Chemical Analysis Report

NE-DIST-2022-07-01-01

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

Event Description: **Suwannee Central and Twin spring**
Request ID: **RQ-2022-05-16-21**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Colin Wright, Program Administrator

Date Certified: 25-JUL-2022 11:30

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: Olustee Creek at SR-18 **Collection Date/Time: 06/30/2022 10:25**

Field ID: 21030071 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2338600	EPA 8270E	Aldrin	0.68	U	ng/L	P416118	
		Alpha-BHC	0.10	U	ng/L	P416118	
		Alpha-Chlordane	0.21	U	ng/L	P416118	
		PCB-1016	2.1	U	ng/L	P416118	
		Beta-BHC	0.10	U	ng/L	P416118	
		PCB-1221	2.1	U	ng/L	P416118	
		Beta-Cyfluthrin	1.3	U	ng/L	P416118	
		PCB-1232	2.1	U	ng/L	P416118	
		Bifenthrin	0.52	U	ng/L	P416118	
		PCB-1242	2.1	U	ng/L	P416118	
		Carbophenothion	0.94	U	ng/L	P416118	
		PCB-1248	2.1	U	ng/L	P416118	
		Chlorothalonil	1.3	U	ng/L	P416118	
		PCB-1254	2.1	U	ng/L	P416118	
		Cis-Nonachlor	0.21	U	ng/L	P416118	
		PCB-1260	2.1	U	ng/L	P416118	
		Cypermethrin	1.6	U	ng/L	P416118	
		Dacthal	0.16	U	ng/L	P416118	
		DDD-p,p'	0.26	U	ng/L	P416118	
		DDE-p,p'	0.21	U	ng/L	P416118	
		DDT-p,p'	0.26	U	ng/L	P416118	
		Delta-BHC	0.42	U	ng/L	P416118	
		Deltamethrin	1.3	U	ng/L	P416118	
		Dichlobenil	0.26	U	ng/L	P416118	
		Dicofol	1.3	U	ng/L	P416118	
		Dieldrin	0.42	U	ng/L	P416118	
		Endosulfan I	0.42	U	ng/L	P416118	
		Endosulfan II	0.42	U	ng/L	P416118	
		Endosulfan Sulfate	0.31	U	ng/L	P416118	
		Endrin	0.42	U	ng/L	P416118	
		Endrin Aldehyde	0.78	U	ng/L	P416118	
		Endrin Ketone	0.42	U	ng/L	P416118	
		Esfenvalerate	0.78	U	ng/L	P416118	
		Ethalfluralin	0.16	U	ng/L	P416118	
		Fenpropathrin	0.26	U	ng/L	P416118	
		Gamma-BHC	0.13	U	ng/L	P416118	
		Gamma-Chlordane	0.21	U	ng/L	P416118	
		Heptachlor	0.21	U	ng/L	P416118	
		Heptachlor Epoxide	0.26	U	ng/L	P416118	
		Hexachlorobenzene**	1.0	U	ng/L	P416118	
		Kepone	5.2	U	ng/L	P416118	
		Lambda-Cyhalothrin	0.78	U	ng/L	P416118	
		Methoprene	0.78	U	ng/L	P416118	
		Methoxychlor	0.31	U	ng/L	P416118	

Field ID: 21030071

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2338600	EPA 8270E	MGK-264	0.21	U	ng/L	P416118	
		Mirex	0.73	U	ng/L	P416118	
		Oxychlordane	0.31	U	ng/L	P416118	
		Permethrin	1.7	U	ng/L	P416118	
		Phenothrin	0.94	U	ng/L	P416118	
		Piperonyl Butoxide	0.16	U	ng/L	P416118	
		Prallethrin	2.1	U	ng/L	P416118	
		Tau-Fluvalinate	0.26	U	ng/L	P416118	
		Tetramethrin	0.78	U	ng/L	P416118	
		Trans-Nonachlor	0.21	U	ng/L	P416118	
		Triclosan Methyl	0.16	U	ng/L	P416118	
		Trifluralin	0.21	U	ng/L	P416118	
	EPA 8276	Chlordane	2.6	U	ng/L	P416118	
		Toxaphene	16	U	ng/L	P416118	

Sample Location: Olustee Creek at SE Union Way **Collection Date/Time: 06/30/2022 10:55**

Field ID: G1NE0951 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2338601	EPA 8270E	Aldrin	0.66	U	ng/L	P416118	
		Alpha-BHC	0.10	U	ng/L	P416118	
		Alpha-Chlordane	0.20	U	ng/L	P416118	
		PCB-1016	2.0	U	ng/L	P416118	
		Beta-BHC	0.10	U	ng/L	P416118	
		PCB-1221	2.0	U	ng/L	P416118	
		Beta-Cyfluthrin	1.3	U	ng/L	P416118	
		PCB-1232	2.0	U	ng/L	P416118	
		Bifenthrin	0.51	U	ng/L	P416118	
		PCB-1242	2.0	U	ng/L	P416118	
		Carbophenothion	0.92	U	ng/L	P416118	
		PCB-1248	2.0	U	ng/L	P416118	
		Chlorothalonil	1.3	U	ng/L	P416118	
		PCB-1254	2.0	U	ng/L	P416118	
		Cis-Nonachlor	0.20	U	ng/L	P416118	
		PCB-1260	2.0	U	ng/L	P416118	
		Cypermethrin	1.5	U	ng/L	P416118	
		Dacthal	0.15	U	ng/L	P416118	
		DDD-p,p'	0.26	U	ng/L	P416118	
		DDE-p,p'	0.20	U	ng/L	P416118	
		DDT-p,p'	0.26	U	ng/L	P416118	
		Delta-BHC	0.41	U	ng/L	P416118	
		Deltamethrin	1.3	U	ng/L	P416118	
		Dichlobenil	0.26	U	ng/L	P416118	
		Dicofol	1.3	U	ng/L	P416118	
		Dieldrin	0.41	U	ng/L	P416118	
		Endosulfan I	0.41	U	ng/L	P416118	
		Endosulfan II	0.41	U	ng/L	P416118	
		Endosulfan Sulfate	0.31	U	ng/L	P416118	
		Endrin	0.41	U	ng/L	P416118	
		Endrin Aldehyde	0.77	U	ng/L	P416118	
		Endrin Ketone	0.41	U	ng/L	P416118	
		Esfenvalerate	0.77	U	ng/L	P416118	
		Ethalfluralin	0.15	U	ng/L	P416118	
		Fenpropathrin	0.26	U	ng/L	P416118	
		Gamma-BHC	0.13	U	ng/L	P416118	
		Gamma-Chlordane	0.20	U	ng/L	P416118	
		Heptachlor	0.20	U	ng/L	P416118	
		Heptachlor Epoxide	0.26	U	ng/L	P416118	
		Hexachlorobenzene**	1.0	U	ng/L	P416118	
		Kepone	5.1	U	ng/L	P416118	
		Lambda-Cyhalothrin	0.77	U	ng/L	P416118	
		Methoprene	0.77	U	ng/L	P416118	
		Methoxychlor	0.31	U	ng/L	P416118	

Field ID: G1NE0951 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2338601	EPA 8270E	MGK-264	0.20	U	ng/L	P416118	
		Mirex	0.72	U	ng/L	P416118	
		Oxychlordane	0.31	U	ng/L	P416118	
		Permethrin	1.6	U	ng/L	P416118	
		Phenothrin	0.92	U	ng/L	P416118	
		Piperonyl Butoxide	0.60	I	ng/L	P416118	
		Prallethrin	2.0	U	ng/L	P416118	
		Tau-Fluvalinate	0.26	U	ng/L	P416118	
		Tetramethrin	0.77	U	ng/L	P416118	
		Trans-Nonachlor	0.20	U	ng/L	P416118	
		Triclosan Methyl	0.15	U	ng/L	P416118	
		Trifluralin	0.20	U	ng/L	P416118	
	EPA 8276	Chlordane	2.6	U	ng/L	P416118	
		Toxaphene	15	U	ng/L	P416118	

Sample Location: Twin Spring at vent **Collection Date/Time: 06/30/2022 12:05**

Field ID: G1NE0943 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2338595	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P416107	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P416111	
	EPA 300.0 Rev. 2.1	Chloride	6.1		mg Cl/L	P416558	
		Sulfate	12		mg SO4/L	P416563	
	SM 2320 B-2011	Total Alkalinity	138	A	mg CaCO3/L	P416322	
	SM 2540 C-2011	TDS	171	A	mg/L	P416410	
	SM 2540 D-2011	TSS	2	UA	mg/L	P416412	
	SM 4500-F- C-2011	Fluoride	0.069	I	mg F/L	P416326	
2338596	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P416347	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.10	I	mg N/L	P416122	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.0		mg N/L	P416482	
	EPA 365.1 Rev. 2.0	Total-P	0.038		mg P/L	P416186	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P416317	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P416107

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416111

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416558

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416563

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416347

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416122

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416482

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416186

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

Reference Method: EPA 8270E
Batch ID: P416118

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: P416118

Component	Result	Code	Units
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfluralin	0.15	U	ng/L
Ethalfluralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P416118

Component	Result	Code	Units
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270E
Batch ID: P416118

Component	Result	Code	Units
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P416118

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2320 B-2011
Batch ID: P416322

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

Reference Method: SM 2540 C-2011
Batch ID: P416410

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P416412

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P416326

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P416317

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: P416107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.3		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416558

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416347

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416122

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416482

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: P416186

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

Reference Method: EPA 8270E
Batch ID: P416118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.1		P	10 - 93.0
Alpha-BHC	97.9		P	75 - 106
Alpha-Chlordane	91.2		P	50 - 109
Beta-BHC	121		P	36 - 138

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P416118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	80.1		P	23 - 167
Bifenthrin	54.0		P	11 - 123
Carbophenothion	60.1		P	18 - 96.0
Chlorothalonil	94.0		P	27 - 190
Cis-Nonachlor	67.2		P	40 - 111
Cypermethrin	77.0		P	25 - 155
Dacthal	112		P	72 - 119
DDD-p,p'	65.9		P	47 - 108
DDE-p,p'	85.4		P	48 - 107
DDT-p,p'	76.0		P	49 - 111
Delta-BHC	133		P	54 - 138
Deltamethrin	83.0		P	22 - 189
Dichlobenil	101		P	32 - 113
Dicofol	78.8		P	50 - 108
Dieldrin	94.0		P	56 - 110
Endosulfan I	98.9		P	60 - 105
Endosulfan II	76.4		P	50 - 120
Endosulfan Sulfate	102		P	55 - 121
Endrin	73.6		P	31 - 119
Endrin Aldehyde	100		P	36 - 116
Endrin Ketone	98.5		P	69 - 177
Esfenvalerate	73.8		P	10 - 179
Ethalfluralin	78.6		P	49 - 99.0
Fenpropathrin	75.6		P	35 - 119
Gamma-BHC	112		P	69 - 120
Gamma-Chlordane	84.7		P	45 - 107
Heptachlor	72.7		P	41 - 100
Heptachlor Epoxide	93.3		P	58 - 106
Hexachlorobenzene	72.4		P	39 - 100
Kepone	76.7		P	10 - 191
Lambda-Cyhalothrin	62.3		P	21 - 206
Methoprene	68.9		P	10 - 129
Methoxychlor	88.5		P	61 - 111
MGK-264	104		P	20 - 123
Mirex	53.4		P	10 - 182
Oxychlordane	86.6		P	39 - 110
PCB-1016	81.4		P	48 - 112
PCB-1260	87.8		P	44 - 118
Permethrin	71.8		P	26 - 152
Phenothrin	61.6		P	10 - 109
Piperonyl Butoxide	139		P	19 - 147
Prallethrin	106		P	14 - 109
Tau-Fluvalinate	71.6		P	16 - 134
Tetramethrin	100		P	10 - 125
Trans-Nonachlor	86.9		P	45 - 107
Triclosan Methyl	101		P	60 - 110
Trifluralin	75.5		P	44 - 101

Reference Method: EPA 8276
Batch ID: P416118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P416118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	99.0		P	61 - 116
Toxaphene	86.2		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P416322

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P416326

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

Reference Method: SM 5310 B-2011
Batch ID: P416317

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.1		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338500	Chloride	97.2		P	90 - 110
2338854	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338500	Sulfate	95.4		P	90 - 110
2338854	Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416347

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338596	Ammonia-N	96.4	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338606	NO2NO3-N	98.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338565	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P416118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338795	Aldrin	53.5	54.9	P/P	10 - 89.0
2338795	Alpha-BHC	91.0	94.3	P/P	71 - 105
2338795	Alpha-Chlordane	76.7	78.2	P/P	43 - 107
2338795	Beta-BHC	113	109	P/P	57 - 152
2338795	Beta-Cyfluthrin	72.1	64.1	P/P	29 - 186
2338795	Bifenthrin	50.0	37.9	P/P	19 - 119
2338795	Carbophenothion	54.4	49.9	P/P	19 - 107
2338795	Chlorothalonil	118	125	P/P	10 - 245
2338795	Cis-Nonachlor	61.8	56.2	P/P	36 - 110
2338795	Cypermethrin	70.1	63.4	P/P	24 - 169
2338795	Dacthal	99.0	102	P/P	62 - 115
2338795	DDD-p,p'	59.0	55.2	P/P	36 - 109
2338795	DDE-p,p'	74.6	77.3	P/P	30 - 114
2338795	DDT-p,p'	74.3	70.0	P/P	42 - 108
2338795	Delta-BHC	121	123	P/P	60 - 164
2338795	Deltamethrin	79.6	69.1	P/P	10 - 210
2338795	Dichlobenil	86.2	88.4	P/P	23 - 108
2338795	Dicofol	74.1	74.2	P/P	44 - 109
2338795	Dieldrin	80.2	82.9	P/P	37 - 119
2338795	Endosulfan I	88.5	87.8	P/P	52 - 105

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P416118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338795	Endosulfan II	68.3	65.2	P/P	35 - 127
2338795	Endosulfan Sulfate	85.3	86.4	P/P	39 - 130
2338795	Endrin	72.7	66.3	P/P	30 - 116
2338795	Endrin Aldehyde	66.1	68.8	P/P	20 - 110
2338795	Endrin Ketone	92.7	89.6	P/P	48 - 134
2338795	Esfenvalerate	73.7	60.8	P/P	10 - 199
2338795	Ethalfluralin	75.2	73.2	P/P	48 - 95.0
2338795	Fenpropathrin	63.3	60.7	P/P	37 - 121
2338795	Gamma-BHC	105	108	P/P	61 - 126
2338795	Gamma-Chlordane	75.5	75.6	P/P	39 - 105
2338795	Heptachlor	69.1	69.1	P/P	38 - 96.0
2338795	Heptachlor Epoxide	84.0	87.3	P/P	42 - 114
2338795	Hexachlorobenzene	72.5	68.6	P/P	39 - 93.0
2338795	Kepone	64.6	70.3	P/P	10 - 215
2338795	Lambda-Cyhalothrin	56.4	48.0	P/P	10 - 204
2338795	Methoprene	52.8	46.5	P/P	17 - 108
2338795	Methoxychlor	81.9	81.5	P/P	56 - 115
2338795	MGK-264	81.4	91.1	P/P	35 - 120
2338795	Mirex	48.0	46.4	P/P	10 - 178
2338795	Oxychlordane	77.5	82.2	P/P	47 - 91.0
2338795	Permethrin	69.1	59.0	P/P	27 - 170
2338795	Phenothrin	56.0	44.7	P/P	10 - 133
2338795	Piperonyl Butoxide	123	131	P/P	23 - 150
2338795	Prallethrin	79.2	84.6	P/P	21 - 113
2338795	Tau-Fluvalinate	74.4	58.7	P/P	16 - 158
2338795	Tetramethrin	83.7	83.2	P/P	22 - 132
2338795	Trans-Nonachlor	72.4	75.7	P/P	43 - 102
2338795	Triclosan Methyl	88.1	88.3	P/P	49 - 109
2338795	Trifluralin	73.0	70.5	P/P	48 - 93.0
2339052	PCB-1016	89.8	95.4	P/P	46 - 111
2339052	PCB-1260	86.1	89.5	P/P	45 - 114

Reference Method: EPA 8276
Batch ID: P416118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339052	Chlordane	87.4	101	P/P	53 - 126
2339052	Toxaphene	103	107	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P416326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338595	Fluoride	102	102	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P416317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338564	Organic Carbon	97.6	98.4	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P416107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338608	Color (true)	2.14	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338562	Turbidity	6.20	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338500	Chloride	0.309	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338500	Sulfate	0.291	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338596	Ammonia-N	0.399	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416122

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338606	Kjeldahl Nitrogen	0.821	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338606	NO2NO3-N	2.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338565	Total-P	1.58	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P416118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338795	Aldrin	2.54	Spike	P	0 - 37
2338795	Alpha-BHC	3.59	Spike	P	0 - 16
2338795	Alpha-Chlordane	1.83	Spike	P	0 - 28
2338795	Beta-BHC	3.28	Spike	P	0 - 32
2338795	Beta-Cyfluthrin	11.8	Spike	P	0 - 41
2338795	Bifenthrin	27.3	Spike	P	0 - 36
2338795	Carbophenothion	8.70	Spike	P	0 - 30
2338795	Chlorothalonil	5.47	Spike	P	0 - 54
2338795	Cis-Nonachlor	9.40	Spike	P	0 - 33
2338795	Cypermethrin	10.0	Spike	P	0 - 38
2338795	Dacthal	3.04	Spike	P	0 - 23
2338795	DDD-p,p'	6.60	Spike	P	0 - 35
2338795	DDE-p,p'	3.52	Spike	P	0 - 27
2338795	DDT-p,p'	5.97	Spike	P	0 - 31
2338795	Delta-BHC	1.47	Spike	P	0 - 30
2338795	Deltamethrin	14.1	Spike	P	0 - 76
2338795	Dichlobenil	2.62	Spike	P	0 - 33
2338795	Dicofol	0.0659	Spike	P	0 - 24
2338795	Dieldrin	3.25	Spike	P	0 - 35
2338795	Endosulfan I	0.774	Spike	P	0 - 25
2338795	Endosulfan II	4.75	Spike	P	0 - 31
2338795	Endosulfan Sulfate	1.33	Spike	P	0 - 38
2338795	Endrin	9.14	Spike	P	0 - 53
2338795	Endrin Aldehyde	4.00	Spike	P	0 - 81
2338795	Endrin Ketone	3.45	Spike	P	0 - 33
2338795	Esfenvalerate	19.1	Spike	P	0 - 46
2338795	Ethalfluralin	2.64	Spike	P	0 - 22
2338795	Fenpropathrin	4.09	Spike	P	0 - 29
2338795	Gamma-BHC	2.74	Spike	P	0 - 17
2338795	Gamma-Chlordane	0.201	Spike	P	0 - 28
2338795	Heptachlor	0.0384	Spike	P	0 - 28
2338795	Heptachlor Epoxide	3.83	Spike	P	0 - 23
2338795	Hexachlorobenzene	5.51	Spike	P	0 - 22
2338795	Kepone	8.37	Spike	P	0 - 61
2338795	Lambda-Cyhalothrin	16.1	Spike	P	0 - 52
2338795	Methoprene	12.7	Spike	P	0 - 38
2338795	Methoxychlor	0.482	Spike	P	0 - 29
2338795	MGK-264	11.3	Spike	P	0 - 41
2338795	Mirex	3.24	Spike	P	0 - 39
2338795	Oxychlordane	5.97	Spike	P	0 - 33
2338795	Permethrin	15.8	Spike	P	0 - 39
2338795	Phenothrin	22.5	Spike	P	0 - 52
2338795	Piperonyl Butoxide	6.43	Spike	P	0 - 91
2338795	Prallethrin	6.50	Spike	P	0 - 34
2338795	Tau-Fluvalinate	23.6	Spike	P	0 - 41
2338795	Tetramethrin	0.620	Spike	P	0 - 43
2338795	Trans-Nonachlor	4.34	Spike	P	0 - 31
2338795	Triclosan Methyl	0.188	Spike	P	0 - 24
2338795	Trifluralin	3.48	Spike	P	0 - 23
2339052	PCB-1016	6.09	Spike	P	0 - 32
2339052	PCB-1260	3.82	Spike	P	0 - 31

Quality Assurance Report
Precision

Reference Method: EPA 8276
Batch ID: P416118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339052	Chlordane	14.4	Spike	P	0 - 25
2339052	Toxaphene	4.27	Spike	P	0 - 26

Reference Method: SM 2320 B-2011
Batch ID: P416322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338595	Total Alkalinity	1.22	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P416410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338595	TDS	5.85	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P416326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338595	Fluoride	0.500	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P416317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338564	Organic Carbon	0.518	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2338600
Field Sample ID: 21030071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	73.5	P	29 - 130
EPA 8270E	Decachlorobiphenyl	43.7	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	53.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	54.3	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	60.9	P	30 - 101
EPA 8276	PCNB	91.2	P	48 - 121

Lab Sample ID: 2338601
Field Sample ID: G1NE0951

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	88.4	P	29 - 130
EPA 8270E	Decachlorobiphenyl	49.0	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	63.0	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	58.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	71.3	P	30 - 101
EPA 8276	PCNB	102	P	48 - 121

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A113245
Included Lab Sample IDs: 2338595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	93.8	96.9	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A113246
Included Lab Sample IDs: 2338595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	98.5	P/P	95 - 105

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A113336
Included Lab Sample IDs: 2338596

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A113363
Included Lab Sample IDs: 2338596

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.7	98.6	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A113365
Included Lab Sample IDs: 2338595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.0	101	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A113365
Included Lab Sample IDs: 2338595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A113377
Included Lab Sample IDs: 2338596

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	99.5	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A113396
Included Lab Sample IDs: 2338600, 2338601

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	104		P	80 - 120
PCB-1260	98.7		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A113402
Included Lab Sample IDs: 2338600, 2338601

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.8		P	80 - 120
Alpha-BHC	97.0		P	80 - 120
Alpha-Chlordane	99.5		P	80 - 120
Beta-BHC	98.6		P	80 - 120
Beta-Cyfluthrin	106		P	80 - 120
Bifenthrin	92.3		P	80 - 120
Carbophenothion	113		P	80 - 120
Chlorothalonil	99.9		P	80 - 120
Cis-Nonachlor	96.7		P	80 - 120
Cypermethrin	97.6		P	80 - 120
Dacthal	99.2		P	80 - 120
DDD-p,p'	94.4		P	80 - 120
DDE-p,p'	97.5		P	80 - 120
DDT-p,p'	102		P	80 - 120
Delta-BHC	95.6		P	80 - 120
Deltamethrin	102		P	80 - 120
Dichlobenil	86.9		P	80 - 120
Dicofol	99.7		P	80 - 120
Dieldrin	97.7		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	110		P	80 - 120
Endrin Ketone	98.8		P	80 - 120
Esfenvalerate	107		P	80 - 120
Ethalfluralin	103		P	80 - 120
Fenpropathrin	102		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	99.9		P	80 - 120
Heptachlor	103		P	80 - 120
Heptachlor Epoxide	95.0		P	80 - 120
Hexachlorobenzene	95.8		P	80 - 120
Kepone	115		P	80 - 120
Lambda-Cyhalothrin	98.0		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	93.7		P	80 - 120
MGK-264	92.9		P	80 - 120
Mirex	97.0		P	80 - 120
Oxychlordane	97.2		P	80 - 120
Permethrin	98.4		P	80 - 120
Phenothrin	99.2		P	80 - 120
Piperonyl Butoxide	86.9		P	80 - 120
Prallethrin	103		P	80 - 120
Tau-Fluvalinate	107		P	80 - 120
Tetramethrin	92.2		P	80 - 120
Trans-Nonachlor	99.7		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	92.6		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A113416
Included Lab Sample IDs: 2338596

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113433
Included Lab Sample IDs: 2338596

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A113462
Included Lab Sample IDs: 2338595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.3	97.3	P/P	90 - 110
Sulfate	97.0	97.0	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A113500
Included Lab Sample IDs: 2338600, 2338601

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.8		P	80 - 120
Toxaphene	99.9		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	SMP	MS
DEP SOP: NU-094-1	Color (true)	96.3				2.14	
EPA 180.1 Rev. 2.0	Turbidity	95.2				6.20	
EPA 300.0 Rev. 2.1	Chloride	98.1	97.2	97.6		0.309	
	Sulfate	97.3	95.4	95.7		0.291	
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	96.4	96.0			0.399
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103					0.821
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	98.0	100			2.02
EPA 365.1 Rev. 2.0	Total-P	102	106	104			1.58
EPA 8270E	Aldrin	62.1	53.5	54.9			2.54
	Alpha-BHC	97.9	91.0	94.3			3.59
	Alpha-Chlordane	91.2	76.7	78.2			1.83
	Beta-BHC	121	113	109			3.28
	Beta-Cyfluthrin	80.1	72.1	64.1			11.8
	Bifenthrin	54.0	50.0	37.9			27.3
	Carbophenothion	60.1	54.4	49.9			8.70
	Chlorothalonil	94.0	118	125			5.47
	Cis-Nonachlor	67.2	61.8	56.2			9.40
	Cypermethrin	77.0	70.1	63.4			10.0
	Dacthal	112	99.0	102			3.04
	DDD-p,p'	65.9	59.0	55.2			6.60
	DDE-p,p'	85.4	74.6	77.3			3.52
	DDT-p,p'	76.0	74.3	70.0			5.97
	Delta-BHC	133	121	123			1.47
	Deltamethrin	83.0	79.6	69.1			14.1
	Dichlobenil	101	86.2	88.4			2.62
	Dicofol	78.8	74.1	74.2			0.0659
	Dieldrin	94.0	80.2	82.9			3.25
	Endosulfan I	98.9	88.5	87.8			0.774
	Endosulfan II	76.4	68.3	65.2			4.75
	Endosulfan Sulfate	102	85.3	86.4			1.33
	Endrin	73.6	72.7	66.3			9.14
	Endrin Aldehyde	100	66.1	68.8			4.00
	Endrin Ketone	98.5	92.7	89.6			3.45
	Esfenvalerate	73.8	73.7	60.8			19.1
	Ethalfluralin	78.6	75.2	73.2			2.64
	Fenpropathrin	75.6	63.3	60.7			4.09
	Gamma-BHC	112	105	108			2.74
	Gamma-Chlordane	84.7	75.5	75.6			0.201
	Heptachlor	72.7	69.1	69.1			0.0384
	Heptachlor Epoxide	93.3	84.0	87.3			3.83
	Hexachlorobenzene	72.4	72.5	68.6			5.51
	Kepone	76.7	64.6	70.3			8.37
	Lambda-Cyhalothrin	62.3	56.4	48.0			16.1
	Methoprene	68.9	52.8	46.5			12.7
	Methoxychlor	88.5	81.9	81.5			0.482
	MGK-264	104	81.4	91.1			11.3
	Mirex	53.4	48.0	46.4			3.24
	Oxychlordane	86.6	77.5	82.2			5.97
	PCB-1016	81.4	89.8	95.4			6.09
	PCB-1260	87.8	86.1	89.5			3.82
	Permethrin	71.8	69.1	59.0			15.8
	Phenothrin	61.6	56.0	44.7			22.5
	Piperonyl Butoxide	139	123	131			6.43
	Prallethrin	106	79.2	84.6			6.50

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Tau-Fluvalinate	71.6	74.4	58.7			23.6
	Tetramethrin	100	83.7	83.2			0.620
	Trans-Nonachlor	86.9	72.4	75.7			4.34
	Triclosan Methyl	101	88.1	88.3			0.188
	Trifluralin	75.5	73.0	70.5			3.48
EPA 8276	Chlordane	99.0	87.4	101			14.4
	Toxaphene	86.2	103	107			4.27
SM 2320 B-2011	Total Alkalinity	101				1.22	
SM 2540 C-2011	TDS					5.85	
SM 4500-F- C-2011	Fluoride	101	102	102			0.500
SM 5310 B-2011	Organic Carbon	95.1	97.6	98.4			0.518

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2338595
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2338595
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2338595
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2338595
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2338596
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2338596
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2338596
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2338596
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2338600, 2338601
EPA 8270E	PCBs in water matrices by GC/MS/MS	2338600, 2338601
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2338600, 2338601
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2338595
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2338595
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2338595
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2338595
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2338596

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	07/01/2022			07/01/2022 14:37	Samantha L Bates	2338595
EPA 180.1 Rev. 2.0	07/01/2022			07/01/2022 14:42	Khloe J Berg	2338595
EPA 300.0 Rev. 2.1	07/01/2022			07/12/2022 03:58	Anna M. Plaviak	2338595
EPA 350.1 Rev. 2.0	07/01/2022			07/08/2022 11:08	Ping Hua	2338596
EPA 351.2 Rev. 2.0	07/01/2022	07/06/2022 09:21	Simonne.V. Calhoun	07/07/2022 13:58	Alexandra J Mattheus	2338596
EPA 353.2 Rev. 2.0	07/01/2022			07/12/2022 12:47	Judith K. Clark	2338596
EPA 365.1 Rev. 2.0	07/01/2022	07/07/2022 16:00	Simonne.V. Calhoun	07/11/2022 11:55	Simonne.V. Calhoun	2338596
EPA 8270E	07/01/2022	07/07/2022 08:00	Fe-Val Siddell	07/09/2022 03:24	Arthur Maknenko	2338600
	07/01/2022	07/07/2022 08:00	Fe-Val Siddell	07/09/2022 03:54	Arthur Maknenko	2338601
	07/01/2022	07/07/2022 08:00	Fe-Val Siddell	07/10/2022 02:42	Michael Poppell	2338600
	07/01/2022	07/07/2022 08:00	Fe-Val Siddell	07/10/2022 03:11	Michael Poppell	2338601
EPA 8276	07/01/2022	07/07/2022 08:00	Fe-Val Siddell	07/13/2022 12:18	Julie Wi	2338600
	07/01/2022	07/07/2022 08:00	Fe-Val Siddell	07/13/2022 13:14	Julie Wi	2338601
SM 2320 B-2011	07/01/2022			07/06/2022 23:46	Dale L. Simmons	2338595
SM 2540 C-2011	07/01/2022			07/05/2022 16:02	Yijie Li	2338595
SM 2540 D-2011	07/01/2022			07/05/2022 16:02	Yijie Li	2338595
SM 4500-F- C-2011	07/01/2022			07/06/2022 23:35	Dale L. Simmons	2338595
SM 5310 B-2011	07/01/2022			07/07/2022 18:01	Khloe J Berg	2338596