

Chemical Analysis Report

NE-DIST-2023-03-28-01

Florida DEP Laboratory
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DOH Accreditation E31780

Event Description: **Gainesville Lakes**
Request ID: **RQ-2023-03-06-37**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 14-APR-2023 15:17



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: HAMMOCK LAKE

Collection Date/Time: 03/27/2023 10:50

Field ID: G3NE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2396624	DEP SOP: NU-094-1	Color (true)	36		PCU	P427768	
	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P427773	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P427939	
		Sulfate	7.6		mg SO4/L	P427941	
	SM 2320 B-2011	Total Alkalinity	71		mg CaCO3/L	P427943	
	SM 2540 C-2015	TDS	135		mg/L	P428328	
	SM 2540 D-2015	TSS	6	I	mg/L	P428170	
2396627	SM 4500-F- C-2011	Fluoride	0.22		mg F/L	P427950	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.078		mg N/L	P427877	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P427848	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.052		mg N/L	P427994	
	EPA 365.1 Rev. 2.0	Total-P	0.50		mg P/L	P427871	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P427937	

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 ALICE CENTER

Collection Date/Time: 03/27/2023 11:35

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2396622	DEP SOP: NU-094-1	Color (true)	32		PCU	P427768	
	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P427773	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P427939	
		Sulfate	26		mg SO4/L	P427941	
	SM 2320 B-2011	Total Alkalinity	73		mg CaCO3/L	P427943	
	SM 2540 C-2015	TDS	161		mg/L	P428328	
	SM 2540 D-2015	TSS	3	I	mg/L	P428170	
2396623	SM 4500-F- C-2011	Fluoride	0.31		mg F/L	P427950	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427877	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P427848	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P427994	
	EPA 365.1 Rev. 2.0	Total-P	0.60		mg P/L	P427871	
2396640	SM 5310 B-2011	Organic Carbon	7.6		mg C/L	P427937	
	EPA 8270E	Aldrin	0.69	U	ng/L	P427803	
		Alpha-BHC	0.11	U	ng/L	P427803	
		Alpha-Chlordane	0.21	U	ng/L	P427803	
		PCB-1016	2.1	U	ng/L	P427803	
		Beta-BHC	0.11	U	ng/L	P427803	
		PCB-1221	2.1	U	ng/L	P427803	
		Beta-Cyfluthrin	1.3	U	ng/L	P427803	
		PCB-1232	2.1	U	ng/L	P427803	
		Bifenthrin	0.53	U	ng/L	P427803	
		PCB-1242	2.1	U	ng/L	P427803	
		PCB-1248	2.1	U	ng/L	P427803	
		Chlorothalonil	3.8	U	ng/L	P427803	
		PCB-1254	2.1	U	ng/L	P427803	
		Cis-Nonachlor	0.21	U	ng/L	P427803	
		PCB-1260	2.1	U	ng/L	P427803	
		Cypermethrin	1.6	U	ng/L	P427803	
		Dacthal	0.16	U	ng/L	P427803	
		DDD-p,p'	0.26	U	ng/L	P427803	
		DDE-p,p'	0.21	U	ng/L	P427803	
		DDT-p,p'	0.26	U	ng/L	P427803	
		Delta-BHC	0.42	U	ng/L	P427803	
		Deltamethrin	1.3	U	ng/L	P427803	
		Dichlobenil	0.26	U	ng/L	P427803	
		Dicofol	1.3	U	ng/L	P427803	
		Diieldrin	0.42	U	ng/L	P427803	
		Endosulfan I	0.42	U	ng/L	P427803	
		Endosulfan II	0.42	U	ng/L	P427803	
		Endosulfan Sulfate	0.32	U	ng/L	P427803	
		Endrin	0.42	U	ng/L	P427803	
		Endrin Aldehyde	0.79	U	ng/L	P427803	
		Endrin Ketone	0.42	U	ng/L	P427803	

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2396640	EPA 8270E	Esfenvalerate	0.79	U	ng/L	P427803	MS
		Ethalfuralin	0.16	U	ng/L	P427803	
		Fenpropathrin	0.26	U	ng/L	P427803	
		Gamma-BHC	0.13	U	ng/L	P427803	
		Gamma-Chlordane	0.21	U	ng/L	P427803	
		Heptachlor	0.21	U	ng/L	P427803	
		Heptachlor Epoxide	0.26	U	ng/L	P427803	
		Hexachlorobenzene**	1.1	U	ng/L	P427803	
		Kepone	5.3	U	ng/L	P427803	
		Lambda-Cyhalothrin	0.79	U	ng/L	P427803	
		Methoprene	0.79	U	ng/L	P427803	
		Methoxychlor	0.32	U	ng/L	P427803	RPD
		MGK-264	0.21	U	ng/L	P427803	
		Mirex	0.37	U	ng/L	P427803	
		Oxychlordane	0.32	U	ng/L	P427803	
		Permethrin	1.7	U	ng/L	P427803	
		Phenothrin	0.95	U	ng/L	P427803	
		Piperonyl Butoxide	0.16	U	ng/L	P427803	
		Prallethrin	2.1	U	ng/L	P427803	
		Tau-Fluvalinate	0.26	U	ng/L	P427803	
		Tetramethrin	0.79	U	ng/L	P427803	
Trans-Nonachlor	0.21	U	ng/L	P427803			
EPA 8276	Triclosan Methyl	0.16	U	ng/L	P427803	LCS	
	Trifluralin	0.21	U	ng/L	P427803		
	Chlordane	2.1	UJ	ng/L	P427803		
	Toxaphene	16	U	ng/L	P427803		

Ref. Method and Comment:

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

EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: BIVENS ARM LAKE

Collection Date/Time: 03/27/2023 12:05

Field ID: 20020097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2396625	DEP SOP: NU-094-1	Color (true)	16	A	PCU	P427771	
	EPA 180.1 Rev. 2.0	Turbidity	45		NTU	P427773	
	EPA 300.0 Rev. 2.1	Chloride	12	A	mg Cl/L	P427939	
		Sulfate	11	A	mg SO4/L	P427941	
	SM 2320 B-2011	Total Alkalinity	62		mg CaCO3/L	P427943	
	SM 2540 C-2015	TDS	162		mg/L	P428328	
	SM 2540 D-2015	TSS	38		mg/L	P428170	
	SM 4500-F- C-2011	Fluoride	0.17		mg F/L	P427950	
2396628	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P427877	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	5.0		mg N/L	P427848	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P427994	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P427871	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P427937	

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: GLEN SPRING

Collection Date/Time: 03/27/2023 12:35

Field ID: G1NE0952

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2396626	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P427769	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	I	NTU	P427773	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P427939	
		Sulfate	17		mg SO4/L	P427941	
	SM 2320 B-2011	Total Alkalinity	135	A	mg CaCO3/L	P427943	
	SM 2540 C-2015	TDS	200		mg/L	P428328	
	SM 2540 D-2015	TSS	2	U	mg/L	P428170	
	SM 4500-F- C-2011	Fluoride	0.30		mg F/L	P427950	
2396629	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P427878	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P427848	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P427994	
	EPA 365.1 Rev. 2.0	Total-P	0.34		mg P/L	P427871	
	SM 5310 B-2011	Organic Carbon	0.70	I	mg C/L	P427937	

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: P427768

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P427769

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P427771

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427773

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427939

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427941

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427877

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427878

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427848

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427994

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427871

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

Reference Method: EPA 8270E
Batch ID: P427803

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P427803

Component	Result	Code	Units
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
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P427803

Component	Result	Code	Units
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: P427803

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: P427943

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2015

Batch ID: P428328

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P428170

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P427950

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P427937

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: P427768

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P427769

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P427771

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: P427773

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427939

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427877

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427878

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427848

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P427994

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: P427871

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

Reference Method: EPA 8270E

Batch ID: P427803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	39.6		P	10 - 92.0
Alpha-BHC	80.5		P	75 - 107
Alpha-Chlordane	61.4		P	50 - 108
Beta-BHC	71.1		P	36 - 138
Beta-Cyfluthrin	63.8		P	20 - 161
Bifenthrin	46.3		P	10 - 119
Chlorothalonil	76.7		P	26 - 186
Cis-Nonachlor	61.5		P	42 - 119
Cypermethrin	64.7		P	22 - 150
Dacthal	72.9		P	72 - 119
DDD-p,p'	63.5		P	45 - 107
DDE-p,p'	64.2		P	48 - 106
DDT-p,p'	57.8		P	48 - 110
Delta-BHC	80.6		P	54 - 140
Deltamethrin	83.4		P	22 - 189
Dichlobenil	57.8		P	36 - 117
Dicofol	56.0		P	46 - 155
Dieldrin	68.5		P	54 - 110
Endosulfan I	70.9		P	59 - 105
Endosulfan II	68.1		P	51 - 118
Endosulfan Sulfate	68.1		P	57 - 121
Endrin	69.6		P	10 - 120
Endrin Aldehyde	55.8		P	34 - 118
Endrin Ketone	75.1		P	69 - 177
Esfenvalerate	71.1		P	23 - 168
Ethalfuralin	64.9		P	49 - 99.0
Fenpropathrin	58.9		P	34 - 117
Gamma-BHC	72.2		P	72 - 117
Gamma-Chlordane	62.4		P	43 - 106
Heptachlor	56.9		P	41 - 98.0
Heptachlor Epoxide	67.2		P	57 - 106
Hexachlorobenzene	52.1		P	36 - 99.0
Kepone	76.5		P	16 - 215
Lambda-Cyhalothrin	55.1		P	21 - 177
Methoprene	45.6		P	10 - 119
Methoxychlor	71.9		P	60 - 112
MGK-264	62.4		P	26 - 122
Mirex	48.1		P	10 - 169
Oxychlordane	69.8		P	43 - 105
PCB-1016	48.6		P	48 - 112

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P427803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1260	59.3		P	44 - 118
Permethrin	67.2		P	24 - 148
Phenothrin	38.1		P	10 - 106
Piperonyl Butoxide	78.3		P	10 - 139
Prallethrin	61.4		P	17 - 109
Tau-Fluvalinate	53.3		P	13 - 131
Tetramethrin	66.0		P	10 - 132
Trans-Nonachlor	61.5		P	44 - 106
Triclosan Methyl	70.8		P	59 - 109
Trifluralin	65.4		P	44 - 101

Reference Method: EPA 8276
Batch ID: P427803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	58.0		F	61 - 116
Toxaphene	65.2		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P427943

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.3		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P428328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.8		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P428170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P427950

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

Reference Method: SM 5310 B-2011
Batch ID: P427937

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427939

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396625	Chloride	99.6		P	90 - 110
2396677	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427941

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396625	Sulfate	94.2		P	90 - 110
2396677	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396564	Ammonia-N	98.4	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396629	Ammonia-N	99.8	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396627	Kjeldahl Nitrogen	97.0	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427994

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396623	NO2NO3-N	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427871

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396646	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P427803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396761	Aldrin	47.5	60.2	P/P	20 - 82.0
2396761	Alpha-BHC	77.2	89.7	P/P	71 - 109
2396761	Alpha-Chlordane	59.0	76.6	P/P	42 - 106
2396761	Beta-BHC	70.7	81.0	P/P	69 - 180
2396761	Beta-Cyfluthrin	79.4	99.8	P/P	18 - 175
2396761	Bifenthrin	63.2	79.6	P/P	21 - 128
2396761	Chlorothalonil	10.2	11.6	P/P	10 - 300
2396761	Cis-Nonachlor	63.7	63.4	P/P	34 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P427803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396761	Cypermethrin	81.6	103	P/P	22 - 158
2396761	Dacthal	68.7	86.3	P/P	54 - 116
2396761	DDD-p,p'	58.0	60.9	P/P	34 - 107
2396761	DDE-p,p'	63.4	72.8	P/P	33 - 110
2396761	DDT-p,p'	58.1	73.0	P/P	50 - 122
2396761	Delta-BHC	77.2	91.9	P/P	77 - 193
2396761	Deltamethrin	108	145	P/P	10 - 195
2396761	Dichlobenil	31.1	42.1	P/P	25 - 113
2396761	Dicofol	58.5	70.4	P/P	38 - 247
2396761	Dieldrin	66.9	76.2	P/P	45 - 118
2396761	Endosulfan I	72.4	78.9	P/P	51 - 106
2396761	Endosulfan II	66.4	67.2	P/P	37 - 122
2396761	Endosulfan Sulfate	58.4	63.0	P/P	43 - 132
2396761	Endrin	68.1	74.0	P/P	29 - 101
2396761	Endrin Aldehyde	43.6	52.0	P/P	19 - 110
2396761	Endrin Ketone	68.2	69.2	P/P	60 - 140
2396761	Esfenvalerate	88.8	118	P/P	26 - 199
2396761	Ethalfuralin	66.0	76.6	P/P	45 - 99.0
2396761	Fenpropathrin	67.0	91.2	P/P	35 - 120
2396761	Gamma-BHC	55.8	52.4	F/F	63 - 128
2396761	Gamma-Chlordane	67.8	73.4	P/P	40 - 104
2396761	Heptachlor	57.4	73.5	P/P	36 - 97.0
2396761	Heptachlor Epoxide	64.2	81.3	P/P	49 - 184
2396761	Hexachlorobenzene	42.8	58.1	P/P	39 - 96.0
2396761	Kepone	60.5	60.5	P/P	10 - 217
2396761	Lambda-Cyhalothrin	83.7	99.2	P/P	21 - 193
2396761	Methoprene	55.1	63.9	P/P	20 - 106
2396761	Methoxychlor	71.6	97.7	P/P	53 - 118
2396761	MGK-264	63.6	76.6	P/P	40 - 118
2396761	Mirex	54.4	58.4	P/P	26 - 92.0
2396761	Oxychlordane	70.8	87.8	P/P	44 - 99.0
2396761	Permethrin	73.7	99.2	P/P	33 - 182
2396761	Phenothrin	63.6	95.0	P/P	10 - 129
2396761	Piperonyl Butoxide	80.0	96.7	P/P	10 - 211
2396761	Prallethrin	76.2	74.3	P/P	24 - 113
2396761	Tau-Fluvalinate	78.3	100	P/P	14 - 149
2396761	Tetramethrin	90.5	118	P/P	17 - 151
2396761	Trans-Nonachlor	61.0	70.0	P/P	42 - 102
2396761	Triclosan Methyl	66.4	76.5	P/P	48 - 108
2396761	Trifluralin	64.4	78.2	P/P	47 - 96.0
2396778	PCB-1016	75.8	62.2	P/P	46 - 111
2396778	PCB-1260	67.7	61.6	P/P	45 - 114

Reference Method: EPA 8276
Batch ID: P427803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396778	Chlordane	88.8	78.0	P/P	53 - 126
2396778	Toxaphene	99.2	89.1	P/P	56 - 211

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P427950

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396626	Fluoride	102	101	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2396532	Organic Carbon	89.5	89.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P427768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396534	Color (true)	2.71	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P427769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396645	Color (true)	0.277	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P427771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396625	Color (true)	0.843	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396534	Turbidity	5.59	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396625	Chloride	0.937	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396625	Sulfate	0.385	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396564	Ammonia-N	0.968	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396629	Ammonia-N	2.57	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427848

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396627	Kjeldahl Nitrogen	6.44	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427994

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396623	NO2NO3-N	1.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427871

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396646	Total-P	1.05	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P427803

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396761	Aldrin	23.6	Spike	P	0 - 41
2396761	Alpha-BHC	15.0	Spike	P	0 - 25
2396761	Alpha-Chlordane	26.0	Spike	P	0 - 33
2396761	Beta-BHC	13.6	Spike	P	0 - 36
2396761	Beta-Cyfluthrin	22.8	Spike	P	0 - 42
2396761	Bifenthrin	23.0	Spike	P	0 - 53
2396761	Chlorothalonil	12.9	Spike	P	0 - 71
2396761	Cis-Nonachlor	0.538	Spike	P	0 - 29
2396761	Cypermethrin	22.9	Spike	P	0 - 40
2396761	Dacthal	22.7	Spike	P	0 - 26
2396761	DDD-p,p'	4.90	Spike	P	0 - 39
2396761	DDE-p,p'	13.8	Spike	P	0 - 33
2396761	DDT-p,p'	22.7	Spike	P	0 - 40
2396761	Delta-BHC	17.5	Spike	P	0 - 37
2396761	Deltamethrin	29.8	Spike	P	0 - 100
2396761	Dichlobenil	30.0	Spike	P	0 - 40
2396761	Dicofol	18.5	Spike	P	0 - 31
2396761	Dieldrin	13.0	Spike	P	0 - 27
2396761	Endosulfan I	8.57	Spike	P	0 - 23
2396761	Endosulfan II	1.21	Spike	P	0 - 28
2396761	Endosulfan Sulfate	7.54	Spike	P	0 - 38
2396761	Endrin	8.20	Spike	P	0 - 63
2396761	Endrin Aldehyde	17.8	Spike	P	0 - 60
2396761	Endrin Ketone	1.37	Spike	P	0 - 37
2396761	Esfenvalerate	28.3	Spike	P	0 - 52
2396761	Ethalfuralin	14.8	Spike	P	0 - 23
2396761	Fenpropathrin	30.6	Spike	P	0 - 32
2396761	Gamma-BHC	6.29	Spike	P	0 - 17
2396761	Gamma-Chlordane	7.96	Spike	P	0 - 40
2396761	Heptachlor	24.5	Spike	P	0 - 29

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P427803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396761	Heptachlor Epoxide	23.6	Spike	P	0 - 25
2396761	Hexachlorobenzene	30.3	Spike	P	0 - 36
2396761	Kepone	0.0817	Spike	P	0 - 93
2396761	Lambda-Cyhalothrin	16.9	Spike	P	0 - 55
2396761	Methoprene	14.7	Spike	P	0 - 53
2396761	Methoxychlor	30.8	Spike	F	0 - 29
2396761	MGK-264	18.5	Spike	P	0 - 35
2396761	Mirex	7.14	Spike	P	0 - 46
2396761	Oxychlordane	21.4	Spike	P	0 - 29
2396761	Permethrin	29.5	Spike	P	0 - 44
2396761	Phenothrin	39.6	Spike	P	0 - 56
2396761	Piperonyl Butoxide	18.9	Spike	P	0 - 100
2396761	Prallethrin	2.56	Spike	P	0 - 42
2396761	Tau-Fluvalinate	24.8	Spike	P	0 - 54
2396761	Tetramethrin	26.8	Spike	P	0 - 51
2396761	Trans-Nonachlor	13.8	Spike	P	0 - 37
2396761	Triclosan Methyl	14.2	Spike	P	0 - 31
2396761	Trifluralin	19.4	Spike	P	0 - 30
2396778	PCB-1016	19.7	Spike	P	0 - 32
2396778	PCB-1260	9.34	Spike	P	0 - 31

Reference Method: EPA 8276

Batch ID: P427803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396778	Chlordane	12.9	Spike	P	0 - 25
2396778	Toxaphene	10.7	Spike	P	0 - 26

Reference Method: SM 2320 B-2011

Batch ID: P427943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396626	Total Alkalinity	0.697	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P428328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396609	TDS	3.12	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P427950

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396626	Fluoride	0.476	Spike	P	0 - 1.6

Quality Assurance Report

Precision

Reference Method: SM 5310 B-2011
Batch ID: P427937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2396532	Organic Carbon	0.332	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2396640
Field Sample ID: 20020052

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	88.3	P	29 - 130
EPA 8270E	Decachlorobiphenyl	85.9	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	74.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	56.3	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	61.7	P	30 - 101
EPA 8276	PCNB	88.6	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A118237

Included Lab Sample IDs: 2396622, 2396624, 2396625, 2396626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 110
Color (true)	102	103	P/P	90 - 110
Color (true)	103	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118239

Included Lab Sample IDs: 2396622, 2396624, 2396625, 2396626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105
Turbidity	101	100	P/P	95 - 105

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118247

Included Lab Sample IDs: 2396622, 2396624, 2396625, 2396626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.3	97.4	P/P	90 - 110
Sulfate	95.8	96.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118293

Included Lab Sample IDs: 2396623, 2396627, 2396628, 2396629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.6	P/P	90 - 110
Ammonia-N	99.6	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118317

Included Lab Sample IDs: 2396623, 2396627, 2396628, 2396629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.6	P/P	90 - 110
Total-P	99.6	99.6	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A118328

Included Lab Sample IDs: 2396623, 2396627, 2396628, 2396629

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

Reference Method: SM 2320 B-2011

Run ID: A118331

Included Lab Sample IDs: 2396622, 2396624, 2396625, 2396626

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.0	96.7	P/P	90 - 110
Total Alkalinity	96.7	93.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A118331

Included Lab Sample IDs: 2396622, 2396624, 2396625, 2396626

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118343

Included Lab Sample IDs: 2396623, 2396627, 2396628, 2396629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	110	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118361

Included Lab Sample IDs: 2396623, 2396627, 2396628, 2396629

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110
NO2NO3-N	105	106	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A118405

Included Lab Sample IDs: 2396640

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.9		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 8270E

Run ID: A118457

Included Lab Sample IDs: 2396640

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.1		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	102		P	80 - 120
Bifenthrin	97.9		P	80 - 120
Chlorothalonil	109		P	80 - 120
Cis-Nonachlor	96.6		P	80 - 120
Cypermethrin	102		P	80 - 120
Dacthal	100		P	80 - 120
DDD-p,p'	105		P	80 - 120
DDE-p,p'	98.5		P	80 - 120
DDT-p,p'	99.8		P	80 - 120
Delta-BHC	106		P	80 - 120
Deltamethrin	103		P	80 - 120
Dichlobenil	102		P	80 - 120
Dicofol	96.5		P	80 - 120
Dieldrin	99.0		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	97.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A118457
Included Lab Sample IDs: 2396640

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	99.3		P	80 - 120
Endrin	98.8		P	80 - 120
Endrin Aldehyde	96.8		P	80 - 120
Endrin Ketone	92.0		P	80 - 120
Esfenvalerate	107		P	80 - 120
Ethalfuralin	99.1		P	80 - 120
Fenpropathrin	102		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	97.1		P	80 - 120
Heptachlor	97.3		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	99.4		P	80 - 120
Kepone	82.6		P	80 - 120
Lambda-Cyhalothrin	101		P	80 - 120
Methoprene	101		P	80 - 120
Methoxychlor	95.8		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	99.7		P	80 - 120
Oxychlordane	99.2		P	80 - 120
Permethrin	99.8		P	80 - 120
Phenothrin	99.6		P	80 - 120
Piperonyl Butoxide	96.6		P	80 - 120
Prallethrin	101		P	80 - 120
Tau-Fluvalinate	104		P	80 - 120
Tetramethrin	101		P	80 - 120
Trans-Nonachlor	97.7		P	80 - 120
Triclosan Methyl	97.2		P	80 - 120
Trifluralin	98.9		P	80 - 120

Reference Method: EPA 8270E
Run ID: A118485
Included Lab Sample IDs: 2396640

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	96.3		P	80 - 120
PCB-1260	99.2		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)	101			2.71	
	Color (true)	101			0.277	
	Color (true)	102			0.843	
EPA 180.1 Rev. 2.0	Turbidity	100			5.59	
EPA 300.0 Rev. 2.1	Chloride	100	99.6	99.0	0.937	
	Sulfate	97.7	94.2	95.7	0.385	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8	98.4	100		0.968
	Ammonia-N	97.8	99.8	102		2.57
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.4	97.0	108		6.44
EPA 353.2 Rev. 2.0	NO2NO3-N	104	106	104		1.43
EPA 365.1 Rev. 2.0	Total-P	102	102	103		1.05
EPA 8270E	Aldrin	39.6	47.5	60.2		23.6
	Alpha-BHC	80.5	77.2	89.7		15.0
	Alpha-Chlordane	61.4	59.0	76.6		26.0
	Beta-BHC	71.1	70.7	81.0		13.6
	Beta-Cyfluthrin	63.8	79.4	99.8		22.8
	Bifenthrin	46.3	63.2	79.6		23.0
	Chlorothalonil	76.7	10.2	11.6		12.9
	Cis-Nonachlor	61.5	63.7	63.4		0.538
	Cypermethrin	64.7	81.6	103		22.9
	Dacthal	72.9	68.7	86.3		22.7
	DDD-p,p'	63.5	58.0	60.9		4.90
	DDE-p,p'	64.2	63.4	72.8		13.8
	DDT-p,p'	57.8	58.1	73.0		22.7
	Delta-BHC	80.6	77.2	91.9		17.5
	Deltamethrin	83.4	108	145		29.8
	Dichlobenil	57.8	31.1	42.1		30.0
	Dicofol	56.0	58.5	70.4		18.5
	Dieldrin	68.5	66.9	76.2		13.0
	Endosulfan I	70.9	72.4	78.9		8.57
	Endosulfan II	68.1	66.4	67.2		1.21
	Endosulfan Sulfate	68.1	58.4	63.0		7.54
	Endrin	69.6	68.1	74.0		8.20
	Endrin Aldehyde	55.8	43.6	52.0		17.8
	Endrin Ketone	75.1	68.2	69.2		1.37
	Esfenvalerate	71.1	88.8	118		28.3
	Ethalfuralin	64.9	66.0	76.6		14.8
	Fenpropathrin	58.9	67.0	91.2		30.6
	Gamma-BHC	72.2	55.8	52.4		6.29
	Gamma-Chlordane	62.4	67.8	73.4		7.96
	Heptachlor	56.9	57.4	73.5		24.5
	Heptachlor Epoxide	67.2	64.2	81.3		23.6
	Hexachlorobenzene	52.1	42.8	58.1		30.3
	Kepone	76.5	60.5	60.5		0.0817
	Lambda-Cyhalothrin	55.1	83.7	99.2		16.9
	Methoprene	45.6	55.1	63.9		14.7
	Methoxychlor	71.9	71.6	97.7		30.8
	MGK-264	62.4	63.6	76.6		18.5
	Mirex	48.1	54.4	58.4		7.14
	Oxychlordane	69.8	70.8	87.8		21.4
	PCB-1016	48.6	75.8	62.2		19.7
	PCB-1260	59.3	67.7	61.6		9.34
	Permethrin	67.2	73.7	99.2		29.5
	Phenothrin	38.1	63.6	95.0		39.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8270E	Piperonyl Butoxide	78.3	80.0	96.7		18.9
	Prallethrin	61.4	76.2	74.3		2.56
	Tau-Fluvalinate	53.3	78.3	100		24.8
	Tetramethrin	66.0	90.5	118		26.8
	Trans-Nonachlor	61.5	61.0	70.0		13.8
	Triclosan Methyl	70.8	66.4	76.5		14.2
	Trifluralin	65.4	64.4	78.2		19.4
EPA 8276	Chlordane	58.0	88.8	78.0		12.9
	Toxaphene	65.2	99.2	89.1		10.7
SM 2320 B-2011	Total Alkalinity	96.3			0.697	
SM 2540 C-2015	TDS	96.8			3.12	
SM 2540 D-2015	TSS	93.3				
SM 4500-F- C-2011	Fluoride	101	102	101		0.476
SM 5310 B-2011	Organic Carbon	99.8	89.5	89.9		0.332

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2396622, 2396624, 2396625, 2396626
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2396622, 2396624, 2396625, 2396626
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2396622, 2396624, 2396625, 2396626
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2396622, 2396624, 2396625, 2396626
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2396623, 2396627, 2396628, 2396629
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2396623, 2396627, 2396628, 2396629
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2396623, 2396627, 2396628, 2396629
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2396623, 2396627, 2396628, 2396629
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2396640
EPA 8270E	PCBs in water matrices by GC/MS/MS	2396640
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2396640
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2396622, 2396624, 2396625, 2396626
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2396622, 2396624, 2396625, 2396626
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2396622, 2396624, 2396625, 2396626
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2396622, 2396624, 2396625, 2396626
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2396623, 2396627, 2396628, 2396629

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	03/28/2023			03/28/2023 14:43	Alexis Price	2396622
	03/28/2023			03/28/2023 14:44	Alexis Price	2396624
	03/28/2023			03/28/2023 14:49	Alexis Price	2396626
	03/28/2023			03/28/2023 15:14	Alexis Price	2396625
EPA 180.1 Rev. 2.0	03/28/2023			03/28/2023 14:20	Chandler E Cox	2396622, 2396624
	03/28/2023			03/28/2023 14:24	Chandler E Cox	2396625
	03/28/2023			03/28/2023 14:28	Chandler E Cox	2396626
EPA 300.0 Rev. 2.1	03/28/2023			03/31/2023 16:51	James L Waggeberby	2396625
	03/28/2023			03/31/2023 17:51	James L Waggeberby	2396622
	03/28/2023			03/31/2023 18:06	James L Waggeberby	2396624
	03/28/2023			03/31/2023 18:21	James L Waggeberby	2396626
EPA 350.1 Rev. 2.0	03/28/2023			03/30/2023 12:50	Khloe J Berg	2396623
	03/28/2023			03/30/2023 12:51	Khloe J Berg	2396627
	03/28/2023			03/30/2023 12:53	Khloe J Berg	2396628
	03/28/2023			03/30/2023 13:05	Khloe J Berg	2396629
EPA 351.2 Rev. 2.0	03/28/2023	03/30/2023 12:29	Samantha L Bates	04/03/2023 11:39	Samantha L Bates	2396623
	03/28/2023	03/30/2023 12:29	Samantha L Bates	04/03/2023 11:41	Samantha L Bates	2396627
	03/28/2023	03/30/2023 12:29	Samantha L Bates	04/03/2023 11:45	Samantha L Bates	2396628
	03/28/2023	03/30/2023 12:29	Samantha L Bates	04/03/2023 11:47	Samantha L Bates	2396629
EPA 353.2 Rev. 2.0	03/28/2023			04/04/2023 10:11	Beverly Y. Sanders	2396623
	03/28/2023			04/04/2023 10:20	Beverly Y. Sanders	2396627
	03/28/2023			04/04/2023 10:21	Beverly Y. Sanders	2396628
	03/28/2023			04/04/2023 11:45	Beverly Y. Sanders	2396629
EPA 365.1 Rev. 2.0	03/28/2023	03/30/2023 14:30	Alexis Price	03/31/2023 13:11	James L Waggeberby	2396623
	03/28/2023	03/30/2023 14:30	Alexis Price	03/31/2023 13:12	James L Waggeberby	2396627
	03/28/2023	03/30/2023 14:30	Alexis Price	03/31/2023 13:16	James L Waggeberby	2396628
	03/28/2023	03/30/2023 14:30	Alexis Price	03/31/2023 13:17	James L Waggeberby	2396629
EPA 8270E	03/28/2023	03/30/2023 11:00	Fe-Val Siddell	04/06/2023 19:24	Michael Poppell	2396640
	03/28/2023	03/30/2023 11:00	Fe-Val Siddell	04/10/2023 23:53	Julie Wi	2396640
EPA 8276	03/28/2023	03/30/2023 11:00	Fe-Val Siddell	04/01/2023 06:04	Lipi Saha	2396640
SM 2320 B-2011	03/28/2023			03/31/2023 17:11	Dale L. Simmons	2396626
	03/28/2023			03/31/2023 20:53	Dale L. Simmons	2396622
	03/28/2023			03/31/2023 21:07	Dale L. Simmons	2396624
	03/28/2023			03/31/2023 21:22	Dale L. Simmons	2396625
SM 2540 C-2015	03/28/2023			03/29/2023 16:02	Yijie Li	2396622, 2396624, 2396625, 2396626
SM 2540 D-2015	03/28/2023			03/29/2023 16:02	Yijie Li	2396622, 2396624, 2396625, 2396626
SM 4500-F- C-2011	03/28/2023			03/31/2023 17:00	Dale L. Simmons	2396626
	03/28/2023			03/31/2023 20:53	Dale L. Simmons	2396622
	03/28/2023			03/31/2023 21:07	Dale L. Simmons	2396624
	03/28/2023			03/31/2023 21:22	Dale L. Simmons	2396625

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	03/28/2023			04/01/2023 06:59	Khloe J Berg	2396623
	03/28/2023			04/01/2023 07:13	Khloe J Berg	2396627
	03/28/2023			04/01/2023 07:27	Khloe J Berg	2396628
	03/28/2023			04/01/2023 07:41	Khloe J Berg	2396629