

Chemical Analysis Report

SW-DIST-2023-11-28-01

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

Event Description: **Run 11**
Request ID: **RQ-2023-11-20-25**
Customer: **SW-DIST**
Project ID: **SMP**

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Date Certified: 20-DEC-2023 14:24



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: Bellows Outlet

Collection Date/Time: 11/27/2023 09:40

Field ID: G1SW0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452901	DEP SOP: NU-094-1	Color (true)	50	A	PCU	P438246	
	EPA 180.1 Rev. 2.0	Turbidity	4.2		NTU	P438249	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P438360	
		Sulfate	7.2		mg SO4/L	P438363	
	SM 2320 B-2011	Total Alkalinity	94		mg CaCO3/L	P438330	
	SM 2540 C-2015	TDS	157		mg/L	P438788	
	SM 2540 D-2015	TSS	6	I	mg/L	P438693	
2452902	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P438332	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.80		mg N/L	P438561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.6		mg N/L	P438310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.067		mg N/L	P438394	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P438326	
2452913	EPA 8270E	SM 5310 B-2011	Organic Carbon	16	mg C/L	P438314	
		Aldrin	0.70	U	ng/L	P438284	
		Alpha-BHC	0.11	U	ng/L	P438284	
		Alpha-Chlordane	0.22	U	ng/L	P438284	
		PCB-1016	2.2	U	ng/L	P438284	
		Beta-BHC	0.11	U	ng/L	P438284	
		PCB-1221	2.2	U	ng/L	P438284	
		Beta-Cyfluthrin	1.3	U	ng/L	P438284	
		PCB-1232	2.2	U	ng/L	P438284	
		Bifenthrin	0.54	U	ng/L	P438284	
		PCB-1242	2.2	U	ng/L	P438284	
		PCB-1248	2.2	U	ng/L	P438284	
		Chlorothalonil	3.9	U	ng/L	P438284	
		PCB-1254	2.2	U	ng/L	P438284	
		Cis-Nonachlor	0.22	U	ng/L	P438284	
		PCB-1260	2.2	U	ng/L	P438284	
		Cypermethrin	1.6	U	ng/L	P438284	
		Dacthal	0.16	U	ng/L	P438284	
		DDD-p,p'	0.50	I	ng/L	P438284	
		DDE-p,p'	0.22	U	ng/L	P438284	
		DDT-p,p'	3.0	I J	ng/L	P438284	MS
		Delta-BHC	0.43	U	ng/L	P438284	
		Deltamethrin	1.3	U	ng/L	P438284	
		Dichlobenil	0.27	U	ng/L	P438284	
		Dicofol	1.3	U	ng/L	P438284	
		Diieldrin	0.43	U	ng/L	P438284	
		Endosulfan I	0.43	U	ng/L	P438284	
		Endosulfan II	0.97	U	ng/L	P438284	
		Endosulfan Sulfate	0.32	U	ng/L	P438284	
		Endrin	0.97	U	ng/L	P438284	
		Endrin Aldehyde	0.81	U	ng/L	P438284	
		Endrin Ketone	0.43	U	ng/L	P438284	

Field ID: G1SW0060

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452913	EPA 8270E	Esfenvalerate	0.81	U	ng/L	P438284	
		Ethalfuralin	0.16	UJ	ng/L	P438284	MS
		Fenpropathrin	0.27	U	ng/L	P438284	
		Gamma-BHC	0.13	U	ng/L	P438284	
		Gamma-Chlordane	0.22	U	ng/L	P438284	
		Heptachlor	0.22	U	ng/L	P438284	
		Heptachlor Epoxide	0.27	U	ng/L	P438284	
		Hexachlorobenzene**	1.1	U	ng/L	P438284	
		Kepone	15	U	ng/L	P438284	
		Lambda-Cyhalothrin	0.81	U	ng/L	P438284	
		Methoprene	0.81	U	ng/L	P438284	
		Methoxychlor	0.32	U	ng/L	P438284	
		MGK-264	0.22	UJ	ng/L	P438284	MS
		Mirex	0.38	U	ng/L	P438284	
		Oxychlordane	0.32	U	ng/L	P438284	
		Permethrin	1.7	U	ng/L	P438284	
		Phenothrin	0.97	U	ng/L	P438284	
		Piperonyl Butoxide	0.52	I	ng/L	P438284	
		Prallethrin	2.2	U	ng/L	P438284	
		Tau-Fluvalinate	0.27	U	ng/L	P438284	
		Tetramethrin	0.81	U	ng/L	P438284	
		Trans-Nonachlor	0.22	U	ng/L	P438284	
		Triclosan Methyl	0.16	U	ng/L	P438284	
		Trifluralin	0.22	U	ng/L	P438284	
	EPA 8276	Chlordane	2.2	U	ng/L	P438284	
		Toxaphene	16	U	ng/L	P438284	

Ref. Method and Comment:

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Lake Hannah Outlet at Livingston Ave

Collection Date/Time: 11/27/2023 10:45

Field ID: G2SW0143

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452893	DEP SOP: NU-094-1	Color (true)	41		PCU	P438245	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P438249	
	EPA 300.0 Rev. 2.1	Chloride	98		mg Cl/L	P438360	
		Sulfate	30		mg SO4/L	P438363	
	SM 2320 B-2011	Total Alkalinity	162		mg CaCO3/L	P438330	
	SM 2540 C-2015	TDS	361		mg/L	P438788	
	SM 2540 D-2015	TSS	4	I	mg/L	P438693	
	SM 4500-F- C-2011	Fluoride	0.042	I	mg F/L	P438332	
2452897	EPA 350.1 Rev. 2.0	Ammonia-N	6.8		mg N/L	P438561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	7.5		mg N/L	P438310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	3.3		mg N/L	P438394	
	EPA 365.1 Rev. 2.0	Total-P	0.85		mg P/L	P438325	
	SM 5310 B-2011	Organic Carbon	9.6		mg C/L	P438314	

Ref. Method and Comment:

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Bushy Creek at Northdale Blvd by Trail

Collection Date/Time: 11/27/2023 11:20

Field ID: G1SW0147

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452894	DEP SOP: NU-094-1	Color (true)	16		PCU	P438245	
	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P438249	
	EPA 300.0 Rev. 2.1	Chloride	71	A	mg Cl/L	P438360	
		Sulfate	15	A	mg SO4/L	P438363	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P438330	
	SM 2540 C-2015	TDS	168		mg/L	P438788	
	SM 2540 D-2015	TSS	2	I	mg/L	P438693	
	SM 4500-F- C-2011	Fluoride	0.054	I	mg F/L	P438332	
2452898	EPA 350.1 Rev. 2.0	Ammonia-N	0.050		mg N/L	P438561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P438310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P438394	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P438326	
	SM 5310 B-2011	Organic Carbon	4.3		mg C/L	P438314	

Ref. Method and Comment:

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Rocky Creek at Turtle Creek Blvd

Collection Date/Time: 11/27/2023 12:05

Field ID: G1SW0136

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452895	DEP SOP: NU-094-1	Color (true)	95		PCU	P438245	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P438249	
	EPA 300.0 Rev. 2.1	Chloride	61		mg Cl/L	P438360	
		Sulfate	11		mg SO4/L	P438363	
	SM 2320 B-2011	Total Alkalinity	34		mg CaCO3/L	P438330	
	SM 2540 C-2015	TDS	173		mg/L	P438788	
	SM 2540 D-2015	TSS	2	U	mg/L	P438693	
	SM 4500-F- C-2011	Fluoride	0.061	I	mg F/L	P438332	
2452899	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P438561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P438310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P438394	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P438326	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P438314	

Ref. Method and Comment:

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Twin Lake Outfall at Newport Avenue

Collection Date/Time: 11/27/2023 12:35

Field ID: G2SW0157

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452896	DEP SOP: NU-094-1	Color (true)	46	A	PCU	P438245	
	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P438249	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P438360	
		Sulfate	21		mg SO4/L	P438363	
	SM 2320 B-2011	Total Alkalinity	80		mg CaCO3/L	P438330	
	SM 2540 C-2015	TDS	153		mg/L	P438788	
	SM 2540 D-2015	TSS	3	I	mg/L	P438693	
2452900	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P438332	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P438561	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P438310	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34		mg N/L	P438394	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P438326	
	SM 5310 B-2011	Organic Carbon	9.2		mg C/L	P438314	

Ref. Method and Comment:

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P438245

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P438246

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438249

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438360

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438363

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438561

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438310

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438394

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438325

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: P438326

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

Reference Method: EPA 8270E

Batch ID: P438284

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P438284

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

Reference Method: EPA 8276
Batch ID: P438284

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2320 B-2011
Batch ID: P438330

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

Reference Method: SM 2540 C-2015
Batch ID: P438788

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438693

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438332

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P438314

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: P438245

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

Reference Method: DEP SOP: NU-094-1
Batch ID: P438246

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438249

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438360

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438363

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438325

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: P438326

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

Reference Method: EPA 8270E

Batch ID: P438284

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	50.9		P	30 - 96.0
Alpha-BHC	75.2		P	70 - 109
Alpha-Chlordane	60.0		P	45 - 107
Beta-BHC	99.9		P	64 - 138
Beta-Cyfluthrin	56.7		P	17 - 141
Bifenthrin	39.4		P	10 - 113
Chlorothalonil	80.8		P	26 - 180
Cis-Nonachlor	68.6		P	37 - 102
Cypermethrin	37.0		P	20 - 133
Dacthal	83.2		P	69 - 114
DDD-p,p'	68.8		P	42 - 105
DDE-p,p'	58.4		P	42 - 106
DDT-p,p'	66.4		P	42 - 107
Delta-BHC	84.9		P	67 - 144
Deltamethrin	57.1		P	15 - 149
Dichlobenil	62.9		P	46 - 117
Dicofol	63.1		P	34 - 114
Dieldrin	54.5		P	50 - 108
Endosulfan I	67.9		P	55 - 104
Endosulfan II	73.8		P	51 - 111
Endosulfan Sulfate	82.8		P	56 - 121
Endrin	64.6		P	10 - 106
Endrin Aldehyde	83.3		P	34 - 114
Endrin Ketone	76.9		P	63 - 177
Esfenvalerate	62.7		P	29 - 143
Ethalfuralin	83.1		P	46 - 96.0
Fenpropathrin	61.9		P	28 - 115
Gamma-BHC	82.2		P	65 - 121
Gamma-Chlordane	54.1		P	39 - 103
Heptachlor	50.9		P	39 - 94.0
Heptachlor Epoxide	72.0		P	54 - 104
Hexachlorobenzene	54.8		P	36 - 100
Kepone	113		P	10 - 225
Lambda-Cyhalothrin	46.6		P	10 - 135
Methoprene	43.4		P	10 - 109
Methoxychlor	66.3		P	52 - 112
MGK-264	63.7		P	44 - 117
Mirex	52.2		P	20 - 90.0
Oxychlordane	58.1		P	44 - 102
PCB-1016	82.0		P	45 - 107
PCB-1260	98.9		P	40 - 112
Permethrin	54.6		P	18 - 135
Phenothrin	40.0		P	10 - 102
Piperonyl Butoxide	121		P	28 - 156
Prallethrin	52.5		P	28 - 113
Tau-Fluvalinate	58.1		P	10 - 123

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P438284

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tetramethrin	96.8		P	18 - 158
Trans-Nonachlor	60.3		P	39 - 104
Triclosan Methyl	68.6		P	54 - 108
Trifluralin	66.2		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P438284

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	91.4		P	52 - 117
Toxaphene	109		P	44 - 125

Reference Method: SM 2320 B-2011
Batch ID: P438330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.8		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P438788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	92.4		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438693

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	102		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438332

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

Reference Method: SM 5310 B-2011
Batch ID: P438314

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: P438360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452894	Chloride	102		P	90 - 110
2452956	Chloride	107		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452894	Sulfate	104		P	90 - 110
2452956	Sulfate	108		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452856	Ammonia-N	97.6	99.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452886	NO2NO3-N	96.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438325

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452867	Total-P	107	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452946	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P438284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452913	Aldrin	58.5	51.9	P/P	24 - 81.0
2452913	Alpha-BHC	88.9	82.0	P/P	65 - 110
2452913	Alpha-Chlordane	63.5	58.8	P/P	43 - 119
2452913	Beta-BHC	85.4	89.4	P/P	54 - 165
2452913	Beta-Cyfluthrin	88.7	90.6	P/P	27 - 165
2452913	Bifenthrin	71.7	104	P/P	17 - 117
2452913	Chlorothalonil	182	149	P/P	10 - 255
2452913	Cis-Nonachlor	82.2	72.8	P/P	34 - 98.0
2452913	Cypermethrin	56.1	70.6	P/P	25 - 143
2452913	Dacthal	69.8	68.8	P/P	55 - 139
2452913	DDD-p,p'	54.9	54.6	P/P	30 - 109
2452913	DDE-p,p'	52.1	52.0	P/P	35 - 106
2452913	DDT-p,p'	31.3	53.7	F/P	41 - 101
2452913	Delta-BHC	98.9	98.0	P/P	58 - 165

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P438284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452913	Deltamethrin	94.3	117	P/P	10 - 194
2452913	Dichlobenil	43.4	35.0	P/P	22 - 114
2452913	Dicofol	69.4	75.6	P/P	17 - 133
2452913	Dieldrin	53.1	54.7	P/P	45 - 129
2452913	Endosulfan I	74.2	63.2	P/P	49 - 104
2452913	Endosulfan II	77.9	64.4	P/P	37 - 117
2452913	Endosulfan Sulfate	77.0	79.4	P/P	38 - 128
2452913	Endrin	66.9	76.7	P/P	35 - 116
2452913	Endrin Aldehyde	50.6	34.2	P/P	19 - 108
2452913	Endrin Ketone	54.1	67.4	P/P	44 - 134
2452913	Esfenvalerate	126	113	P/P	27 - 176
2452913	Ethalfuralin	109	106	F/F	49 - 100
2452913	Fenpropathrin	78.0	83.0	P/P	34 - 117
2452913	Gamma-BHC	88.4	92.6	P/P	59 - 129
2452913	Gamma-Chlordane	68.5	55.0	P/P	33 - 107
2452913	Heptachlor	60.7	63.1	P/P	37 - 94.0
2452913	Heptachlor Epoxide	86.7	68.9	P/P	38 - 118
2452913	Hexachlorobenzene	65.5	57.7	P/P	35 - 97.0
2452913	Kepone	64.8	46.0	P/P	10 - 221
2452913	Lambda-Cyhalothrin	99.0	91.9	P/P	23 - 190
2452913	Methoprene	91.2	77.7	P/P	21 - 109
2452913	Methoxychlor	71.7	79.0	P/P	46 - 118
2452913	MGK-264	153	115	F/P	39 - 122
2452913	Mirex	63.0	60.4	P/P	25 - 90.0
2452913	Oxychlordane	77.1	79.9	P/P	42 - 100
2452913	Permethrin	81.8	93.2	P/P	33 - 181
2452913	Phenothrin	93.1	102	P/P	12 - 125
2452913	Piperonyl Butoxide	94.0	108	P/P	10 - 178
2452913	Prallethrin	56.2	59.3	P/P	24 - 122
2452913	Tau-Fluvalinate	125	108	P/P	13 - 151
2452913	Tetramethrin	166	147	P/P	16 - 172
2452913	Trans-Nonachlor	90.0	67.1	P/P	39 - 100
2452913	Triclosan Methyl	67.2	67.0	P/P	43 - 110
2452913	Trifluralin	67.6	65.8	P/P	45 - 94.0
2453279	PCB-1016	71.7	77.1	P/P	45 - 107
2453279	PCB-1260	78.6	84.6	P/P	40 - 112

Reference Method: EPA 8276

Batch ID: P438284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453279	Chlordane	77.7	84.4	P/P	43 - 123
2453279	Toxaphene	82.7	84.5	P/P	27 - 156

Reference Method: SM 5310 B-2011

Batch ID: P438314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452885	Organic Carbon	96.6	95.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P438245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452896	Color (true)	0.285	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P438246

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452901	Color (true)	1.43	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452709	Turbidity	1.27	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452894	Chloride	0.0770	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438363

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452894	Sulfate	0.104	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452856	Ammonia-N	1.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452897	Kjeldahl Nitrogen	12.1	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452886	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438325

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452867	Total-P	4.34	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438326

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452946	Total-P	1.18	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P438284

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452913	Aldrin	12.1	Spike	P	0 - 41
2452913	Alpha-BHC	8.03	Spike	P	0 - 25
2452913	Alpha-Chlordane	7.64	Spike	P	0 - 32
2452913	Beta-BHC	4.62	Spike	P	0 - 33
2452913	Beta-Cyfluthrin	2.07	Spike	P	0 - 43
2452913	Bifenthrin	37.1	Spike	P	0 - 52
2452913	Chlorothalonil	19.7	Spike	P	0 - 82
2452913	Cis-Nonachlor	12.1	Spike	P	0 - 33
2452913	Cypermethrin	23.0	Spike	P	0 - 51
2452913	Dacthal	1.54	Spike	P	0 - 27
2452913	DDD-p,p'	0.388	Spike	P	0 - 39
2452913	DDE-p,p'	0.105	Spike	P	0 - 31
2452913	DDT-p,p'	26.1	Spike	P	0 - 29
2452913	Delta-BHC	0.842	Spike	P	0 - 35
2452913	Deltamethrin	21.8	Spike	P	0 - 100
2452913	Dichlobenil	21.4	Spike	P	0 - 40
2452913	Dicofol	8.57	Spike	P	0 - 37
2452913	Dieldrin	2.90	Spike	P	0 - 27
2452913	Endosulfan I	15.9	Spike	P	0 - 23
2452913	Endosulfan II	19.0	Spike	P	0 - 34
2452913	Endosulfan Sulfate	3.02	Spike	P	0 - 36
2452913	Endrin	13.7	Spike	P	0 - 45
2452913	Endrin Aldehyde	38.6	Spike	P	0 - 76
2452913	Endrin Ketone	21.9	Spike	P	0 - 43
2452913	Esfenvalerate	10.7	Spike	P	0 - 51
2452913	Ethalfuralin	2.28	Spike	P	0 - 22
2452913	Fenpropathrin	6.26	Spike	P	0 - 49
2452913	Gamma-BHC	4.57	Spike	P	0 - 28
2452913	Gamma-Chlordane	21.8	Spike	P	0 - 40
2452913	Heptachlor	3.86	Spike	P	0 - 29
2452913	Heptachlor Epoxide	22.9	Spike	P	0 - 33
2452913	Hexachlorobenzene	12.7	Spike	P	0 - 36
2452913	Kepone	15.6	Spike	P	0 - 85
2452913	Lambda-Cyhalothrin	7.47	Spike	P	0 - 55
2452913	Methoprene	16.0	Spike	P	0 - 53
2452913	Methoxychlor	9.62	Spike	P	0 - 50
2452913	MGK-264	28.4	Spike	P	0 - 43

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P438284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452913	Mirex	4.23	Spike	P	0 - 40
2452913	Oxychlordane	3.69	Spike	P	0 - 31
2452913	Permethrin	12.9	Spike	P	0 - 50
2452913	Phenothrin	8.93	Spike	P	0 - 58
2452913	Piperonyl Butoxide	11.8	Spike	P	0 - 100
2452913	Prallethrin	5.30	Spike	P	0 - 39
2452913	Tau-Fluvalinate	14.4	Spike	P	0 - 54
2452913	Tetramethrin	12.2	Spike	P	0 - 51
2452913	Trans-Nonachlor	29.2	Spike	P	0 - 39
2452913	Triclosan Methyl	0.317	Spike	P	0 - 31
2452913	Trifluralin	2.71	Spike	P	0 - 22
2453279	PCB-1016	7.28	Spike	P	0 - 25
2453279	PCB-1260	7.36	Spike	P	0 - 30

Reference Method: EPA 8276
Batch ID: P438284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453279	Chlordane	8.23	Spike	P	0 - 28
2453279	Toxaphene	2.13	Spike	P	0 - 27

Reference Method: SM 2320 B-2011
Batch ID: P438330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452866	Total Alkalinity	0.494	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P438788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452745	TDS	6.91	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P438693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452745	TSS	7.41	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P438332

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452866	Fluoride	0.986	Spike	P	0 - 1.9

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P438314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452885	Organic Carbon	0.983	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2452913

Field Sample ID: G1SW0060

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	55.3	P	37 - 129
EPA 8270E	Decachlorobiphenyl	41.2	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	40.5	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	32.9	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	53.3	P	28 - 102
EPA 8276	PCNB	65.4	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A122915

Included Lab Sample IDs: 2452893, 2452894, 2452895, 2452896, 2452901

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122917

Included Lab Sample IDs: 2452893, 2452894, 2452895, 2452896, 2452901

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

Reference Method: SM 5310 B-2011

Run ID: A122947

Included Lab Sample IDs: 2452897, 2452898, 2452899, 2452900, 2452902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.9	96.4	P/P	90 - 110
Organic Carbon	96.4	96.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122949

Included Lab Sample IDs: 2452893, 2452894, 2452895, 2452896, 2452901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	104	P/P	90 - 110
Sulfate	102	104	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A122950

Included Lab Sample IDs: 2452893, 2452894, 2452895, 2452896, 2452901

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.7	95.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A122950

Included Lab Sample IDs: 2452893, 2452894, 2452895, 2452896, 2452901

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122978

Included Lab Sample IDs: 2452897, 2452898, 2452899, 2452900, 2452902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	96.5	96.0	P/P	90 - 110
NO2NO3-N	98.0	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122981

Included Lab Sample IDs: 2452897, 2452899, 2452900, 2452902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123011

Included Lab Sample IDs: 2452898

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123024

Included Lab Sample IDs: 2452897, 2452898, 2452899, 2452900, 2452902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.8	98.5	P/P	90 - 110
Kjeldahl Nitrogen	98.5	99.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123056

Included Lab Sample IDs: 2452897, 2452898, 2452899, 2452900, 2452902

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

Reference Method: EPA 8270E

Run ID: A123120

Included Lab Sample IDs: 2452913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	101		P	80 - 120
PCB-1260	85.3		P	80 - 120

Reference Method: EPA 8270E

Run ID: A123256

Included Lab Sample IDs: 2452913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	94.7		P	80 - 120
Alpha-Chlordane	104		P	80 - 120
Beta-BHC	98.5		P	80 - 120
Beta-Cyfluthrin	100		P	80 - 120
Bifenthrin	89.4		P	80 - 120
Chlorothalonil	96.1		P	80 - 120
Cis-Nonachlor	99.0		P	80 - 120
Cypermethrin	101		P	80 - 120
Dacthal	98.4		P	80 - 120
DDD-p,p'	86.1		P	80 - 120
DDE-p,p'	108		P	80 - 120
DDT-p,p'	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A123256
Included Lab Sample IDs: 2452913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Delta-BHC	99.3		P	80 - 120
Deltamethrin	100		P	80 - 120
Dichlobenil	91.5		P	80 - 120
Dicofol	98.0		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	98.3		P	80 - 120
Endosulfan Sulfate	104		P	80 - 120
Endrin	97.5		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	101		P	80 - 120
Ethalfuralin	107		P	80 - 120
Fenpropathrin	91.5		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	103		P	80 - 120
Heptachlor	92.7		P	80 - 120
Heptachlor Epoxide	90.2		P	80 - 120
Hexachlorobenzene	96.5		P	80 - 120
Kepone	88.9		P	80 - 120
Lambda-Cyhalothrin	99.3		P	80 - 120
Methoprene	101		P	80 - 120
Methoxychlor	88.9		P	80 - 120
MGK-264	97.7		P	80 - 120
Mirex	102		P	80 - 120
Oxychlordane	108		P	80 - 120
Permethrin	99.6		P	80 - 120
Phenothrin	102		P	80 - 120
Piperonyl Butoxide	95.9		P	80 - 120
Prallethrin	103		P	80 - 120
Tau-Fluvalinate	106		P	80 - 120
Tetramethrin	101		P	80 - 120
Trans-Nonachlor	85.8		P	80 - 120
Triclosan Methyl	82.6		P	80 - 120
Trifluralin	95.9		P	80 - 120

Reference Method: EPA 8276
Run ID: A123308
Included Lab Sample IDs: 2452913

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	104		P	80 - 120
Toxaphene	97.3		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		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	101				0.285	
	Color (true)	101				1.43	
EPA 180.1 Rev. 2.0	Turbidity	104				1.27	
EPA 300.0 Rev. 2.1	Chloride	106	102	107		0.0770	
	Sulfate	106	104	108		0.104	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	97.6	99.6			1.74
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.8					12.1
EPA 353.2 Rev. 2.0	NO2NO3-N	96.0	96.5	96.5			0.0
EPA 365.1 Rev. 2.0	Total-P	104	107	102			4.34
	Total-P	103	105	107			1.18
EPA 8270E	Aldrin	50.9	58.5	51.9			12.1
	Alpha-BHC	75.2	88.9	82.0			8.03
	Alpha-Chlordane	60.0	63.5	58.8			7.64
	Beta-BHC	99.9	85.4	89.4			4.62
	Beta-Cyfluthrin	56.7	88.7	90.6			2.07
	Bifenthrin	39.4	71.7	104			37.1
	Chlorothalonil	80.8	182	149			19.7
	Cis-Nonachlor	68.6	82.2	72.8			12.1
	Cypermethrin	37.0	56.1	70.6			23.0
	Dacthal	83.2	69.8	68.8			1.54
	DDD-p,p'	68.8	54.9	54.6			0.388
	DDE-p,p'	58.4	52.1	52.0			0.105
	DDT-p,p'	66.4	31.3	53.7			26.1
	Delta-BHC	84.9	98.9	98.0			0.842
	Deltamethrin	57.1	94.3	117			21.8
	Dichlobenil	62.9	43.4	35.0			21.4
	Dicofol	63.1	69.4	75.6			8.57
	Dieldrin	54.5	53.1	54.7			2.90
	Endosulfan I	67.9	74.2	63.2			15.9
	Endosulfan II	73.8	77.9	64.4			19.0
	Endosulfan Sulfate	82.8	77.0	79.4			3.02
	Endrin	64.6	66.9	76.7			13.7
	Endrin Aldehyde	83.3	50.6	34.2			38.6
	Endrin Ketone	76.9	54.1	67.4			21.9
	Esfenvalerate	62.7	126	113			10.7
	Ethalfuralin	83.1	109	106			2.28
	Fenpropathrin	61.9	78.0	83.0			6.26
	Gamma-BHC	82.2	88.4	92.6			4.57
	Gamma-Chlordane	54.1	68.5	55.0			21.8
	Heptachlor	50.9	60.7	63.1			3.86
	Heptachlor Epoxide	72.0	86.7	68.9			22.9
	Hexachlorobenzene	54.8	65.5	57.7			12.7
	Kepone	113	64.8	46.0			15.6
	Lambda-Cyhalothrin	46.6	99.0	91.9			7.47
	Methoprene	43.4	91.2	77.7			16.0
	Methoxychlor	66.3	71.7	79.0			9.62
	MGK-264	63.7	153	115			28.4
	Mirex	52.2	63.0	60.4			4.23
	Oxychlordane	58.1	77.1	79.9			3.69
	PCB-1016	82.0	71.7	77.1			7.28
	PCB-1260	98.9	78.6	84.6			7.36
	Permethrin	54.6	81.8	93.2			12.9
	Phenothrin	40.0	93.1	102			8.93
	Piperonyl Butoxide	121	94.0	108			11.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Prallethrin	52.5	56.2	59.3		5.30
	Tau-Fluvalinate	58.1	125	108		14.4
	Tetramethrin	96.8	166	147		12.2
	Trans-Nonachlor	60.3	90.0	67.1		29.2
	Triclosan Methyl	68.6	67.2	67.0		0.317
	Trifluralin	66.2	67.6	65.8		2.71
EPA 8276	Chlordane	91.4	77.7	84.4		8.23
	Toxaphene	109	82.7	84.5		2.13
SM 2320 B-2011	Total Alkalinity	97.8			0.494	
SM 2540 C-2015	TDS	92.4			6.91	
SM 2540 D-2015	TSS	102			7.41	
SM 4500-F- C-2011	Fluoride	101				0.986
SM 5310 B-2011	Organic Carbon	96.3	96.6	95.3		0.983

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2452893, 2452894, 2452895, 2452896, 2452901
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2452893, 2452894, 2452895, 2452896, 2452901
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2452893, 2452894, 2452895, 2452896, 2452901
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2452893, 2452894, 2452895, 2452896, 2452901
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2452897, 2452898, 2452899, 2452900, 2452902
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2452897, 2452898, 2452899, 2452900, 2452902
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2452897, 2452898, 2452899, 2452900, 2452902
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2452897, 2452898, 2452899, 2452900, 2452902
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2452913
EPA 8270E	PCBs in water matrices by GC/MS/MS	2452913
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2452913
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2452893, 2452894, 2452895, 2452896, 2452901
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2452893, 2452894, 2452895, 2452896, 2452901
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2452893, 2452894, 2452895, 2452896, 2452901
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2452893, 2452894, 2452895, 2452896, 2452901
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2452897, 2452898, 2452899, 2452900, 2452902

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	11/28/2023			11/28/2023 13:38	Blanca Fach	2452896
	11/28/2023			11/28/2023 13:42	Blanca Fach	2452893
	11/28/2023			11/28/2023 13:43	Blanca Fach	2452894
	11/28/2023			11/28/2023 13:44	Blanca Fach	2452895
	11/28/2023			11/28/2023 13:49	Blanca Fach	2452901
EPA 180.1 Rev. 2.0	11/28/2023			11/28/2023 13:40	Anna M. Plaviak	2452893
	11/28/2023			11/28/2023 13:41	Anna M. Plaviak	2452894
	11/28/2023			11/28/2023 13:42	Anna M. Plaviak	2452895, 2452896
	11/28/2023			11/28/2023 13:44	Anna M. Plaviak	2452901
EPA 300.0 Rev. 2.1	11/28/2023			11/30/2023 08:18	James L Waggeberby	2452894
	11/28/2023			11/30/2023 09:18	James L Waggeberby	2452893
	11/28/2023			11/30/2023 09:33	James L Waggeberby	2452895
	11/28/2023			11/30/2023 09:48	James L Waggeberby	2452896
EPA 350.1 Rev. 2.0	11/28/2023			11/30/2023 10:03	James L Waggeberby	2452901
	11/28/2023			12/06/2023 11:44	Khloe J Berg	2452900
	11/28/2023			12/06/2023 12:56	Khloe J Berg	2452897
	11/28/2023			12/06/2023 12:57	Khloe J Berg	2452898
	11/28/2023			12/06/2023 12:58	Khloe J Berg	2452899
EPA 351.2 Rev. 2.0	11/28/2023			12/06/2023 13:00	Khloe J Berg	2452902
	11/28/2023	12/01/2023 09:23	Simonne.V. Calhoun	12/05/2023 11:02	Samantha L Bates	2452897
	11/28/2023	12/01/2023 09:23	Simonne.V. Calhoun	12/05/2023 11:07	Samantha L Bates	2452898
	11/28/2023	12/01/2023 09:23	Simonne.V. Calhoun	12/05/2023 11:09	Samantha L Bates	2452899
	11/28/2023	12/01/2023 09:23	Simonne.V. Calhoun	12/05/2023 11:13	Samantha L Bates	2452900
EPA 353.2 Rev. 2.0	11/28/2023	12/01/2023 09:23	Simonne.V. Calhoun	12/05/2023 11:15	Samantha L Bates	2452902
	11/28/2023			11/30/2023 10:32	Anna M. Plaviak	2452899
	11/28/2023			11/30/2023 10:33	Anna M. Plaviak	2452900
	11/28/2023			11/30/2023 10:34	Anna M. Plaviak	2452902
	11/28/2023			11/30/2023 11:51	Anna M. Plaviak	2452897
EPA 365.1 Rev. 2.0	11/28/2023			11/30/2023 11:52	Anna M. Plaviak	2452898
	11/28/2023	11/30/2023 12:55	Adam P Silver	12/01/2023 12:57	James L Waggeberby	2452897
	11/28/2023	11/30/2023 12:55	Adam P Silver	12/01/2023 13:04	James L Waggeberby	2452899
	11/28/2023	11/30/2023 12:55	Adam P Silver	12/01/2023 13:05	James L Waggeberby	2452900
	11/28/2023	11/30/2023 12:55	Adam P Silver	12/01/2023 13:06	James L Waggeberby	2452902
EPA 8270E	11/28/2023	11/30/2023 12:55	Adam P Silver	12/04/2023 13:30	Chandler E Cox	2452898
	11/28/2023	12/01/2023 08:30	Rasheda Ghaffari	12/06/2023 03:04	Lipi Saha	2452913
	11/28/2023	12/01/2023 08:30	Rasheda Ghaffari	12/10/2023 22:25	Julie Wi	2452913
EPA 8276	11/28/2023	12/01/2023 08:30	Rasheda Ghaffari	12/16/2023 15:17	Kenedi Mills	2452913
SM 2320 B-2011	11/28/2023			11/29/2023 20:43	Chandler E Cox	2452893
	11/28/2023			11/29/2023 20:55	Chandler E Cox	2452894
	11/28/2023			11/29/2023 21:07	Chandler E Cox	2452895

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	11/28/2023			11/29/2023 21:19	Chandler E Cox	2452896
	11/28/2023			11/29/2023 21:32	Chandler E Cox	2452901
SM 2540 C-2015	11/28/2023			12/01/2023 15:02	Yijie Li	2452893, 2452894, 2452895, 2452896, 2452901
SM 2540 D-2015	11/28/2023			12/01/2023 15:02	Yijie Li	2452893, 2452894, 2452895, 2452896, 2452901
SM 4500-F- C-2011	11/28/2023			11/29/2023 20:43	Chandler E Cox	2452893
	11/28/2023			11/29/2023 20:55	Chandler E Cox	2452894
	11/28/2023			11/29/2023 21:07	Chandler E Cox	2452895
	11/28/2023			11/29/2023 21:19	Chandler E Cox	2452896
	11/28/2023			11/29/2023 21:32	Chandler E Cox	2452901
SM 5310 B-2011	11/28/2023			11/29/2023 18:37	Kenneth H Lee	2452897
	11/28/2023			11/29/2023 18:50	Kenneth H Lee	2452898
	11/28/2023			11/29/2023 19:32	Kenneth H Lee	2452899
	11/28/2023			11/29/2023 19:45	Kenneth H Lee	2452900
	11/28/2023			11/29/2023 20:00	Kenneth H Lee	2452902