

Chemical Analysis Report

NE-DIST-2022-02-25-01

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

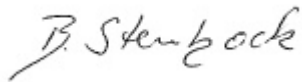
Event Description: **Suwannee Spring 2022**
Request ID: **RQ-2022-02-21-26**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 22-MAR-2022 16:30



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: TRAIL SPRINGS (springs vent)

Collection Date/Time: 02/24/2022 10:15

Field ID: 22051007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2308283	DEP SOP: NU-094-1	Color (true)**	6.2	A	PCU	P410437	
	EPA 180.1 Rev. 2.0	Turbidity	0.15	I	NTU	P410381	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P410851	
		Sulfate	30		mg SO4/L	P410855	
	SM 2320 B-2011	Total Alkalinity	167		mg CaCO3/L	P410660	
	SM 2540 C-2011	TDS	266		mg/L	P410754	
	SM 2540 D-2011	TSS	2	U	mg/L	P410897	
	SM 4500 F-C-2011	Fluoride	0.080	I	mg F/L	P410663	
2308285	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	IY	mg N/L	P410632	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	Y	mg N/L	P410430	
	EPA 353.2 Rev. 2.0	NO2NO3-N	5.8	Y	mg N/L	P410730	
	EPA 365.1 Rev. 2.0	Total-P	0.058	Y	mg P/L	P410537	
	SM 5310 B-2011	Organic Carbon	1.5	Y	mg C/L	P410673	

Ref. Method and Comment:

DEP SOP: NU-094-1: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 353.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 365.1 Rev. 2.0: Total-P: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 5310 B-2011: Sample was left out at room temperature overnight, should be stored below 6 degC.

Sample Location: COW CR @ SR 340

Collection Date/Time: 02/24/2022 10:50

Field ID: 21030143

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2308293	EPA 8270E	Aldrin	0.67	UY	ng/L	P410328	
		Alpha-BHC	0.10	UY	ng/L	P410328	
		Alpha-Chlordane	0.21	UY	ng/L	P410328	
		PCB-1016	2.1	UY	ng/L	P410328	
		Beta-BHC	0.10	UY	ng/L	P410328	
		PCB-1221	2.1	UY	ng/L	P410328	
		Beta-Cyfluthrin**	1.3	UY	ng/L	P410328	
		PCB-1232	2.1	UY	ng/L	P410328	
		Bifenthrin**	0.51	UY	ng/L	P410328	
		PCB-1242	2.1	UY	ng/L	P410328	
		Carbophenothion	0.92	UY	ng/L	P410328	
		PCB-1248	2.1	UY	ng/L	P410328	
		Chlorothalonil	1.3	UY	ng/L	P410328	
		PCB-1254	2.1	UY	ng/L	P410328	
		Cis-Nonachlor**	0.21	UY	ng/L	P410328	
		PCB-1260	2.1	UY	ng/L	P410328	
		Cypermethrin	1.5	UY	ng/L	P410328	
		Dacthal**	0.15	UY	ng/L	P410328	
		DDD-p,p'	0.26	UY	ng/L	P410328	
		DDE-p,p'	0.21	UY	ng/L	P410328	
		DDT-p,p'	0.26	UY	ng/L	P410328	
		Delta-BHC	0.41	UY	ng/L	P410328	
		Deltamethrin**	1.3	UY	ng/L	P410328	
		Dichlobenil**	0.26	UY	ng/L	P410328	
		Dicofol	1.3	UY	ng/L	P410328	
		Dieldrin	0.41	UY	ng/L	P410328	
		Endosulfan I	0.41	UY	ng/L	P410328	
		Endosulfan II	0.41	UY	ng/L	P410328	
		Endosulfan Sulfate	0.31	UY	ng/L	P410328	
		Endrin	0.41	UYQ	ng/L	P411150	
		Endrin Aldehyde	0.77	UY	ng/L	P410328	
		Endrin Ketone	0.41	UYJ	ng/L	P410328	LCS, MS
		Esfenvalerate**	0.77	UY	ng/L	P410328	
		Ethalfuralin**	0.15	UY	ng/L	P410328	
		Fenpropathrin**	0.26	UY	ng/L	P410328	
		Gamma-BHC	0.13	UY	ng/L	P410328	
		Gamma-Chlordane	0.21	UY	ng/L	P410328	
		Heptachlor	0.21	UY	ng/L	P410328	
		Heptachlor Epoxide	0.26	UY	ng/L	P410328	
		Hexachlorobenzene	1.0	UY	ng/L	P410328	
		Kepone**	5.1	UYJ	ng/L	P410328	CCV
		Lambda-Cyhalothrin**	0.77	UY	ng/L	P410328	
		Methoprene**	0.77	UYQ	ng/L	P411150	
		Methoxychlor	0.31	UY	ng/L	P410328	

Field ID: 21030143

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2308293	EPA 8270E	MGK-264**	0.21	UY	ng/L	P410328	
		Mirex	0.72	UY	ng/L	P410328	
		Oxychlordane**	0.31	UY	ng/L	P410328	
		Permethrin	1.6	UY	ng/L	P410328	
		Phenothrin**	0.92	UY	ng/L	P410328	
		Piperonyl Butoxide**	0.15	UYQ	ng/L	P411150	
		Prallethrin**	2.1	UY	ng/L	P410328	
		Tau-Fluvalinate**	0.26	UY	ng/L	P410328	
		Tetramethrin**	0.77	UY	ng/L	P410328	
		Trans-Nonachlor**	0.21	UY	ng/L	P410328	
		Triclosan Methyl**	0.15	UY	ng/L	P410328	
		Trifluralin	0.21	UY	ng/L	P410328	
	EPA 8276	Chlordane	2.6	UY	ng/L	P410328	RPD
		Toxaphene	15	UY	ng/L	P410328	RPD

Ref. Method and Comment:

EPA 8270E: Sample expired for preparation for some analytes due to need for re-extraction. Refer to the Lab Analysis Report for an explanation of

QC Codes. Y - Due to improper preservation; see NCR report.

EPA 8270E: Y - Due to improper preservation; see NCR report.

EPA 8276: Y - Due to improper preservation; see NCR report.

Sample Location: COW CREEK AT SR 138

Collection Date/Time: 02/24/2022 11:10

Field ID: 21030086

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2308294	EPA 8270E	Aldrin	0.67	UY	ng/L	P410328	
		Alpha-BHC	0.10	UY	ng/L	P410328	
		Alpha-Chlordane	0.21	UY	ng/L	P410328	
		PCB-1016	2.1	UY	ng/L	P410328	
		Beta-BHC	0.10	UY	ng/L	P410328	
		PCB-1221	2.1	UY	ng/L	P410328	
		Beta-Cyfluthrin**	1.3	UY	ng/L	P410328	
		PCB-1232	2.1	UY	ng/L	P410328	
		Bifenthrin**	0.52	UY	ng/L	P410328	
		PCB-1242	2.1	UY	ng/L	P410328	
		Carbophenothion	0.93	UY	ng/L	P410328	
		PCB-1248	2.1	UY	ng/L	P410328	
		Chlorothalonil	1.3	UY	ng/L	P410328	
		PCB-1254	2.1	UY	ng/L	P410328	
		Cis-Nonachlor**	0.21	UY	ng/L	P410328	
		PCB-1260	2.1	UY	ng/L	P410328	
		Cypermethrin	1.5	UY	ng/L	P410328	
		Dacthal**	0.15	UY	ng/L	P410328	
		DDD-p,p'	0.26	UY	ng/L	P410328	
		DDE-p,p'	0.21	UY	ng/L	P410328	
		DDT-p,p'	0.26	UY	ng/L	P410328	
		Delta-BHC	0.41	UY	ng/L	P410328	
		Deltamethrin**	1.3	UYJ	ng/L	P410328	CCV
		Dichlobenil**	0.26	UY	ng/L	P410328	
		Dicofol	1.3	UY	ng/L	P410328	
		Dieldrin	0.41	UY	ng/L	P410328	
		Endosulfan I	0.41	UY	ng/L	P410328	
		Endosulfan II	0.41	UY	ng/L	P410328	
		Endosulfan Sulfate	0.31	UY	ng/L	P410328	
		Endrin	0.41	UYQ	ng/L	P411150	
		Endrin Aldehyde	0.77	UY	ng/L	P410328	
		Endrin Ketone	0.41	UYJ	ng/L	P410328	LCS, MS
		Esfenvalerate**	0.77	UY	ng/L	P410328	
		Ethalfuralin**	0.15	UY	ng/L	P410328	
		Fenpropathrin**	0.26	UY	ng/L	P410328	
		Gamma-BHC	0.13	UY	ng/L	P410328	
		Gamma-Chlordane	0.21	UY	ng/L	P410328	
		Heptachlor	0.21	UY	ng/L	P410328	
		Heptachlor Epoxide	0.26	UY	ng/L	P410328	
		Hexachlorobenzene	1.0	UY	ng/L	P410328	
		Kepone**	5.2	UY	ng/L	P410328	
		Lambda-Cyhalothrin**	0.77	UY	ng/L	P410328	
		Methoprene**	0.79	UYQ	ng/L	P411150	
		Methoxychlor	0.31	UY	ng/L	P410328	

Field ID: 21030086

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2308294	EPA 8270E	MGK-264**	0.21	UY	ng/L	P410328	
		Mirex	0.72	UY	ng/L	P410328	
		Oxychlordane**	0.31	UY	ng/L	P410328	
		Permethrin	1.6	UY	ng/L	P410328	
		Phenothrin**	0.93	UY	ng/L	P410328	
		Piperonyl Butoxide**	0.16	UYQ	ng/L	P411150	
		Prallethrin**	2.1	UY	ng/L	P410328	
		Tau-Fluvalinate**	0.26	UY	ng/L	P410328	
		Tetramethrin**	0.77	UY	ng/L	P410328	
		Trans-Nonachlor**	0.21	UY	ng/L	P410328	
		Triclosan Methyl**	0.15	UY	ng/L	P410328	
		Trifluralin	0.21	UY	ng/L	P410328	
	EPA 8276	Chlordane	2.6	UY	ng/L	P410328	RPD
		Toxaphene	15	UY	ng/L	P410328	RPD

Ref. Method and Comment:

EPA 8270E: Sample expired for preparation for some analytes due to need for re-extraction. Refer to the Lab Analysis Report for an explanation of

QC Codes. Y - Due to improper preservation; see NCR report.

EPA 8270E: Y - Due to improper preservation; see NCR report.

EPA 8276: Y - Due to improper preservation; see NCR report.

Sample Location: TWIN SPRING at vent

Collection Date/Time: 02/24/2022 11:50

Field ID: G1NE0943

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2308284	DEP SOP: NU-094-1	Color (true)**	2.5	U	PCU	P410437	
	EPA 180.1 Rev. 2.0	Turbidity	0.30	I	NTU	P410381	
	EPA 300.0 Rev. 2.1	Chloride	6.2	A	mg Cl/L	P410851	
		Sulfate	13	A	mg SO4/L	P410855	
	SM 2320 B-2011	Total Alkalinity	137		mg CaCO3/L	P410660	
	SM 2540 C-2011	TDS	181	A	mg/L	P410754	
	SM 2540 D-2011	TSS	2	IA	mg/L	P410897	
	SM 4500 F-C-2011	Fluoride	0.071	I	mg F/L	P410663	
2308286	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	IY	mg N/L	P410632	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23	Y	mg N/L	P410476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.8	Y	mg N/L	P410730	
	EPA 365.1 Rev. 2.0	Total-P	0.038	Y	mg P/L	P410933	
	SM 5310 B-2011	Organic Carbon	0.51	IY	mg C/L	P410673	

Ref. Method and Comment:

DEP SOP: NU-094-1: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 350.1 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 351.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 353.2 Rev. 2.0: Sample was left out at room temperature overnight, should be stored below 6 degC.

EPA 365.1 Rev. 2.0: Total-P: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 5310 B-2011: Sample was left out at room temperature overnight, should be stored below 6 degC.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P410437

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410381

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410851

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410855

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410632

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410430

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410476

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410730

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410537

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P410933

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

Reference Method: EPA 8270E

Batch ID: P410328

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	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 Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410328

Component	Result	Code	Units
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
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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410328

Component	Result	Code	Units
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 8270E

Batch ID: P411150

Component	Result	Code	Units
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L

Reference Method: EPA 8276

Batch ID: P410328

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: P410660

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

Reference Method: SM 2540 C-2011

Batch ID: P410754

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P410897

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P410663

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P410673

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: P410437

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.6		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410381

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410851

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410855

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410632

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410430

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410476

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410730

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410537

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P410933

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

Reference Method: EPA 8270E
 Batch ID: P410328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.9		P	10 - 93.0
Alpha-BHC	96.4		P	75 - 106
Alpha-Chlordane	86.8		P	50 - 109
Beta-BHC	110		P	65 - 135
Beta-Cyfluthrin	105		P	23 - 167
Bifenthrin	93.5		P	11 - 123
Carbophenothion	48.7		P	18 - 96.0
Chlorothalonil	54.3		P	26 - 182
Cis-Nonachlor	79.6		P	40 - 111
Cypermethrin	114		P	25 - 155
Dacthal	98.2		P	73 - 112
DDD-p,p'	82.2		P	47 - 108
DDE-p,p'	82.9		P	48 - 107
DDT-p,p'	87.3		P	49 - 111
Delta-BHC	117		P	68 - 143
Deltamethrin	71.3		P	16 - 176
Dichlobenil	93.6		P	32 - 113
Dicofol	92.7		P	50 - 108
Dieldrin	76.9		P	56 - 110
Endosulfan I	85.3		P	60 - 105
Endosulfan II	88.5		P	50 - 120
Endosulfan Sulfate	101		P	55 - 121
Endrin Aldehyde	62.1		P	36 - 116
Endrin Ketone	177		F	56 - 130
Esfenvalerate	106		P	10 - 179
Ethalfuralin	81.5		P	49 - 99.0
Fenpropathrin	74.4		P	35 - 119
Gamma-BHC	99.9		P	72 - 115
Gamma-Chlordane	85.0		P	45 - 107
Heptachlor	78.9		P	41 - 100
Heptachlor Epoxide	95.9		P	58 - 106
Hexachlorobenzene	83.9		P	39 - 100
Kepone	155		P	10 - 191
Lambda-Cyhalothrin	102		P	10 - 186
Methoxychlor	108		P	61 - 111
MGK-264	77.9		P	20 - 123
Mirex	68.4		P	10 - 182
Oxychlordane	81.7		P	39 - 110
PCB-1016	84.6		P	49 - 111
PCB-1260	90.5		P	42 - 116
Permethrin	105		P	26 - 152
Phenothrin	49.8		P	10 - 109
Prallethrin	40.2		P	14 - 109
Tau-Fluvalinate	94.0		P	16 - 134
Tetramethrin	18.2		P	10 - 125
Trans-Nonachlor	85.1		P	45 - 107

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P410328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Triclosan Methyl	87.6		P	60 - 110
Trifluralin	82.4		P	49 - 98.0

Reference Method: EPA 8270E
Batch ID: P411150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	57.8		P	31 - 119
Methoprene	23.9		P	10 - 129
Piperonyl Butoxide	80.4		P	27 - 142

Reference Method: EPA 8276
Batch ID: P410328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	93.2		P	61 - 118
Toxaphene	81.2		P	51 - 122

Reference Method: SM 2320 B-2011
Batch ID: P410660

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.7		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P410663

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.0		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P410673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308284	Chloride	99.0		P	90 - 110
2308650	Chloride	97.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410855

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308284	Sulfate	97.1		P	90 - 110
2308650	Sulfate	98.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410632

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308285	Ammonia-N	96.8	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410430

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307820	Kjeldahl Nitrogen	100	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307448	Kjeldahl Nitrogen	105	96.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410730

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308230	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308273	Total-P	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410933

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308314	Total-P	106	101	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P410328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307892	Aldrin	47.3	44.4	P/P	10 - 89.0
2307892	Alpha-BHC	87.0	82.3	P/P	71 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P410328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307892	Alpha-Chlordane	74.8	69.6	P/P	43 - 107
2307892	Beta-BHC	101	96.2	P/P	57 - 152
2307892	Beta-Cyfluthrin	104	101	P/P	29 - 186
2307892	Bifenthrin	81.2	81.4	P/P	19 - 119
2307892	Carbophenothion	44.7	44.6	P/P	19 - 107
2307892	Chlorothalonil	154	159	P/P	10 - 245
2307892	Cis-Nonachlor	65.5	56.8	P/P	36 - 110
2307892	Cypermethrin	115	102	P/P	24 - 169
2307892	Dacthal	83.9	81.9	P/P	62 - 115
2307892	DDD-p,p'	68.1	65.8	P/P	36 - 109
2307892	DDE-p,p'	66.3	64.0	P/P	30 - 114
2307892	DDT-p,p'	73.3	70.4	P/P	42 - 108
2307892	Delta-BHC	112	105	P/P	60 - 164
2307892	Deltamethrin	56.0	62.1	P/P	10 - 210
2307892	Dichlobenil	74.9	75.3	P/P	23 - 108
2307892	Dicofol	78.7	72.6	P/P	44 - 109
2307892	Dieldrin	69.6	61.0	P/P	37 - 119
2307892	Endosulfan I	70.9	65.9	P/P	52 - 105
2307892	Endosulfan II	75.2	70.4	P/P	35 - 127
2307892	Endosulfan Sulfate	83.0	71.1	P/P	39 - 130
2307892	Endrin Aldehyde	22.9	34.0	P/P	20 - 110
2307892	Endrin Ketone	126	139	P/F	48 - 134
2307892	Esfenvalerate	97.1	94.2	P/P	10 - 199
2307892	Ethalfuralin	68.2	66.0	P/P	48 - 95.0
2307892	Fenpropathrin	75.9	74.7	P/P	37 - 121
2307892	Gamma-BHC	89.8	87.0	P/P	61 - 126
2307892	Gamma-Chlordane	73.0	71.3	P/P	39 - 105
2307892	Heptachlor	68.7	64.2	P/P	38 - 96.0
2307892	Heptachlor Epoxide	96.4	76.9	P/P	42 - 114
2307892	Hexachlorobenzene	72.6	69.5	P/P	39 - 93.0
2307892	Kepone	142	135	P/P	10 - 215
2307892	Lambda-Cyhalothrin	104	117	P/P	10 - 204
2307892	Methoxychlor	100	91.5	P/P	56 - 115
2307892	MGK-264	65.4	65.5	P/P	35 - 120
2307892	Mirex	64.3	60.0	P/P	10 - 178
2307892	Oxychlordane	65.2	68.5	P/P	47 - 91.0
2307892	Permethrin	99.9	94.0	P/P	27 - 170
2307892	Phenothrin	60.6	53.8	P/P	10 - 133
2307892	Prallethrin	44.7	46.2	P/P	21 - 113
2307892	Tau-Fluvalinate	99.7	96.5	P/P	16 - 158
2307892	Tetramethrin	37.5	42.7	P/P	22 - 132
2307892	Trans-Nonachlor	68.0	67.0	P/P	43 - 102
2307892	Triclosan Methyl	69.2	65.5	P/P	49 - 109
2307892	Trifluralin	71.0	67.4	P/P	48 - 93.0
2307902	PCB-1016	79.3	64.5	P/P	46 - 110
2307902	PCB-1260	93.4	79.2	P/P	42 - 111

Reference Method: EPA 8270E

Batch ID: P411150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308510	Endrin	79.0	68.2	P/P	30 - 116

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P411150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2308510	Methoprene	63.7	64.9	P/P	17 - 108
2308510	Piperonyl Butoxide	84.6	69.5	P/P	23 - 150

Reference Method: EPA 8276

Batch ID: P410328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307902	Chlordane	85.2	64.9	P/P	55 - 128
2307902	Toxaphene	88.5	64.5	P/P	57 - 211

Reference Method: SM 4500 F-C-2011

Batch ID: P410663

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307772	Fluoride	94.9	94.4	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P410673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2307775	Organic Carbon	87.9	90.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308129	Turbidity	14.2	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308284	Chloride	2.10	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P410855

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308284	Sulfate	0.525	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410632

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308285	Ammonia-N	1.53	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410430

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307820	Kjeldahl Nitrogen	2.10	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P410476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307448	Kjeldahl Nitrogen	6.31	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P410730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308230	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P410537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308273	Total-P	1.57	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P410933

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308314	Total-P	3.56	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P410328

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307892	Aldrin	6.38	Spike	P	0 - 37
2307892	Alpha-BHC	5.52	Spike	P	0 - 16
2307892	Alpha-Chlordane	7.13	Spike	P	0 - 28
2307892	Beta-BHC	4.64	Spike	P	0 - 32
2307892	Beta-Cyfluthrin	2.64	Spike	P	0 - 41
2307892	Bifenthrin	0.265	Spike	P	0 - 36
2307892	Carbophenothion	0.143	Spike	P	0 - 81
2307892	Chlorothalonil	3.02	Spike	P	0 - 54
2307892	Cis-Nonachlor	14.1	Spike	P	0 - 33
2307892	Cypermethrin	12.3	Spike	P	0 - 38
2307892	Dacthal	2.43	Spike	P	0 - 23
2307892	DDD-p,p'	3.49	Spike	P	0 - 35
2307892	DDE-p,p'	3.49	Spike	P	0 - 27
2307892	DDT-p,p'	4.04	Spike	P	0 - 31
2307892	Delta-BHC	6.02	Spike	P	0 - 30
2307892	Deltamethrin	10.4	Spike	P	0 - 76
2307892	Dichlobenil	0.531	Spike	P	0 - 33
2307892	Dicofol	8.11	Spike	P	0 - 24
2307892	Dieldrin	12.1	Spike	P	0 - 35
2307892	Endosulfan I	7.31	Spike	P	0 - 25
2307892	Endosulfan II	6.66	Spike	P	0 - 31
2307892	Endosulfan Sulfate	15.5	Spike	P	0 - 38
2307892	Endrin Aldehyde	39.2	Spike	P	0 - 81
2307892	Endrin Ketone	10.2	Spike	P	0 - 33
2307892	Esfenvalerate	2.95	Spike	P	0 - 46
2307892	Ethalfuralin	3.29	Spike	P	0 - 22
2307892	Fenpropathrin	1.59	Spike	P	0 - 29
2307892	Gamma-BHC	3.14	Spike	P	0 - 17
2307892	Gamma-Chlordane	2.32	Spike	P	0 - 28
2307892	Heptachlor	6.71	Spike	P	0 - 28
2307892	Heptachlor Epoxide	22.6	Spike	P	0 - 23
2307892	Hexachlorobenzene	4.35	Spike	P	0 - 22
2307892	Kepone	4.95	Spike	P	0 - 61
2307892	Lambda-Cyhalothrin	12.1	Spike	P	0 - 52
2307892	Methoxychlor	9.11	Spike	P	0 - 29
2307892	MGK-264	0.193	Spike	P	0 - 41
2307892	Mirex	6.97	Spike	P	0 - 39
2307892	Oxychlordane	4.99	Spike	P	0 - 33
2307892	Permethrin	6.05	Spike	P	0 - 39
2307892	Phenothrin	12.0	Spike	P	0 - 52
2307892	Prallethrin	3.21	Spike	P	0 - 34
2307892	Tau-Fluvalinate	3.22	Spike	P	0 - 41
2307892	Tetramethrin	13.1	Spike	P	0 - 43
2307892	Trans-Nonachlor	1.57	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P410328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307892	Triclosan Methyl	5.56	Spike	P	0 - 24
2307892	Trifluralin	5.18	Spike	P	0 - 23
2307902	PCB-1016	20.6	Spike	P	0 - 22
2307902	PCB-1260	16.4	Spike	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P411150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308510	Endrin	14.7	Spike	P	0 - 53
2308510	Methoprene	1.86	Spike	P	0 - 38
2308510	Piperonyl Butoxide	15.5	Spike	P	0 - 91

Reference Method: EPA 8276
Batch ID: P410328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307902	Chlordane	27.0	Spike	F	0 - 25
2307902	Toxaphene	31.3	Spike	F	0 - 24

Reference Method: SM 2320 B-2011
Batch ID: P410660

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307772	Total Alkalinity	1.80	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P410754

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2308284	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P410663

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307772	Fluoride	0.498	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P410673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2307775	Organic Carbon	2.23	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2308293

Field Sample ID: 21030143

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	76.2	P	38 - 115
EPA 8270E	Decachlorobiphenyl	86.1	P	31 - 118
EPA 8270E	Decachlorobiphenyl	58.4	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	64.3	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	68.2	P	28 - 96.0
EPA 8270E	Tetrachloro-m-xylene	50.3	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	64.4	P	30 - 97.0
EPA 8276	PCNB	67.1	P	45 - 119

Lab Sample ID: 2308294

Field Sample ID: 21030086

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	75.6	P	38 - 115
EPA 8270E	Decachlorobiphenyl	71.5	P	31 - 118
EPA 8270E	Decachlorobiphenyl	97.9	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	69.6	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	74.3	P	28 - 96.0
EPA 8270E	Tetrachloro-m-xylene	45.4	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	65.6	P	30 - 97.0
EPA 8276	PCNB	78.3	P	45 - 119

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110635

Included Lab Sample IDs: 2308283, 2308284

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

Reference Method: DEP SOP: NU-094-1

Run ID: A110661

Included Lab Sample IDs: 2308283, 2308284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110697

Included Lab Sample IDs: 2308285

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110734

Included Lab Sample IDs: 2308285, 2308286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	99.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A110751

Included Lab Sample IDs: 2308283, 2308284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.7	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A110751

Included Lab Sample IDs: 2308283, 2308284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A110758

Included Lab Sample IDs: 2308285, 2308286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	91.3	90.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110763

Included Lab Sample IDs: 2308286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.1	95.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110783

Included Lab Sample IDs: 2308285, 2308286

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A110787

Included Lab Sample IDs: 2308293, 2308294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.0		P	80 - 120
Toxaphene	96.2		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110801

Included Lab Sample IDs: 2308285

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

Reference Method: EPA 8270E

Run ID: A110810

Included Lab Sample IDs: 2308293, 2308294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	106		P	80 - 120
PCB-1260	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110831

Included Lab Sample IDs: 2308283, 2308284

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110930

Included Lab Sample IDs: 2308286

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

Reference Method: EPA 8270E

Run ID: A110957

Included Lab Sample IDs: 2308293, 2308294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin	105		P	80 - 120
Methoprene	102		P	80 - 120
Piperonyl Butoxide	96.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110972
Included Lab Sample IDs: 2308293

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	97.4		P	80 - 120
Alpha-Chlordane	104		P	80 - 120
Beta-BHC	97.2		P	80 - 120
Beta-Cyfluthrin	105		P	80 - 120
Bifenthrin	101		P	80 - 120
Carbophenothion	104		P	80 - 120
Chlorothalonil	94.9		P	80 - 120
Cis-Nonachlor	96.6		P	80 - 120
Cypermethrin	102		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	105		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	98.5		P	80 - 120
Deltamethrin	93.4		P	80 - 120
Dichlobenil	98.3		P	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	105		P	80 - 120
Endosulfan I	98.7		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	93.8		P	80 - 120
Endrin Aldehyde	99.6		P	80 - 120
Endrin Ketone	91.1		P	80 - 120
Esfenvalerate	103		P	80 - 120
Ethalfuralin	99.5		P	80 - 120
Fenpropathrin	106		P	80 - 120
Gamma-BHC	99.8		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	99.6		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Hexachlorobenzene	99.7		P	80 - 120
Kepone	76.8*		F	80 - 120
Lambda-Cyhalothrin	104		P	80 - 120
Methoxychlor	99.4		P	80 - 120
MGK-264	101		P	80 - 120
Mirex	104		P	80 - 120
Oxychlordane	99.0		P	80 - 120
Permethrin	101		P	80 - 120
Phenothrin	105		P	80 - 120
Prallethrin	98.3		P	80 - 120
Tau-Fluvalinate	104		P	80 - 120
Tetramethrin	102		P	80 - 120
Trans-Nonachlor	105		P	80 - 120
Triclosan Methyl	105		P	80 - 120
Trifluralin	98.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A110975
Included Lab Sample IDs: 2308294

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.3		P	80 - 120
Alpha-BHC	95.3		P	80 - 120
Alpha-Chlordane	95.3		P	80 - 120
Beta-BHC	93.6		P	80 - 120
Beta-Cyfluthrin	84.1		P	80 - 120
Bifenthrin	96.4		P	80 - 120
Carbophenothion	101		P	80 - 120
Chlorothalonil	99.2		P	80 - 120
Cis-Nonachlor	105		P	80 - 120
Cypermethrin	92.2		P	80 - 120
Dacthal	98.1		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	94.3		P	80 - 120
Delta-BHC	94.7		P	80 - 120
Deltamethrin	78.7*		F	80 - 120
Dichlobenil	95.9		P	80 - 120
Dicofol	97.5		P	80 - 120
Dieldrin	91.5		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin Aldehyde	98.2		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	85.9		P	80 - 120
Ethalfuralin	99.8		P	80 - 120
Fenpropathrin	92.4		P	80 - 120
Gamma-BHC	95.6		P	80 - 120
Gamma-Chlordane	100		P	80 - 120
Heptachlor	96.4		P	80 - 120
Heptachlor Epoxide	97.1		P	80 - 120
Hexachlorobenzene	98.3		P	80 - 120
Kepone	96.4		P	80 - 120
Lambda-Cyhalothrin	87.4		P	80 - 120
Methoxychlor	89.9		P	80 - 120
MGK-264	94.0		P	80 - 120
Mirex	102		P	80 - 120
Oxychlordane	89.8		P	80 - 120
Permethrin	91.0		P	80 - 120
Phenothrin	89.6		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	83.3		P	80 - 120
Tetramethrin	96.2		P	80 - 120
Trans-Nonachlor	98.5		P	80 - 120
Triclosan Methyl	95.3		P	80 - 120
Trifluralin	96.3		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
DEP SOP: NU-094-1	Color (true)	98.6				
EPA 180.1 Rev. 2.0	Turbidity	97.3				14.2
EPA 300.0 Rev. 2.1	Chloride	100	99.0	97.1		2.10
	Sulfate	101	97.1	98.9		0.525
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	96.8	98.4		
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.9	100	103		
	Kjeldahl Nitrogen	102	105	96.7		
EPA 353.2 Rev. 2.0	NO2NO3-N	100	101	101		
EPA 365.1 Rev. 2.0	Total-P	104	105	103		
	Total-P	98.0	106	101		
EPA 8270E	Aldrin	57.9	47.3	44.4		
	Alpha-BHC	96.4	87.0	82.3		
	Alpha-Chlordane	86.8	74.8	69.6		
	Beta-BHC	110	101	96.2		
	Beta-Cyfluthrin	105	104	101		
	Bifenthrin	93.5	81.2	81.4		
	Carbophenothion	48.7	44.7	44.6		
	Chlorothalonil	54.3	154	159		
	Cis-Nonachlor	79.6	65.5	56.8		
	Cypermethrin	114	115	102		
	Dacthal	98.2	83.9	81.9		
	DDD-p,p'	82.2	68.1	65.8		
	DDE-p,p'	82.9	66.3	64.0		
	DDT-p,p'	87.3	73.3	70.4		
	Delta-BHC	117	112	105		
	Deltamethrin	71.3	56.0	62.1		
	Dichlobenil	93.6	74.9	75.3		
	Dicofol	92.7	78.7	72.6		
	Dieldrin	76.9	69.6	61.0		
	Endosulfan I	85.3	70.9	65.9		
	Endosulfan II	88.5	75.2	70.4		
	Endosulfan Sulfate	101	83.0	71.1		
	Endrin	57.8	79.0	68.2		
	Endrin Aldehyde	62.1	22.9	34.0		
	Endrin Ketone	177	126	139		
	Esfenvalerate	106	97.1	94.2		
	Ethalfuralin	81.5	68.2	66.0		
	Fenpropathrin	74.4	75.9	74.7		
	Gamma-BHC	99.9	89.8	87.0		
	Gamma-Chlordane	85.0	73.0	71.3		
	Heptachlor	78.9	68.7	64.2		
	Heptachlor Epoxide	95.9	96.4	76.9		
	Hexachlorobenzene	83.9	72.6	69.5		
	Kepone	155	142	135		
	Lambda-Cyhalothrin	102	104	117		
	Methoprene	23.9	63.7	64.9		
	Methoxychlor	108	100	91.5		
	MGK-264	77.9	65.4	65.5		
	Mirex	68.4	64.3	60.0		
	Oxychlordane	81.7	65.2	68.5		
	PCB-1016	84.6	79.3	64.5		
	PCB-1260	90.5	93.4	79.2		
	Permethrin	105	99.9	94.0		
	Phenothrin	49.8	60.6	53.8		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Piperonyl Butoxide	80.4	84.6	69.5		15.5
	Prallethrin	40.2	44.7	46.2		3.21
	Tau-Fluvalinate	94.0	99.7	96.5		3.22
	Tetramethrin	18.2	37.5	42.7		13.1
	Trans-Nonachlor	85.1	68.0	67.0		1.57
	Triclosan Methyl	87.6	69.2	65.5		5.56
	Trifluralin	82.4	71.0	67.4		5.18
EPA 8276	Chlordane	93.2	85.2	64.9		27.0
	Toxaphene	81.2	88.5	64.5		31.3
SM 2320 B-2011	Total Alkalinity	95.7			1.80	
SM 2540 C-2011	TDS				3.31	
SM 4500 F-C-2011	Fluoride	98.0	94.9	94.4		0.498
SM 5310 B-2011	Organic Carbon	96.3	87.9	90.0		2.23

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2308283, 2308284
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2308283, 2308284
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2308283, 2308284
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2308283, 2308284
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2308285, 2308286
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2308285, 2308286
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2308285, 2308286
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2308285, 2308286
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2308293, 2308294
EPA 8270E	PCBs in water matrices by GC/MS/MS	2308293, 2308294
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2308293, 2308294
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2308283, 2308284
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2308283, 2308284
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2308283, 2308284
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2308283, 2308284
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2308285, 2308286

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	02/25/2022			02/25/2022 16:38	Anna M. Plaviak	2308283
	02/25/2022			02/25/2022 16:39	Anna M. Plaviak	2308284
EPA 180.1 Rev. 2.0	02/25/2022			02/25/2022 15:40	Khloe J Berg	2308283, 2308284
EPA 300.0 Rev. 2.1	02/25/2022			03/07/2022 17:53	James L Waggerby	2308284
	02/25/2022			03/07/2022 19:16	James L Waggerby	2308283
EPA 350.1 Rev. 2.0	02/25/2022			03/03/2022 11:58	Judith K. Clark	2308285
	02/25/2022			03/03/2022 12:02	Judith K. Clark	2308286
EPA 351.2 Rev. 2.0	02/25/2022	03/01/2022 10:02	Samantha L Bates	03/01/2022 16:24	Alexandra J Mattheus	2308285
	02/25/2022	03/02/2022 12:36	Samantha L Bates	03/04/2022 13:39	Alexandra J Mattheus	2308286
EPA 353.2 Rev. 2.0	02/25/2022			03/07/2022 12:06	Beverly Y. Sanders	2308285
	02/25/2022			03/07/2022 12:07	Beverly Y. Sanders	2308286
EPA 365.1 Rev. 2.0	02/25/2022	03/04/2022 14:00	Simonne.V. Calhoun	03/07/2022 14:58	Sarah A Nixon	2308285
	02/25/2022	03/11/2022 12:25	Simonne.V. Calhoun	03/14/2022 14:44	James L Waggerby	2308286
EPA 8270E	02/25/2022	03/02/2022 08:30	Rasheda Ghaffari	03/07/2022 21:22	Julie Wi	2308293
	02/25/2022	03/02/2022 08:30	Rasheda Ghaffari	03/07/2022 21:52	Julie Wi	2308294
	02/25/2022	03/02/2022 08:30	Rasheda Ghaffari	03/08/2022 21:34	Julie Wi	2308293
	02/25/2022	03/02/2022 08:30	Rasheda Ghaffari	03/10/2022 23:03	Julie Wi	2308294
	02/25/2022	03/10/2022 08:00	Julie Wi	03/15/2022 22:56	Julie Wi	2308293
	02/25/2022	03/10/2022 08:00	Julie Wi	03/15/2022 23:25	Julie Wi	2308294
	02/25/2022	03/02/2022 08:30	Rasheda Ghaffari	03/05/2022 04:17	Arthur Maknenko	2308293
EPA 8276	02/25/2022	03/02/2022 08:30	Rasheda Ghaffari	03/05/2022 05:13	Arthur Maknenko	2308294
	02/25/2022			03/03/2022 02:47	Dale L. Simmons	2308283
SM 2320 B-2011	02/25/2022			03/03/2022 03:01	Dale L. Simmons	2308284
	02/25/2022			03/02/2022 14:21	Yijie Li	2308283, 2308284
SM 2540 C-2011	02/25/2022			03/02/2022 14:26	Yijie Li	2308283, 2308284
SM 4500 F-C-2011	02/25/2022			03/03/2022 02:47	Dale L. Simmons	2308283
	02/25/2022			03/03/2022 03:01	Dale L. Simmons	2308284
SM 5310 B-2011	02/25/2022			03/03/2022 01:29	Nathaniel J Jones	2308285
	02/25/2022			03/03/2022 02:20	Nathaniel J Jones	2308286