

Chemical Analysis Report

NW-DIST-2023-01-26-02

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

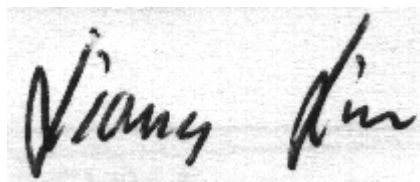
Event Description: **Western Lake Run**
Request ID: **RQ-2023-01-23-13**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 16-FEB-2023 16:23

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: Pond Creek West of Headwaters of Blackwater Bay **Collection Date/Time: 01/24/2023 12:15**

Field ID: G4NW0277

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2383522	EPA 8270E	Aldrin	0.68	U	ng/L	P425082	
		Alpha-BHC	0.10	U	ng/L	P425082	
		Alpha-Chlordane	0.21	U	ng/L	P425082	MS
		PCB-1016	2.1	U	ng/L	P425082	
		Beta-BHC	0.10	U	ng/L	P425082	
		PCB-1221	2.1	U	ng/L	P425082	
		Beta-Cyfluthrin	1.3	U	ng/L	P425082	
		PCB-1232	2.1	U	ng/L	P425082	
		Bifenthrin	0.52	U	ng/L	P425082	
		PCB-1242	2.1	U	ng/L	P425082	
		Carbophenothion	0.94	U	ng/L	P425082	
		PCB-1248	2.1	U	ng/L	P425082	
		Chlorothalonil	3.8	U	ng/L	P425082	
		PCB-1254	2.1	U	ng/L	P425082	
		Cis-Nonachlor	0.21	U	ng/L	P425082	
		PCB-1260	2.1	U	ng/L	P425082	
		Cypermethrin	1.6	U	ng/L	P425082	
		Dacthal	0.16	U	ng/L	P425082	
		DDD-p,p'	0.26	U	ng/L	P425082	MS
		DDE-p,p'	0.21	U	ng/L	P425082	
		DDT-p,p'	0.26	U	ng/L	P425082	
		Delta-BHC	0.42	U	ng/L	P425082	
		Deltamethrin	1.3	U	ng/L	P425082	
		Dichlobenil	0.26	U	ng/L	P425082	
		Dicofol	1.3	U	ng/L	P425082	
		Dieldrin	2.8		ng/L	P425082	
		Endosulfan I	0.42	U	ng/L	P425082	
		Endosulfan II	0.42	U	ng/L	P425082	
		Endosulfan Sulfate	0.31	U	ng/L	P425082	
		Endrin	0.42	U	ng/L	P425082	MS
		Endrin Aldehyde	0.79	U	ng/L	P425082	
		Endrin Ketone	0.42	U	ng/L	P425082	
		Esfenvalerate	0.79	U	ng/L	P425082	
		Ethalfuralin	0.16	U	ng/L	P425082	
		Fenpropathrin	0.26	U	ng/L	P425082	
		Gamma-BHC	0.13	U	ng/L	P425082	
		Gamma-Chlordane	0.21	U	ng/L	P425082	
		Heptachlor	0.21	U	ng/L	P425082	
		Heptachlor Epoxide	0.26	U	ng/L	P425082	
		Hexachlorobenzene**	1.0	U	ng/L	P425082	
		Kepone	5.2	U	ng/L	P425082	
		Lambda-Cyhalothrin	0.79	U	ng/L	P425082	
		Methoprene	0.79	U	ng/L	P425082	

Field ID: G4NW0277

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2383522	EPA 8270E	Methoxychlor	0.31	U	ng/L	P425082	MS
		MGK-264	0.21	U	ng/L	P425082	
		Mirex	0.37	U	ng/L	P425082	
		Oxychlordane	0.31	U	ng/L	P425082	
		Permethrin	1.7	U	ng/L	P425082	
		Phenothrin	0.94	U	ng/L	P425082	
		Piperonyl Butoxide	0.16	U	ng/L	P425082	
		Prallethrin	2.1	U	ng/L	P425082	MS
		Tau-Fluvalinate	0.26	U	ng/L	P425082	
		Tetramethrin	0.79	U	ng/L	P425082	
		Trans-Nonachlor	0.21	U	ng/L	P425082	
		Triclosan Methyl	0.16	U	ng/L	P425082	
		Trifluralin	0.21	U	ng/L	P425082	
		Chlordane	2.1	U	ng/L	P425082	
		Toxaphene	16	U	ng/L	P425082	
	EPA 8276						

Sample Location: CRESCENT LAKE

Collection Date/Time: 01/24/2023 10:56

Field ID: G5NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2383516	DEP SOP: NU-094-1	Color (true)	12	AQ	PCU	P425047	
	EPA 180.1 Rev. 2.0	Turbidity	1.9	Q	NTU	P425059	
	EPA 300.0 Rev. 2.1	Chloride	8.9		mg Cl/L	P425655	
		Sulfate	6.7		mg SO4/L	P425659	
	SM 2320 B-2011	Total Alkalinity	21		mg CaCO3/L	P425396	
	SM 2540 C-2015	TDS	54		mg/L	P425428	
	SM 2540 D-2015	TSS	2	I	mg/L	P425334	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P425400	MS
2383517	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P425612	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	J	mg N/L	P425196	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.46		mg N/L	P425261	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P425182	
	SM 5310 B-2011	Organic Carbon	2.5		mg C/L	P425292	

Ref. Method and Comment:

DEP SOP: NU-094-1: The sample expired upon receipt.

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: FB

Collection Date/Time: 01/24/2023 11:10

Field ID: FB_01242023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2383518	DEP SOP: NU-094-1	Color (true)	2.5	UQ	PCU	P425047	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	UQ	NTU	P425059	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P425655	
		Sulfate	0.20	U	mg SO4/L	P425659	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P425396	
	SM 2540 C-2015	TDS	15	U	mg/L	P425427	
	SM 2540 D-2015	TSS	2	U	mg/L	P425333	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P425400	MS
2383519	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P425727	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P425196	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P425261	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P425402	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P425292	

Ref. Method and Comment:

DEP SOP: NU-094-1: The sample expired upon receipt.

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P425047

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425059

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425655

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425659

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425612

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425727

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425196

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425261

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425182

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: P425402

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

Reference Method: EPA 8270E

Batch ID: P425082

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	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425082

Component	Result	Code	Units
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425082

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

Reference Method: EPA 8276

Batch ID: P425082

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

Reference Method: SM 2320 B-2011

Batch ID: P425396

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

Reference Method: SM 2540 C-2015

Batch ID: P425427

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015

Batch ID: P425428

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P425333

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P425334

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P425334

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425400

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P425292

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: P425047

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425059

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425655

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425659

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	95.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425612

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425727

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425196

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425261

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425182

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425402

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

Reference Method: EPA 8270E
Batch ID: P425082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	45.7		P	10 - 92.0
Alpha-BHC	93.7		P	75 - 107
Alpha-Chlordane	84.8		P	50 - 108
Beta-BHC	120		P	36 - 138
Beta-Cyfluthrin	79.5		P	20 - 161
Bifenthrin	50.9		P	10 - 119
Carbophenothion	72.7		P	19 - 94.0
Chlorothalonil	112		P	26 - 186
Cis-Nonachlor	62.5		P	42 - 119
Cypermethrin	71.6		P	22 - 150
Dacthal	95.5		P	72 - 119
DDD-p,p'	89.2		P	45 - 107
DDE-p,p'	83.9		P	48 - 106
DDT-p,p'	68.9		P	48 - 110
Delta-BHC	113		P	54 - 140
Deltamethrin	91.2		P	22 - 189
Dichlobenil	81.6		P	36 - 117
Dicofol	105		P	46 - 155
Dieldrin	89.8		P	54 - 110
Endosulfan I	75.6		P	59 - 105
Endosulfan II	88.0		P	51 - 118
Endosulfan Sulfate	105		P	57 - 121
Endrin	91.8		P	10 - 120
Endrin Aldehyde	73.7		P	34 - 118
Endrin Ketone	97.2		P	69 - 177
Esfenvalerate	84.2		P	23 - 168
Ethalfuralin	71.1		P	49 - 99.0
Fenpropathrin	62.8		P	34 - 117
Gamma-BHC	88.4		P	72 - 117
Gamma-Chlordane	60.7		P	43 - 106
Heptachlor	68.9		P	41 - 98.0
Heptachlor Epoxide	84.7		P	57 - 106
Hexachlorobenzene	67.4		P	36 - 99.0
Kepone	205		P	16 - 215
Lambda-Cyhalothrin	60.7		P	21 - 177
Methoprene	60.9		P	10 - 119
Methoxychlor	97.2		P	60 - 112
MGK-264	79.2		P	26 - 122
Mirex	53.5		P	10 - 169
Oxychlordane	75.3		P	43 - 105
PCB-1016	84.4		P	48 - 112
PCB-1260	93.6		P	44 - 118
Permethrin	103		P	24 - 148
Phenothrin	39.5		P	10 - 106
Piperonyl Butoxide	92.5		P	10 - 139
Prallethrin	82.6		P	17 - 109

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P425082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tau-Fluvalinate	78.8		P	13 - 131
Tetramethrin	69.2		P	10 - 132
Trans-Nonachlor	71.7		P	44 - 106
Triclosan Methyl	72.8		P	59 - 109
Trifluralin	72.8		P	44 - 101

Reference Method: EPA 8276
Batch ID: P425082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	105		P	61 - 116
Toxaphene	114		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P425396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.3		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P425427

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.4		P	90 - 110

Reference Method: SM 2540 C-2015
Batch ID: P425428

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.7		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P425333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	101		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P425334

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	97.7		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P425400

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P425292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383496	Chloride	97.4		P	90 - 110
2383506	Chloride	94.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425659

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383496	Sulfate	94.0		P	90 - 110
2383506	Sulfate	90.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383498	Ammonia-N	94.8	96.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383318	Ammonia-N	99.2	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425196

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383517	Kjeldahl Nitrogen	97.0	89.8	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383507	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383517	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383890	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P425082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382926	Aldrin	51.2	52.6	P/P	20 - 82.0
2382926	Alpha-BHC	87.8	91.7	P/P	71 - 109

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P425082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2382926	Alpha-Chlordane	100	109	P/F	42 - 106
2382926	Beta-BHC	118	126	P/P	69 - 180
2382926	Beta-Cyfluthrin	105	104	P/P	18 - 175
2382926	Bifenthrin	51.8	72.9	P/P	21 - 128
2382926	Carbophenothion	68.4	74.7	P/P	10 - 126
2382926	Chlorothalonil	114	114	P/P	10 - 300
2382926	Cis-Nonachlor	66.4	57.5	P/P	34 - 106
2382926	Cypermethrin	77.6	79.2	P/P	22 - 158
2382926	Dacthal	82.7	88.5	P/P	54 - 116
2382926	DDD-p,p'	107	96.9	F/P	34 - 107
2382926	DDE-p,p'	99.3	103	P/P	33 - 110
2382926	DDT-p,p'	63.8	73.8	P/P	50 - 122
2382926	Delta-BHC	122	127	P/P	77 - 193
2382926	Deltamethrin	126	95.4	P/P	10 - 195
2382926	Dichlobenil	49.2	50.5	P/P	25 - 113
2382926	Dicofol	78.1	79.5	P/P	38 - 247
2382926	Dieldrin	95.7	104	P/P	45 - 118
2382926	Endosulfan I	71.8	72.9	P/P	51 - 106
2382926	Endosulfan II	72.2	77.7	P/P	37 - 122
2382926	Endosulfan Sulfate	102	119	P/P	43 - 132
2382926	Endrin	100	108	P/F	29 - 101
2382926	Endrin Aldehyde	54.1	37.5	P/P	19 - 110
2382926	Endrin Ketone	77.9	70.9	P/P	60 - 140
2382926	Esfenvalerate	119	115	P/P	26 - 199
2382926	Ethalfuralin	72.4	80.5	P/P	45 - 99.0
2382926	Fenpropathrin	63.4	55.8	P/P	35 - 120
2382926	Gamma-BHC	75.6	75.6	P/P	63 - 128
2382926	Gamma-Chlordane	60.2	50.0	P/P	40 - 104
2382926	Heptachlor	60.8	67.8	P/P	36 - 97.0
2382926	Heptachlor Epoxide	71.7	82.7	P/P	49 - 184
2382926	Hexachlorobenzene	74.6	85.2	P/P	39 - 96.0
2382926	Kepone	175	182	P/P	10 - 217
2382926	Lambda-Cyhalothrin	90.3	83.8	P/P	21 - 193
2382926	Methoprene	100	95.2	P/P	20 - 106
2382926	Methoxychlor	48.2	53.5	F/P	53 - 118
2382926	MGK-264	82.3	83.8	P/P	40 - 118
2382926	Mirex	52.7	53.1	P/P	26 - 92.0
2382926	Oxychlordane	60.4	73.7	P/P	44 - 99.0
2382926	Permethrin	108	114	P/P	33 - 182
2382926	Phenothrin	94.0	54.1	P/P	10 - 129
2382926	Piperonyl Butoxide	101	79.7	P/P	10 - 211
2382926	Prallethrin	118	111	F/P	24 - 113
2382926	Tau-Fluvalinate	116	112	P/P	14 - 149
2382926	Tetramethrin	54.0	64.0	P/P	17 - 151
2382926	Trans-Nonachlor	64.3	65.5	P/P	42 - 102
2382926	Triclosan Methyl	77.9	67.1	P/P	48 - 108
2382926	Trifluralin	68.2	76.6	P/P	47 - 96.0
2383566	PCB-1016	87.8	91.8	P/P	46 - 111
2383566	PCB-1260	92.3	94.2	P/P	45 - 114

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P425082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383566	Chlordane	118	108	P/P	53 - 126
2383566	Toxaphene	127	123	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P425400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383190	Fluoride	104	102	F/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2383773	Organic Carbon	96.7	97.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P425047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383516	Color (true)	0.532	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425059

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383396	Turbidity	0.377	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383496	Chloride	4.79	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P425659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383496	Sulfate	5.75	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383498	Ammonia-N	1.87	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P425727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383318	Ammonia-N	0.347	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425196

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383517	Kjeldahl Nitrogen	6.87	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383507	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383517	Total-P	1.21	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383890	Total-P	1.42	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P425082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382926	Aldrin	2.81	Spike	P	0 - 41
2382926	Alpha-BHC	4.37	Spike	P	0 - 25
2382926	Alpha-Chlordane	8.26	Spike	P	0 - 33
2382926	Beta-BHC	6.12	Spike	P	0 - 36
2382926	Beta-Cyfluthrin	0.926	Spike	P	0 - 42
2382926	Bifenthrin	33.8	Spike	P	0 - 53
2382926	Carbophenothion	8.71	Spike	P	0 - 49
2382926	Chlorothalonil	0.282	Spike	P	0 - 71
2382926	Cis-Nonachlor	14.4	Spike	P	0 - 29
2382926	Cypermethrin	2.09	Spike	P	0 - 40
2382926	Dacthal	6.81	Spike	P	0 - 26
2382926	DDD-p,p'	10.1	Spike	P	0 - 39
2382926	DDE-p,p'	3.72	Spike	P	0 - 33
2382926	DDT-p,p'	14.5	Spike	P	0 - 40
2382926	Delta-BHC	4.21	Spike	P	0 - 37
2382926	Deltamethrin	27.4	Spike	P	0 - 100
2382926	Dichlobenil	2.66	Spike	P	0 - 40
2382926	Dicofol	1.72	Spike	P	0 - 31
2382926	Dieldrin	7.97	Spike	P	0 - 27
2382926	Endosulfan I	1.44	Spike	P	0 - 23
2382926	Endosulfan II	7.33	Spike	P	0 - 28
2382926	Endosulfan Sulfate	16.0	Spike	P	0 - 38
2382926	Endrin	7.84	Spike	P	0 - 63
2382926	Endrin Aldehyde	36.2	Spike	P	0 - 60
2382926	Endrin Ketone	9.45	Spike	P	0 - 37
2382926	Esfenvalerate	3.11	Spike	P	0 - 52
2382926	Ethalfuralin	10.6	Spike	P	0 - 23
2382926	Fenpropathrin	12.8	Spike	P	0 - 32
2382926	Gamma-BHC	0.0517	Spike	P	0 - 17
2382926	Gamma-Chlordane	16.4	Spike	P	0 - 40
2382926	Heptachlor	10.9	Spike	P	0 - 29
2382926	Heptachlor Epoxide	14.2	Spike	P	0 - 25
2382926	Hexachlorobenzene	13.2	Spike	P	0 - 36
2382926	Kepone	3.71	Spike	P	0 - 93
2382926	Lambda-Cyhalothrin	7.42	Spike	P	0 - 55
2382926	Methoprene	4.88	Spike	P	0 - 53
2382926	Methoxychlor	10.3	Spike	P	0 - 29

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P425082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382926	MGK-264	1.75	Spike	P	0 - 35
2382926	Mirex	0.776	Spike	P	0 - 46
2382926	Oxychlordane	19.9	Spike	P	0 - 29
2382926	Permethrin	5.77	Spike	P	0 - 44
2382926	Phenothrin	53.9	Spike	P	0 - 56
2382926	Piperonyl Butoxide	23.2	Spike	P	0 - 100
2382926	Prallethrin	5.97	Spike	P	0 - 42
2382926	Tau-Fluvalinate	3.31	Spike	P	0 - 54
2382926	Tetramethrin	16.8	Spike	P	0 - 51
2382926	Trans-Nonachlor	1.92	Spike	P	0 - 37
2382926	Triclosan Methyl	14.9	Spike	P	0 - 31
2382926	Trifluralin	11.5	Spike	P	0 - 30
2383566	PCB-1016	4.39	Spike	P	0 - 32
2383566	PCB-1260	2.03	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P425082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383566	Chlordane	8.25	Spike	P	0 - 25
2383566	Toxaphene	2.93	Spike	P	0 - 26

Reference Method: SM 2320 B-2011
Batch ID: P425396

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383190	Total Alkalinity	0.142	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P425427

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2382577	TDS	5.08	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P425428

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383441	TDS	5.17	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P425334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383441	TSS	7.14	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P425400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383190	Fluoride	1.47	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P425292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2383773	Organic Carbon	0.435	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2383522

Field Sample ID: G4NW0277

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	101	P	29 - 130
EPA 8270E	Decachlorobiphenyl	53.6	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	52.1	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	63.9	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	61.0	P	30 - 101
EPA 8276	PCNB	93.9	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117120

Included Lab Sample IDs: 2383516, 2383518

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117125

Included Lab Sample IDs: 2383516, 2383518

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

Reference Method: EPA 8270E

Run ID: A117198

Included Lab Sample IDs: 2383522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.5		P	80 - 120
PCB-1260	102		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117205

Included Lab Sample IDs: 2383517, 2383519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	108	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117206

Included Lab Sample IDs: 2383517

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

Reference Method: SM 5310 B-2011

Run ID: A117216

Included Lab Sample IDs: 2383517, 2383519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.2	99.1	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117220

Included Lab Sample IDs: 2383522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.1		P	80 - 120
Alpha-BHC	96.7		P	80 - 120
Alpha-Chlordane	87.9		P	80 - 120
Beta-BHC	107		P	80 - 120
Beta-Cyfluthrin	98.6		P	80 - 120
Bifenthrin	98.8		P	80 - 120
Carbophenothion	92.9		P	80 - 120
Chlorothalonil	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117220
Included Lab Sample IDs: 2383522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cis-Nonachlor	105		P	80 - 120
Cypermethrin	115		P	80 - 120
Dacthal	111		P	80 - 120
DDD-p,p'	96.2		P	80 - 120
DDE-p,p'	96.0		P	80 - 120
DDT-p,p'	97.0		P	80 - 120
Delta-BHC	90.8		P	80 - 120
Deltamethrin	100		P	80 - 120
Dichlobenil	92.5		P	80 - 120
Dicofol	98.8		P	80 - 120
Dieldrin	95.4		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	110		P	80 - 120
Endosulfan Sulfate	96.1		P	80 - 120
Endrin	93.9		P	80 - 120
Endrin Aldehyde	114		P	80 - 120
Endrin Ketone	113		P	80 - 120
Esfenvalerate	98.9		P	80 - 120
Ethalfuralin	102		P	80 - 120
Fenpropathrin	81.3		P	80 - 120
Gamma-BHC	112		P	80 - 120
Gamma-Chlordane	105		P	80 - 120
Heptachlor	109		P	80 - 120
Heptachlor Epoxide	108		P	80 - 120
Hexachlorobenzene	106		P	80 - 120
Kepone	83.8		P	80 - 120
Lambda-Cyhalothrin	113		P	80 - 120
Methoprene	92.1		P	80 - 120
Methoxychlor	87.2		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	107		P	80 - 120
Oxychlordane	101		P	80 - 120
Permethrin	94.1		P	80 - 120
Phenothrin	95.0		P	80 - 120
Piperonyl Butoxide	89.8		P	80 - 120
Prallethrin	87.2		P	80 - 120
Tau-Fluvalinate	98.7		P	80 - 120
Tetramethrin	80.2		P	80 - 120
Trans-Nonachlor	109		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	103		P	80 - 120

Reference Method: EPA 8276
Run ID: A117231
Included Lab Sample IDs: 2383522

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	108		P	80 - 120
Toxaphene	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117263

Included Lab Sample IDs: 2383517, 2383519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.4	90.9	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117270

Included Lab Sample IDs: 2383516, 2383518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.5	96.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117270

Included Lab Sample IDs: 2383516, 2383518

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117317

Included Lab Sample IDs: 2383516, 2383518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.1	99.7	P/P	90 - 110
Sulfate	97.1	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117331

Included Lab Sample IDs: 2383519

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117354

Included Lab Sample IDs: 2383517

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117409

Included Lab Sample IDs: 2383519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.3	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	103			0.532	
EPA 180.1 Rev. 2.0	Turbidity	102			0.377	
EPA 300.0 Rev. 2.1	Chloride	98.0	97.4	94.8	4.79	
	Sulfate	95.7	94.0	90.6	5.75	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	94.8	96.8		1.87
	Ammonia-N	101	99.2	99.6		0.347
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	97.0	89.8		6.87
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	106	101			0.0
EPA 365.1 Rev. 2.0	Total-P	105	106	105		1.21
	Total-P	104	105	107		1.42
EPA 8270E	Aldrin	45.7	51.2	52.6		2.81
	Alpha-BHC	93.7	87.8	91.7		4.37
	Alpha-Chlordane	84.8	100	109		8.26
	Beta-BHC	120	118	126		6.12
	Beta-Cyfluthrin	79.5	105	104		0.926
	Bifenthrin	50.9	51.8	72.9		33.8
	Carbophenothion	72.7	68.4	74.7		8.71
	Chlorothalonil	112	114	114		0.282
	Cis-Nonachlor	62.5	66.4	57.5		14.4
	Cypermethrin	71.6	77.6	79.2		2.09
	Dacthal	95.5	82.7	88.5		6.81
	DDD-p,p'	89.2	107	96.9		10.1
	DDE-p,p'	83.9	99.3	103		3.72
	DDT-p,p'	68.9	63.8	73.8		14.5
	Delta-BHC	113	122	127		4.21
	Deltamethrin	91.2	126	95.4		27.4
	Dichlobenil	81.6	49.2	50.5		2.66
	Dicofol	105	78.1	79.5		1.72
	Dieldrin	89.8	95.7	104		7.97
	Endosulfan I	75.6	71.8	72.9		1.44
	Endosulfan II	88.0	72.2	77.7		7.33
	Endosulfan Sulfate	105	102	119		16.0
	Endrin	91.8	100	108		7.84
	Endrin Aldehyde	73.7	54.1	37.5		36.2
	Endrin Ketone	97.2	77.9	70.9		9.45
	Esfenvalerate	84.2	119	115		3.11
	Ethalfuralin	71.1	72.4	80.5		10.6
	Fenpropathrin	62.8	63.4	55.8		12.8
	Gamma-BHC	88.4	75.6	75.6		0.0517
	Gamma-Chlordane	60.7	60.2	50.0		16.4
	Heptachlor	68.9	60.8	67.8		10.9
	Heptachlor Epoxide	84.7	71.7	82.7		14.2
	Hexachlorobenzene	67.4	74.6	85.2		13.2
	Kepone	205	175	182		3.71
	Lambda-Cyhalothrin	60.7	90.3	83.8		7.42
	Methoprene	60.9	100	95.2		4.88
	Methoxychlor	97.2	48.2	53.5		10.3
	MGK-264	79.2	82.3	83.8		1.75
	Mirex	53.5	52.7	53.1		0.776
	Oxychlordane	75.3	60.4	73.7		19.9
	PCB-1016	84.4	87.8	91.8		4.39
	PCB-1260	93.6	92.3	94.2		2.03
	Permethrin	103	108	114		5.77
	Phenothrin	39.5	94.0	54.1		53.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Piperonyl Butoxide	92.5	101	79.7		23.2
	Prallethrin	82.6	118	111		5.97
	Tau-Fluvalinate	78.8	116	112		3.31
	Tetramethrin	69.2	54.0	64.0		16.8
	Trans-Nonachlor	71.7	64.3	65.5		1.92
	Triclosan Methyl	72.8	77.9	67.1		14.9
	Trifluralin	72.8	68.2	76.6		11.5
EPA 8276	Chlordane	105	118	108		8.25
	Toxaphene	114	127	123		2.93
SM 2320 B-2011	Total Alkalinity	97.3			0.142	
SM 2540 C-2015	TDS	97.4			5.08	
	TDS	98.7			5.17	
SM 2540 D-2015	TSS	101				
	TSS	97.7			7.14	
SM 4500-F- C-2011	Fluoride	104	104	102		1.47
SM 5310 B-2011	Organic Carbon	96.8	96.7	97.3		0.435

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2383516, 2383518
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2383516, 2383518
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2383516, 2383518
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2383516, 2383518
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2383517, 2383519
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2383517, 2383519
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2383517, 2383519
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2383517, 2383519
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2383522
EPA 8270E	PCBs in water matrices by GC/MS/MS	2383522
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2383522
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2383516, 2383518
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2383516, 2383518
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2383516, 2383518
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2383516, 2383518
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2383517, 2383519

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	01/26/2023			01/26/2023 14:37	Alexis Price	2383516
	01/26/2023			01/26/2023 14:38	Alexis Price	2383518
EPA 180.1 Rev. 2.0	01/26/2023			01/26/2023 13:45	Chandler E Cox	2383516, 2383518
EPA 300.0 Rev. 2.1	01/26/2023			02/08/2023 21:41	Anna M. Plaviak	2383516
	01/26/2023			02/08/2023 21:56	Anna M. Plaviak	2383518
EPA 350.1 Rev. 2.0	01/26/2023			02/09/2023 13:13	Ping Hua	2383517
	01/26/2023			02/13/2023 10:36	Ping Hua	2383519
EPA 351.2 Rev. 2.0	01/26/2023	01/31/2023 12:30	Simonne.V. Calhoun	02/03/2023 16:58	Samantha L Bates	2383517
	01/26/2023	01/31/2023 12:30	Simonne.V. Calhoun	02/03/2023 17:02	Samantha L Bates	2383519
EPA 353.2 Rev. 2.0	01/26/2023			02/01/2023 11:50	Beverly Y. Sanders	2383517
	01/26/2023			02/01/2023 12:00	Beverly Y. Sanders	2383519
EPA 365.1 Rev. 2.0	01/26/2023	01/31/2023 13:47	Adam P Silver	02/01/2023 13:15	James L Waggeberby	2383517
	01/26/2023	02/06/2023 03:24	Adam P Silver	02/08/2023 13:13	James L Waggeberby	2383519
EPA 8270E	01/26/2023	01/30/2023 08:00	Fe-Val Siddell	01/31/2023 23:14	Vandana T. Nagar	2383522
	01/26/2023	01/30/2023 08:00	Fe-Val Siddell	02/01/2023 20:15	Julie Wi	2383522
EPA 8276	01/26/2023	01/30/2023 08:00	Fe-Val Siddell	02/02/2023 10:03	Lipi Saha	2383522
SM 2320 B-2011	01/26/2023			02/03/2023 07:56	Dale L. Simmons	2383516
	01/26/2023			02/03/2023 08:06	Dale L. Simmons	2383518
SM 2540 C-2015	01/26/2023			01/27/2023 16:11	Yijie Li	2383516, 2383518
SM 2540 D-2015	01/26/2023			01/27/2023 16:11	Yijie Li	2383516, 2383518
SM 4500-F- C-2011	01/26/2023			02/03/2023 07:56	Dale L. Simmons	2383516
	01/26/2023			02/03/2023 08:06	Dale L. Simmons	2383518
SM 5310 B-2011	01/26/2023			02/01/2023 19:11	Elise M. Gillis	2383517
	01/26/2023			02/01/2023 20:05	Elise M. Gillis	2383519