	P/P	90 - 110
Kjeldahl Nitrogen	103	97.0	P/P	90 - 110
Kjeldahl Nitrogen	104	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119496

Included Lab Sample IDs: 2412213, 2412214, 2412215, 2412219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.8	98.6	P/P	90 - 110
Sulfate	96.8	97.7	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A119510

Included Lab Sample IDs: 2412213, 2412214, 2412215, 2412219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	91.7	97.7	P/P	90 - 110
Total Alkalinity	97.7	93.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A119510

Included Lab Sample IDs: 2412213, 2412214, 2412215, 2412219

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119511

Included Lab Sample IDs: 2412216, 2412217, 2412218, 2412220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	99.1	P/P	90 - 110
Ammonia-N	98.6	98.4	P/P	90 - 110
Ammonia-N	99.1	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119541

Included Lab Sample IDs: 2412216

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	104	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119545

Included Lab Sample IDs: 2412227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.2		P	80 - 120
Alpha-BHC	105		P	80 - 120
Alpha-Chlordane	104		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	99.7		P	80 - 120
Bifenthrin	109		P	80 - 120
Carbophenothion	98.4		P	80 - 120
Chlorothalonil	85.6		P	80 - 120
Cis-Nonachlor	108		P	80 - 120
Cypermethrin	108		P	80 - 120
Dacthal	95.6		P	80 - 120
DDD-p,p'	107		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	100		P	80 - 120
Delta-BHC	108		P	80 - 120
Deltamethrin	93.6		P	80 - 120
Dichlobenil	113		P	80 - 120
Dicofol	91.9		P	80 - 120
Dieldrin	93.4		P	80 - 120
Endosulfan I	108		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	93.8		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	87.0		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	104		P	80 - 120
Ethalfuralin	96.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A119545
Included Lab Sample IDs: 2412227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenpropathrin	103		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	103		P	80 - 120
Heptachlor Epoxide	99.2		P	80 - 120
Hexachlorobenzene	103		P	80 - 120
Kepone	90.5		P	80 - 120
Lambda-Cyhalothrin	108		P	80 - 120
Methoprene	113		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	113		P	80 - 120
Mirex	106		P	80 - 120
Oxychlordane	111		P	80 - 120
Permethrin	106		P	80 - 120
Phenothrin	107		P	80 - 120
Piperonyl Butoxide	106		P	80 - 120
Prallethrin	112		P	80 - 120
Tau-Fluvalinate	96.2		P	80 - 120
Tetramethrin	100		P	80 - 120
Trans-Nonachlor	109		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	99.9		P	80 - 120

Reference Method: EPA 8276
Run ID: A119580
Included Lab Sample IDs: 2412227

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

Reference Method: EPA 8270E
Run ID: A119585
Included Lab Sample IDs: 2412227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	96.6		P	80 - 120
PCB-1260	103		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A119661
Included Lab Sample IDs: 2412217, 2412218, 2412220

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	105	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)	98.8				0.752	
EPA 180.1 Rev. 2.0	Turbidity	97.5				0.396	
EPA 300.0 Rev. 2.1	Chloride	99.2	94.8	94.7		0.265	
	Sulfate	97.8	97.4	95.6		0.961	
EPA 350.1 Rev. 2.0	Ammonia-N	97.2	97.6	97.6			0.0
	Ammonia-N	96.4	97.6	97.2			0.362
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	110	99.2			7.14
	Kjeldahl Nitrogen	104	96.1	100			2.32
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103	103			0.0
	NO2NO3-N	104	104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	102	106	106			0.118
EPA 8270E	Aldrin	46.2	45.7	45.3			0.790
	Alpha-BHC	76.6	86.3	81.5			5.79
	Alpha-Chlordane	69.8	71.1	81.9			14.1
	Beta-BHC	75.7	82.6	84.7			2.57
	Beta-Cyfluthrin	69.2	74.0	78.5			5.91
	Bifenthrin	45.8	49.6	41.0			19.0
	Carbophenothion	51.6	66.0	68.2			3.31
	Chlorothalonil	76.3	100	100			0.222
	Cis-Nonachlor	75.2	74.3	73.6			0.960
	Cypermethrin	74.4	81.2	80.0			1.60
	Dacthal	77.2	82.7	86.4			4.46
	DDD-p,p'	68.6	72.6	75.5			3.97
	DDE-p,p'	65.6	71.5	74.3			3.93
	DDT-p,p'	62.1	68.2	61.3			10.7
	Delta-BHC	87.7	97.0	98.6			1.61
	Deltamethrin	75.2	92.6	88.5			4.54
	Dichlobenil	62.8	44.1	38.4			14.0
	Dicofol	62.4	70.9	65.8			7.52
	Dieldrin	73.1	79.6	79.9			0.175
	Endosulfan I	73.8	80.3	80.3			0.0151
	Endosulfan II	77.3	79.0	86.9			9.57
	Endosulfan Sulfate	77.7	73.3	81.4			10.5
	Endrin	68.4	74.3	72.4			2.69
	Endrin Aldehyde	80.0	90.4	93.6			3.57
	Endrin Ketone	80.5	78.1	92.4			16.8
	Esfenvalerate	67.1	76.4	72.9			4.67
	Ethalfuralin	70.2	70.9	67.1			5.52
	Fenpropathrin	72.0	77.9	75.4			3.27
	Gamma-BHC	84.6	122	116			5.19
	Gamma-Chlordane	62.9	70.5	71.1			0.843
	Heptachlor	56.5	59.9	58.8			1.82
	Heptachlor Epoxide	71.2	71.5	70.4			0.796
	Hexachlorobenzene	57.0	49.1	43.3			12.5
	Kepone	136	138	140			1.65
	Lambda-Cyhalothrin	60.9	67.1	66.8			0.473
	Methoprene	55.4	58.6	56.6			3.43
	Methoxychlor	70.7	79.7	71.2			11.2
	MGK-264	75.9	78.3	84.7			7.83
	Mirex	54.0	63.2	58.9			7.09
	Oxychlordane	64.1	74.6	71.3			4.44
	PCB-1016	69.0	71.9	66.9			7.17
	PCB-1260	88.1	78.2	66.0			16.9
	Permethrin	59.6	69.1	59.0			15.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Phenothrin	46.1	60.1	52.2		14.1
	Piperonyl Butoxide	76.1	80.3	69.4		14.6
	Prallethrin	70.0	71.5	71.4		0.146
	Tau-Fluvalinate	58.4	67.8	65.3		3.75
	Tetramethrin	77.3	83.9	75.8		10.1
	Trans-Nonachlor	72.6	74.5	77.9		4.53
	Triclosan Methyl	73.1	78.4	79.1		0.922
	Trifluralin	64.7	74.8	68.9		8.11
EPA 8276	Chlordane	95.2	84.9	80.0		5.87
	Toxaphene	99.6	100	95.8		4.32
SM 2320 B-2011	Total Alkalinity	97.9			0.638	
SM 2540 C-2015	TDS	104			3.28	
SM 2540 D-2015	TSS	88.1				
SM 4500-F- C-2011	Fluoride	102	102	102		0.0
SM 5310 B-2011	Organic Carbon	93.4	92.6	95.2		1.99

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2412213, 2412214, 2412215, 2412219
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2412213, 2412214, 2412215, 2412219
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2412213, 2412214, 2412215, 2412219
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2412213, 2412214, 2412215, 2412219
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2412216, 2412217, 2412218, 2412220
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2412216, 2412217, 2412218, 2412220
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2412216, 2412217, 2412218, 2412220
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2412216, 2412217, 2412218, 2412220
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2412227
EPA 8270E	PCBs in water matrices by GC/MS/MS	2412227
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2412227
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2412213, 2412214, 2412215, 2412219
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2412213, 2412214, 2412215, 2412219
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2412213, 2412214, 2412215, 2412219
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2412213, 2412214, 2412215, 2412219
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2412216, 2412217, 2412218, 2412220

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	05/24/2023			05/24/2023 14:56	Anna M. Plaviak	2412213
	05/24/2023			05/24/2023 14:57	Anna M. Plaviak	2412214
	05/24/2023			05/24/2023 14:58	Anna M. Plaviak	2412215
	05/24/2023			05/24/2023 14:59	Anna M. Plaviak	2412219
EPA 180.1 Rev. 2.0	05/24/2023			05/24/2023 14:11	Alexis Price	2412213, 2412214
	05/24/2023			05/24/2023 14:12	Alexis Price	2412215, 2412219
EPA 300.0 Rev. 2.1	05/24/2023			06/01/2023 13:32	James L Waggeberby	2412215
	05/24/2023			06/01/2023 15:33	James L Waggeberby	2412213
	05/24/2023			06/01/2023 15:48	James L Waggeberby	2412214
	05/24/2023			06/01/2023 16:03	James L Waggeberby	2412219
EPA 350.1 Rev. 2.0	05/24/2023			05/31/2023 14:25	Khloe J Berg	2412217
	05/24/2023			05/31/2023 14:26	Khloe J Berg	2412218
	05/24/2023			05/31/2023 14:38	Khloe J Berg	2412220
	05/24/2023			05/31/2023 15:11	Khloe J Berg	2412216
EPA 351.2 Rev. 2.0	05/24/2023	05/25/2023 11:58	Dana G. Hughes	05/30/2023 11:48	Ping Hua	2412216
	05/24/2023	05/25/2023 11:58	Dana G. Hughes	05/30/2023 12:52	Ping Hua	2412217
	05/24/2023	05/25/2023 11:58	Dana G. Hughes	05/30/2023 12:57	Ping Hua	2412218
	05/24/2023	05/25/2023 11:58	Dana G. Hughes	05/30/2023 12:59	Ping Hua	2412220
EPA 353.2 Rev. 2.0	05/24/2023			06/02/2023 11:21	Beverly Y. Sanders	2412216
	05/24/2023			06/08/2023 09:49	Beverly Y. Sanders	2412217
	05/24/2023			06/08/2023 09:55	Beverly Y. Sanders	2412218
	05/24/2023			06/08/2023 09:56	Beverly Y. Sanders	2412220
EPA 365.1 Rev. 2.0	05/24/2023	05/25/2023 14:40	Adam P Silver	05/26/2023 12:05	Chandler E Cox	2412216
	05/24/2023	05/25/2023 14:40	Adam P Silver	05/26/2023 12:13	Chandler E Cox	2412217
	05/24/2023	05/25/2023 14:40	Adam P Silver	05/26/2023 12:14	Chandler E Cox	2412218
	05/24/2023	05/25/2023 14:40	Adam P Silver	05/26/2023 12:15	Chandler E Cox	2412220
EPA 8270E	05/24/2023	05/26/2023 08:00	Fe-Val Siddell	06/01/2023 03:57	Michael Poppell	2412227
	05/24/2023	05/26/2023 08:00	Fe-Val Siddell	06/03/2023 00:01	Michael Poppell	2412227
EPA 8276	05/24/2023	05/26/2023 08:00	Fe-Val Siddell	06/02/2023 12:40	Arthur Maknenko	2412227
SM 2320 B-2011	05/24/2023			05/31/2023 17:09	Dale L. Simmons	2412213
	05/24/2023			05/31/2023 20:21	Dale L. Simmons	2412214
	05/24/2023			05/31/2023 20:34	Dale L. Simmons	2412215
	05/24/2023			05/31/2023 20:49	Dale L. Simmons	2412219
SM 2540 C-2015	05/24/2023			05/26/2023 16:01	Yijie Li	2412213, 2412214, 2412215, 2412219
SM 2540 D-2015	05/24/2023			05/26/2023 16:01	Yijie Li	2412213, 2412214, 2412215, 2412219
SM 4500-F- C-2011	05/24/2023			05/31/2023 16:58	Dale L. Simmons	2412213
	05/24/2023			05/31/2023 20:21	Dale L. Simmons	2412214
	05/24/2023			05/31/2023 20:34	Dale L. Simmons	2412215
	05/24/2023			05/31/2023 20:49	Dale L. Simmons	2412219
SM 5310 B-2011	05/24/2023			05/26/2023 02:59	Elise M. Gillis	2412216

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	05/24/2023			05/26/2023 03:44	Elise M. Gillis	2412217
	05/24/2023			05/26/2023 03:59	Elise M. Gillis	2412218
	05/24/2023			05/26/2023 04:13	Elise M. Gillis	2412220