

Chemical Analysis Report

NE-DIST-2022-09-16-01

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

Event Description: **LSJR West Boat, Butcher, Miramar**
Request ID: **RQ-2022-09-19-23**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 07-OCT-2022 10:34



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: Miramar at San Jose

Collection Date/Time: 09/15/2022 09:25

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357186	DEP SOP: NU-094-1	Color (true)	29		PCU	P419734	
	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P419746	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P420089	
	SM 2320 B-2011	Total Alkalinity	85		mg CaCO3/L	P420275	
	SM 2540 C-2011	TDS	224		mg/L	P420188	
	SM 2540 D-2011	TSS	2	I	mg/L	P420145	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P420215	
2357187	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P419911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P419875	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.91		mg N/L	P420163	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P419838	
	SM 5310 B-2011	Organic Carbon	5.8		mg C/L	P419944	
2357199	EPA 8270E	Aldrin	0.68	U	ng/L	P419792	
		Alpha-BHC	0.12	I	ng/L	P419792	
		Alpha-Chlordane	1.3		ng/L	P419792	
		PCB-1016	2.1	U	ng/L	P419792	
		Beta-BHC	0.49	I	ng/L	P419792	
		PCB-1221	2.1	U	ng/L	P419792	
		Beta-Cyfluthrin	1.3	U	ng/L	P419792	
		PCB-1232	2.1	U	ng/L	P419792	
		Bifenthrin	0.52	U	ng/L	P419792	
		PCB-1242	2.1	U	ng/L	P419792	
		PCB-1248	2.1	U	ng/L	P419792	
		Chlorothalonil	1.3	U	ng/L	P419792	
		PCB-1254	2.1	U	ng/L	P419792	
		Cis-Nonachlor	0.21	U	ng/L	P419792	
		PCB-1260	2.1	U	ng/L	P419792	
		Cypermethrin	1.6	UJ	ng/L	P419792	RPD
		Dacthal	0.16	U	ng/L	P419792	
		DDD-p,p'	0.26	UJ	ng/L	P419792	RPD
		DDE-p,p'	0.21	U	ng/L	P419792	
		DDT-p,p'	0.26	U	ng/L	P419792	
		Delta-BHC	0.85	I	ng/L	P419792	
		Deltamethrin	1.3	U	ng/L	P419792	
		Dichlobenil	0.52	I	ng/L	P419792	
		Dicofol	1.3	UJ	ng/L	P419792	RPD
		Dieldrin	14		ng/L	P419792	
		Endosulfan I	0.42	U	ng/L	P419792	
		Endosulfan II	0.42	U	ng/L	P419792	
		Endosulfan Sulfate	0.31	U	ng/L	P419792	
		Endrin	0.42	U	ng/L	P419792	
		Endrin Aldehyde	0.79	UJ	ng/L	P419792	RPD
		Endrin Ketone	0.56	I	ng/L	P419792	
		Esfenvalerate	0.79	U	ng/L	P419792	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357199	EPA 8270E	Ethalfuralin	0.16	U	ng/L	P419792	
		Fenpropathrin	0.26	U	ng/L	P419792	
		Gamma-BHC	0.13	U	ng/L	P419792	
		Gamma-Chlordane	0.78	I	ng/L	P419792	
		Heptachlor	0.21	U	ng/L	P419792	
		Heptachlor Epoxide	3.7		ng/L	P419792	
		Hexachlorobenzene**	1.0	U	ng/L	P419792	
		Kepone	5.2	UJ	ng/L	P419792	CCV
		Lambda-Cyhalothrin	0.79	UJ	ng/L	P419792	RPD
		Methoprene	0.79	U	ng/L	P419792	
		Methoxychlor	0.49	I	ng/L	P419792	
		MGK-264	0.24	I	ng/L	P419792	
		Mirex	0.37	U	ng/L	P419792	
		Oxychlordane	0.31	U	ng/L	P419792	
		Permethrin	1.7	UJ	ng/L	P419792	RPD
		Phenothrin	0.94	U	ng/L	P419792	
		Piperonyl Butoxide	0.77	I	ng/L	P419792	
		Prallethrin	2.1	U	ng/L	P419792	
		Tau-Fluvalinate	0.26	U	ng/L	P419792	
		Tetramethrin	0.79	U	ng/L	P419792	
		Trans-Nonachlor	0.24	I	ng/L	P419792	
		Triclosan Methyl	0.16	U	ng/L	P419792	
		Trifluralin	0.21	U	ng/L	P419792	
	EPA 8276	Chlordane	8.0	I	ng/L	P419792	
		Toxaphene	16	U	ng/L	P419792	

Ref. Method and Comment:

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

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

Sample Location: WILLS BR at Watergate rd.

Collection Date/Time: 09/15/2022 10:05

Field ID: G2NE1183

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357182	DEP SOP: NU-094-1	Color (true)	95		PCU	P419733	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P419746	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P420089	
		Sulfate	15		mg SO4/L	P420094	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P420275	
	SM 2540 C-2011	TDS	145		mg/L	P420188	
	SM 2540 D-2011	TSS	2	I	mg/L	P420145	
	SM 4500-F- C-2011	Fluoride	0.076	I	mg F/L	P420215	
2357184	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P419911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P419876	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P420163	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P419838	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P419944	

Ref. Method and Comment:

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

Sample Location: BUTCHER PEN CR @ CONFEDERATE PT ROAD

Collection Date/Time: 09/15/2022 10:40

Field ID: 20030082

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357183	DEP SOP: NU-094-1	Color (true)	100		PCU	P419734	
	EPA 180.1 Rev. 2.0	Turbidity	8.0		NTU	P419746	
	EPA 300.0 Rev. 2.1	Chloride	69		mg Cl/L	P420089	
		Sulfate	22		mg SO4/L	P420094	
	SM 2320 B-2011	Total Alkalinity	97		mg CaCO3/L	P420275	
	SM 2540 C-2011	TDS	272	A	mg/L	P420188	
	SM 2540 D-2011	TSS	10	IA	mg/L	P420145	
	SM 4500-F- C-2011	Fluoride	0.14		mg F/L	P420215	
2357185	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P419911	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P419876	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.056		mg N/L	P420163	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P419947	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P419944	

Ref. Method and Comment:

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

Sample Location: Black CR South Fork @ CR218

Collection Date/Time: 09/15/2022 11:55

Field ID: 20030244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2357180	DEP SOP: NU-094-1	Color (true)	430		PCU	P419733	
	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P419746	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P420089	
		Sulfate	1.9		mg SO4/L	P420094	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P420275	
	SM 2540 C-2011	TDS	70		mg/L	P420188	
	SM 2540 D-2011	TSS	4	I	mg/L	P420145	
	SM 4500-F- C-2011	Fluoride	0.058	I	mg F/L	P420215	
	2357181	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P419911
EPA 351.2 Rev. 2.0		Kjeldahl Nitrogen	0.95		mg N/L	P419937	
EPA 353.2 Rev. 2.0		NO2NO3-N	0.011		mg N/L	P420163	
EPA 365.1 Rev. 2.0		Total-P	0.11		mg P/L	P419838	
SM 5310 B-2011		Organic Carbon	37		mg C/L	P419944	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P419733

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P419734

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419746

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420089

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420094

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419911

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419875

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419876

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419937

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: P420163

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419838

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419947

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

Reference Method: EPA 8270E
Batch ID: P419792

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	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P419792

Component	Result	Code	Units
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P419792

Component	Result	Code	Units
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P419792

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: P420275

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

Reference Method: SM 2540 C-2011

Batch ID: P420188

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P420145

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P420215

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P419944

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: P419733

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P419734

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: P419746

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420089

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420094

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419911

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419875

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419876

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419937

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P420163

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	94.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419838

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P419947

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

Reference Method: EPA 8270E

Batch ID: P419792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.7		P	10 - 92.0
Alpha-BHC	83.2		P	75 - 107
Alpha-Chlordane	67.3		P	50 - 108
Beta-BHC	112		P	36 - 138
Beta-Cyfluthrin	59.0		P	20 - 161
Bifenthrin	36.6		P	10 - 119
Chlorothalonil	65.0		P	26 - 186
Cis-Nonachlor	65.2		P	42 - 119
Cypermethrin	62.6		P	22 - 150
Dacthal	85.6		P	72 - 119
DDD-p,p'	82.9		P	45 - 107
DDE-p,p'	68.3		P	48 - 106
DDT-p,p'	65.5		P	48 - 110
Delta-BHC	115		P	54 - 140
Deltamethrin	57.1		P	22 - 189
Dichlobenil	89.0		P	36 - 117
Dicofol	81.0		P	46 - 155
Dieldrin	75.8		P	54 - 110
Endosulfan I	75.1		P	59 - 105
Endosulfan II	81.0		P	51 - 118
Endosulfan Sulfate	92.8		P	57 - 121
Endrin	70.2		P	10 - 120
Endrin Aldehyde	83.4		P	34 - 118
Endrin Ketone	94.3		P	69 - 177
Esfenvalerate	54.3		P	23 - 168
Ethalfuralin	70.7		P	49 - 99.0
Fenpropathrin	62.2		P	34 - 117
Gamma-BHC	85.7		P	72 - 117
Gamma-Chlordane	68.4		P	43 - 106
Heptachlor	59.8		P	41 - 98.0
Heptachlor Epoxide	73.2		P	57 - 106
Hexachlorobenzene	63.8		P	36 - 99.0
Kepone	187		P	16 - 215
Lambda-Cyhalothrin	46.3		P	21 - 177

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P419792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methoprene	41.1		P	10 - 119
Methoxychlor	76.6		P	60 - 112
MGK-264	83.0		P	26 - 122
Mirex	45.1		P	10 - 169
Oxychlordane	68.3		P	43 - 105
PCB-1016	85.5		P	48 - 112
PCB-1260	80.2		P	44 - 118
Permethrin	58.3		P	24 - 148
Phenothrin	39.5		P	10 - 106
Piperonyl Butoxide	89.9		P	10 - 139
Prallethrin	76.5		P	17 - 109
Tau-Fluvalinate	41.6		P	13 - 131
Tetramethrin	95.1		P	10 - 132
Trans-Nonachlor	67.9		P	44 - 106
Triclosan Methyl	75.8		P	59 - 109
Trifluralin	66.4		P	44 - 101

Reference Method: EPA 8276

Batch ID: P419792

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.3		P	61 - 116
Toxaphene	81.0		P	48 - 124

Reference Method: SM 2320 B-2011

Batch ID: P420275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.5		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P420215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P419944

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420089

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357095	Chloride	101		P	90 - 110
2357194	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420094

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357095	Sulfate	98.8		P	90 - 110
2357194	Sulfate	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419911

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357181	Ammonia-N	98.2	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356812	Kjeldahl Nitrogen	99.6	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357150	Kjeldahl Nitrogen	100	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357285	Kjeldahl Nitrogen	97.5	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357164	NO2NO3-N	94.0	92.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357083	Total-P	108	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419947

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357504	Total-P	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P419792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357199	Aldrin	65.9	55.4	P/P	20 - 82.0
2357199	Alpha-BHC	84.1	77.1	P/P	71 - 109
2357199	Alpha-Chlordane	67.7	62.0	P/P	42 - 106
2357199	Beta-BHC	82.6	91.1	P/P	69 - 180
2357199	Beta-Cyfluthrin	80.7	72.2	P/P	18 - 175
2357199	Bifenthrin	99.8	108	P/P	21 - 128
2357199	Chlorothalonil	109	87.8	P/P	10 - 300
2357199	Cis-Nonachlor	71.5	73.1	P/P	34 - 106
2357199	Cypermethrin	63.0	108	P/P	22 - 158
2357199	Dacthal	83.7	77.0	P/P	54 - 116
2357199	DDD-p,p'	56.5	107	P/P	34 - 107
2357199	DDE-p,p'	76.0	66.5	P/P	33 - 110
2357199	DDT-p,p'	70.6	67.4	P/P	50 - 122
2357199	Delta-BHC	108	96.4	P/P	77 - 193
2357199	Deltamethrin	105	101	P/P	10 - 195
2357199	Dichlobenil	62.4	62.3	P/P	25 - 113
2357199	Dicofol	62.6	104	P/P	38 - 247
2357199	Dieldrin	51.2	52.0	P/P	45 - 118
2357199	Endosulfan I	80.5	80.1	P/P	51 - 106
2357199	Endosulfan II	76.5	80.7	P/P	37 - 122
2357199	Endosulfan Sulfate	73.3	68.3	P/P	43 - 132
2357199	Endrin	82.7	67.3	P/P	29 - 101
2357199	Endrin Aldehyde	26.8	64.5	P/P	19 - 110
2357199	Endrin Ketone	82.7	91.3	P/P	60 - 140
2357199	Esfenvalerate	96.5	82.5	P/P	26 - 199
2357199	Ethalfuralin	66.7	67.8	P/P	45 - 99.0
2357199	Fenpropathrin	74.0	63.3	P/P	35 - 120
2357199	Gamma-BHC	90.8	91.3	P/P	63 - 128
2357199	Gamma-Chlordane	71.4	62.4	P/P	40 - 104
2357199	Heptachlor	66.2	63.7	P/P	36 - 97.0
2357199	Heptachlor Epoxide	51.4	55.8	P/P	49 - 184
2357199	Hexachlorobenzene	75.1	72.8	P/P	39 - 96.0
2357199	Kepone	155	137	P/P	10 - 217
2357199	Lambda-Cyhalothrin	64.5	121	P/P	21 - 193
2357199	Methoprene	72.6	73.7	P/P	20 - 106
2357199	Methoxychlor	85.4	78.8	P/P	53 - 118
2357199	MGK-264	77.8	72.8	P/P	40 - 118
2357199	Mirex	66.9	64.4	P/P	26 - 92.0
2357199	Oxychlordane	71.9	73.9	P/P	44 - 99.0
2357199	Permethrin	57.7	102	P/P	33 - 182
2357199	Phenothrin	60.8	85.9	P/P	10 - 129
2357199	Piperonyl Butoxide	90.5	68.8	P/P	10 - 211
2357199	Prallethrin	73.4	75.3	P/P	24 - 113
2357199	Tau-Fluvalinate	83.0	81.8	P/P	14 - 149
2357199	Tetramethrin	150	140	P/P	17 - 151
2357199	Trans-Nonachlor	75.0	66.1	P/P	42 - 102
2357199	Triclosan Methyl	83.2	66.9	P/P	48 - 108
2357199	Trifluralin	66.9	65.0	P/P	47 - 96.0
2357336	PCB-1016	105	107	P/P	46 - 111
2357336	PCB-1260	84.8	84.6	P/P	45 - 114

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P419792

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357336	Chlordane	87.2	88.2	P/P	53 - 126
2357336	Toxaphene	89.5	86.3	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P420215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357236	Fluoride	100	99.8	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P419944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2357184	Organic Carbon	99.4	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357163	Color (true)	0.379	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P419734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357232	Color (true)	2.20	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357047	Turbidity	3.42	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357095	Chloride	0.287	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P420094

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357095	Sulfate	0.287	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357181	Ammonia-N	0.345	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356812	Kjeldahl Nitrogen	0.676	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357150	Kjeldahl Nitrogen	1.79	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357285	Kjeldahl Nitrogen	3.15	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420163

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357164	NO2NO3-N	1.61	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357083	Total-P	2.93	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419947

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357504	Total-P	0.732	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P419792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357199	Aldrin	17.3	Spike	P	0 - 41
2357199	Alpha-BHC	8.33	Spike	P	0 - 25
2357199	Alpha-Chlordane	5.56	Spike	P	0 - 33
2357199	Beta-BHC	8.33	Spike	P	0 - 36
2357199	Beta-Cyfluthrin	11.1	Spike	P	0 - 42
2357199	Bifenthrin	7.59	Spike	P	0 - 53
2357199	Chlorothalonil	21.9	Spike	P	0 - 71
2357199	Cis-Nonachlor	2.26	Spike	P	0 - 29
2357199	Cypermethrin	52.3	Spike	F	0 - 40
2357199	Dacthal	8.31	Spike	P	0 - 26
2357199	DDD-p,p'	61.7	Spike	F	0 - 39
2357199	DDE-p,p'	13.3	Spike	P	0 - 33
2357199	DDT-p,p'	4.62	Spike	P	0 - 40
2357199	Delta-BHC	10.7	Spike	P	0 - 37
2357199	Deltamethrin	4.48	Spike	P	0 - 100
2357199	Dichlobenil	0.228	Spike	P	0 - 40
2357199	Dicofol	49.7	Spike	F	0 - 31
2357199	Dieldrin	0.482	Spike	P	0 - 27
2357199	Endosulfan I	0.451	Spike	P	0 - 23
2357199	Endosulfan II	5.31	Spike	P	0 - 28
2357199	Endosulfan Sulfate	7.13	Spike	P	0 - 38
2357199	Endrin	20.5	Spike	P	0 - 63
2357199	Endrin Aldehyde	82.6	Spike	F	0 - 60

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P419792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357199	Endrin Ketone	9.42	Spike	P	0 - 37
2357199	Esfenvalerate	15.6	Spike	P	0 - 52
2357199	Ethalfuralin	1.66	Spike	P	0 - 23
2357199	Fenpropathrin	15.5	Spike	P	0 - 32
2357199	Gamma-BHC	0.510	Spike	P	0 - 17
2357199	Gamma-Chlordane	9.98	Spike	P	0 - 40
2357199	Heptachlor	3.86	Spike	P	0 - 29
2357199	Heptachlor Epoxide	2.67	Spike	P	0 - 25
2357199	Hexachlorobenzene	3.14	Spike	P	0 - 36
2357199	Kepone	11.9	Spike	P	0 - 93
2357199	Lambda-Cyhalothrin	61.1	Spike	F	0 - 55
2357199	Methoprene	1.51	Spike	P	0 - 53
2357199	Methoxychlor	6.90	Spike	P	0 - 29
2357199	MGK-264	6.04	Spike	P	0 - 35
2357199	Mirex	3.87	Spike	P	0 - 46
2357199	Oxychlordane	2.80	Spike	P	0 - 29
2357199	Permethrin	55.8	Spike	F	0 - 44
2357199	Phenothrin	34.3	Spike	P	0 - 56
2357199	Piperonyl Butoxide	21.1	Spike	P	0 - 100
2357199	Prallethrin	2.62	Spike	P	0 - 42
2357199	Tau-Fluvalinate	1.43	Spike	P	0 - 54
2357199	Tetramethrin	7.19	Spike	P	0 - 51
2357199	Trans-Nonachlor	11.4	Spike	P	0 - 37
2357199	Triclosan Methyl	21.8	Spike	P	0 - 31
2357199	Trifluralin	2.89	Spike	P	0 - 30
2357336	PCB-1016	1.67	Spike	P	0 - 32
2357336	PCB-1260	0.243	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P419792

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357336	Chlordane	1.11	Spike	P	0 - 25
2357336	Toxaphene	3.64	Spike	P	0 - 26

Reference Method: SM 2320 B-2011
Batch ID: P420275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357236	Total Alkalinity	1.79	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P420188

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357183	TDS	5.50	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P420215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357236	Fluoride	0.479	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2357184	Organic Carbon	0.656	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2357199

Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	107	P	29 - 130
EPA 8270E	Decachlorobiphenyl	83.6	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	66.3	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	73.1	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	95.0	P	30 - 101
EPA 8276	PCNB	94.9	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A114787

Included Lab Sample IDs: 2357180, 2357182, 2357183, 2357186

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114790

Included Lab Sample IDs: 2357180, 2357182, 2357183, 2357186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114854

Included Lab Sample IDs: 2357181, 2357184, 2357185, 2357187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	98.0	P/P	90 - 110
Ammonia-N	98.2	97.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114857

Included Lab Sample IDs: 2357180, 2357182, 2357183, 2357186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114861

Included Lab Sample IDs: 2357181, 2357184, 2357187

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

Reference Method: SM 5310 B-2011

Run ID: A114868

Included Lab Sample IDs: 2357181, 2357184, 2357185, 2357187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	95.6	P/P	90 - 110
Organic Carbon	95.6	95.9	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A114877

Included Lab Sample IDs: 2357199

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114892

Included Lab Sample IDs: 2357184, 2357185, 2357187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.8	97.9	P/P	90 - 110
Kjeldahl Nitrogen	97.9	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114913

Included Lab Sample IDs: 2357185

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.6	98.2	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A114931

Included Lab Sample IDs: 2357199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.1		P	80 - 120
Toxaphene	96.3		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A114960

Included Lab Sample IDs: 2357181, 2357184, 2357185, 2357187

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	92.0	92.5	P/P	90 - 110
NO2NO3-N	95.5	93.5	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A114980

Included Lab Sample IDs: 2357180, 2357182, 2357183, 2357186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	97.1	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A114982

Included Lab Sample IDs: 2357199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.7		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	97.8		P	80 - 120
Bifenthrin	96.4		P	80 - 120
Chlorothalonil	96.6		P	80 - 120
Cypermethrin	108		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	105		P	80 - 120
DDE-p,p'	98.2		P	80 - 120
DDT-p,p'	98.9		P	80 - 120
Delta-BHC	97.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A114982
Included Lab Sample IDs: 2357199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Deltamethrin	94.7		P	80 - 120
Dichlobenil	95.4		P	80 - 120
Dicofol	101		P	80 - 120
Endosulfan Sulfate	98.8		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	100		P	80 - 120
Endrin Ketone	104		P	80 - 120
Esfenvalerate	99.4		P	80 - 120
Ethalfuralin	99.0		P	80 - 120
Fenpropathrin	98.7		P	80 - 120
Gamma-BHC	98.2		P	80 - 120
Gamma-Chlordane	99.5		P	80 - 120
Hexachlorobenzene	99.9		P	80 - 120
Kepone	61.0*		F	80 - 120
Lambda-Cyhalothrin	101		P	80 - 120
Methoprene	97.3		P	80 - 120
MGK-264	91.9		P	80 - 120
Permethrin	99.4		P	80 - 120
Phenothrin	103		P	80 - 120
Piperonyl Butoxide	91.3		P	80 - 120
Prallethrin	94.5		P	80 - 120
Tau-Fluvalinate	101		P	80 - 120
Tetramethrin	93.1		P	80 - 120
Trans-Nonachlor	98.8		P	80 - 120
Triclosan Methyl	98.2		P	80 - 120
Trifluralin	103		P	80 - 120

Reference Method: EPA 8270E
Run ID: A114985
Included Lab Sample IDs: 2357199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cis-Nonachlor	82.5		P	80 - 120
Dieldrin	89.3		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	87.7		P	80 - 120
Heptachlor	80.4		P	80 - 120
Heptachlor Epoxide	95.4		P	80 - 120
Methoxychlor	111		P	80 - 120
Mirex	86.3		P	80 - 120
Oxychlordane	91.7		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A115007
Included Lab Sample IDs: 2357180, 2357182, 2357183, 2357186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	98.5	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115027

Included Lab Sample IDs: 2357181

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	103	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)	100				0.379	
	Color (true)	102				2.20	
EPA 180.1 Rev. 2.0	Turbidity	100				3.42	
EPA 300.0 Rev. 2.1	Chloride	103	101	101		0.287	
	Sulfate	103	98.8	99.0		0.287	
EPA 350.1 Rev. 2.0	Ammonia-N	95.8	98.2	97.8			0.345
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	99.6	100			0.676
	Kjeldahl Nitrogen	98.0	100	103			1.79
	Kjeldahl Nitrogen	106	97.5	101			3.15
EPA 353.2 Rev. 2.0	NO2NO3-N	94.5	94.0	92.5			1.61
EPA 365.1 Rev. 2.0	Total-P	106	108	104			2.93
	Total-P	100	101	102			0.732
EPA 8270E	Aldrin	46.7	65.9	55.4			17.3
	Alpha-BHC	83.2	84.1	77.1			8.33
	Alpha-Chlordane	67.3	67.7	62.0			5.56
	Beta-BHC	112	82.6	91.1			8.33
	Beta-Cyfluthrin	59.0	80.7	72.2			11.1
	Bifenthrin	36.6	99.8	108			7.59
	Chlorothalonil	65.0	109	87.8			21.9
	Cis-Nonachlor	65.2	71.5	73.1			2.26
	Cypermethrin	62.6	63.0	108			52.3
	Dacthal	85.6	83.7	77.0			8.31
	DDD-p,p'	82.9	56.5	107			61.7
	DDE-p,p'	68.3	76.0	66.5			13.3
	DDT-p,p'	65.5	70.6	67.4			4.62
	Delta-BHC	115	108	96.4			10.7
	Deltamethrin	57.1	105	101			4.48
	Dichlobenil	89.0	62.3	62.4			0.228
	Dicofol	81.0	104	62.6			49.7
	Dieldrin	75.8	51.2	52.0			0.482
	Endosulfan I	75.1	80.5	80.1			0.451
	Endosulfan II	81.0	76.5	80.7			5.31
	Endosulfan Sulfate	92.8	68.3	73.3			7.13
	Endrin	70.2	67.3	82.7			20.5
	Endrin Aldehyde	83.4	64.5	26.8			82.6
	Endrin Ketone	94.3	91.3	82.7			9.42
	Esfenvalerate	54.3	82.5	96.5			15.6
	Ethalfuralin	70.7	67.8	66.7			1.66
	Fenpropathrin	62.2	63.3	74.0			15.5
	Gamma-BHC	85.7	91.3	90.8			0.510
	Gamma-Chlordane	68.4	62.4	71.4			9.98
	Heptachlor	59.8	66.2	63.7			3.86
	Heptachlor Epoxide	73.2	51.4	55.8			2.67
	Hexachlorobenzene	63.8	72.8	75.1			3.14
	Kepone	187	137	155			11.9
	Lambda-Cyhalothrin	46.3	121	64.5			61.1
	Methoprene	41.1	73.7	72.6			1.51
	Methoxychlor	76.6	85.4	78.8			6.90
	MGK-264	83.0	72.8	77.8			6.04
	Mirex	45.1	66.9	64.4			3.87
	Oxychlordane	68.3	71.9	73.9			2.80
	PCB-1016	85.5	105	107			1.67
	PCB-1260	80.2	84.8	84.6			0.243
	Permethrin	58.3	102	57.7			55.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Phenothrin	39.5	85.9	60.8		34.3
	Piperonyl Butoxide	89.9	68.8	90.5		21.1
	Prallethrin	76.5	75.3	73.4		2.62
	Tau-Fluvalinate	41.6	81.8	83.0		1.43
	Tetramethrin	95.1	140	150		7.19
	Trans-Nonachlor	67.9	66.1	75.0		11.4
	Triclosan Methyl	75.8	66.9	83.2		21.8
	Trifluralin	66.4	65.0	66.9		2.89
EPA 8276	Chlordane	78.3	87.2	88.2		1.11
	Toxaphene	81.0	89.5	86.3		3.64
SM 2320 B-2011	Total Alkalinity	98.5			1.79	
SM 2540 C-2011	TDS				5.50	
SM 4500-F- C-2011	Fluoride	99.9	100	99.8		0.479
SM 5310 B-2011	Organic Carbon	95.0	99.4	100		0.656

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2357180, 2357182, 2357183, 2357186
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2357180, 2357182, 2357183, 2357186
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2357180, 2357182, 2357183, 2357186
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2357180, 2357182, 2357183
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2357181, 2357184, 2357185, 2357187
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2357181, 2357184, 2357185, 2357187
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2357181, 2357184, 2357185, 2357187
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2357181, 2357184, 2357185, 2357187
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2357199
EPA 8270E	PCBs in water matrices by GC/MS/MS	2357199
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2357199
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2357180, 2357182, 2357183, 2357186
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2357180, 2357182, 2357183, 2357186
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2357180, 2357182, 2357183, 2357186
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2357180, 2357182, 2357183, 2357186
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2357181, 2357184, 2357185, 2357187

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	09/16/2022			09/16/2022 14:28	Samantha L Bates	2357182
	09/16/2022			09/16/2022 14:30	Samantha L Bates	2357183
	09/16/2022			09/16/2022 14:31	Samantha L Bates	2357186
	09/16/2022			09/16/2022 14:40	Samantha L Bates	2357180
EPA 180.1 Rev. 2.0	09/16/2022			09/16/2022 14:35	Chandler E Cox	2357180
	09/16/2022			09/16/2022 14:36	Chandler E Cox	2357182
	09/16/2022			09/16/2022 14:37	Chandler E Cox	2357183
	09/16/2022			09/16/2022 14:38	Chandler E Cox	2357186
EPA 300.0 Rev. 2.1	09/16/2022			09/23/2022 05:20	Anna M. Plaviak	2357180
	09/16/2022			09/23/2022 05:36	Anna M. Plaviak	2357182
	09/16/2022			09/23/2022 06:21	Anna M. Plaviak	2357183
	09/16/2022			09/23/2022 06:36	Anna M. Plaviak	2357186
EPA 350.1 Rev. 2.0	09/16/2022			09/21/2022 11:52	Ping Hua	2357184
	09/16/2022			09/21/2022 11:54	Ping Hua	2357185
	09/16/2022			09/21/2022 11:55	Ping Hua	2357187
	09/16/2022			09/21/2022 13:07	Ping Hua	2357181
EPA 351.2 Rev. 2.0	09/16/2022	09/21/2022 13:07	Samantha L Bates	09/22/2022 13:04	Samantha L Bates	2357187
	09/16/2022	09/21/2022 13:07	Samantha L Bates	09/22/2022 13:25	Samantha L Bates	2357184
	09/16/2022	09/21/2022 13:07	Samantha L Bates	09/22/2022 13:27	Samantha L Bates	2357185
	09/16/2022	09/22/2022 09:22	Alexandra J Mattheus	09/29/2022 11:19	Samantha L Bates	2357181
EPA 353.2 Rev. 2.0	09/16/2022			09/27/2022 11:45	Beverly Y. Sanders	2357181
	09/16/2022			09/27/2022 11:46	Beverly Y. Sanders	2357184
	09/16/2022			09/27/2022 11:47	Beverly Y. Sanders	2357185
	09/16/2022			09/27/2022 12:20	Beverly Y. Sanders	2357187
EPA 365.1 Rev. 2.0	09/16/2022	09/21/2022 08:40	Adam P Silver	09/21/2022 14:55	Simonne.V. Calhoun	2357181
	09/16/2022	09/21/2022 08:40	Adam P Silver	09/21/2022 14:57	Simonne.V. Calhoun	2357184
	09/16/2022	09/21/2022 08:40	Adam P Silver	09/21/2022 14:58	Simonne.V. Calhoun	2357187
	09/16/2022	09/22/2022 14:19	Adam P Silver	09/22/2022 18:41	Simonne.V. Calhoun	2357185
EPA 8270E	09/16/2022	09/20/2022 08:30	Rasheda Ghaffari	09/22/2022 05:42	Julie Wi	2357199
	09/16/2022	09/20/2022 08:30	Rasheda Ghaffari	09/23/2022 17:07	Vandana T. Nagar	2357199
	09/16/2022	09/20/2022 08:30	Rasheda Ghaffari	09/27/2022 17:15	Vandana T. Nagar	2357199
EPA 8276	09/16/2022	09/20/2022 08:30	Rasheda Ghaffari	09/24/2022 03:35	Arthur Maknenko	2357199
SM 2320 B-2011	09/16/2022			09/28/2022 20:00	Adam P Silver	2357180
	09/16/2022			09/28/2022 20:09	Adam P Silver	2357182
	09/16/2022			09/28/2022 20:18	Adam P Silver	2357183
	09/16/2022			09/28/2022 20:27	Adam P Silver	2357186
SM 2540 C-2011	09/16/2022			09/20/2022 15:08	Yijie Li	2357180, 2357182, 2357183, 2357186
SM 2540 D-2011	09/16/2022			09/20/2022 15:08	Yijie Li	2357180, 2357182, 2357183, 2357186
SM 4500-F- C-2011	09/16/2022			09/28/2022 01:25	Adam P Silver	2357180
	09/16/2022			09/28/2022 01:36	Adam P Silver	2357182

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500-F- C-2011	09/16/2022			09/28/2022 01:48	Adam P Silver	2357183
	09/16/2022			09/28/2022 01:59	Adam P Silver	2357186
SM 5310 B-2011	09/16/2022			09/21/2022 15:40	Khloe J Berg	2357184
	09/16/2022			09/21/2022 18:16	Khloe J Berg	2357181
	09/16/2022			09/21/2022 18:31	Khloe J Berg	2357185
	09/16/2022			09/21/2022 18:44	Khloe J Berg	2357187