

Chemical Analysis Report

SW-DIST-2023-07-28-01

Florida DEP Laboratory
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DOH Accreditation E31780

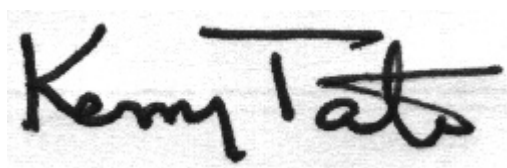
Event Description: **Run 10**
Request ID: **RQ-2023-07-17-53**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 10-AUG-2023 13:09

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the name.

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: Little Lake Wilson Center

Collection Date/Time: 07/27/2023 10:45

Field ID: G1SW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427566	DEP SOP: NU-094-1	Color (true)	29		PCU	P433184	
	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P433186	
	EPA 300.0 Rev. 2.1	Chloride	81		mg Cl/L	P433407	
		Sulfate	1.9		mg SO4/L	P433410	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P433355	
	SM 2540 C-2015	TDS	221		mg/L	P433609	
	SM 2540 D-2015	TSS	4	I	mg/L	P433522	
2427567	SM 4500-F- C-2011	Fluoride	0.075	I	mg F/L	P433358	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P433463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P433319	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433246	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P433293	
2427589	SM 5310 B-2011	Organic Carbon	12		mg C/L	P433376	
	EPA 8270E	Aldrin	0.69	U	ng/L	P433074	
		Alpha-BHC	0.11	U	ng/L	P433074	
		Alpha-Chlordane	0.21	U	ng/L	P433074	
		PCB-1016	2.1	U	ng/L	P433074	
		Beta-BHC	0.11	U	ng/L	P433074	
		PCB-1221	2.1	U	ng/L	P433074	
		Beta-Cyfluthrin	1.3	U	ng/L	P433074	
		PCB-1232	2.1	U	ng/L	P433074	
		Bifenthrin	0.53	U	ng/L	P433074	
		PCB-1242	2.1	U	ng/L	P433074	
		Carbophenothion	0.95	U	ng/L	P433074	
		PCB-1248	2.1	U	ng/L	P433074	
		Chlorothalonil	3.8	U	ng/L	P433074	
		PCB-1254	2.1	U	ng/L	P433074	
		Cis-Nonachlor	0.21	U	ng/L	P433074	
		PCB-1260	2.1	U	ng/L	P433074	
		Cypermethrin	1.6	U	ng/L	P433074	
		Dacthal	0.16	U	ng/L	P433074	
		DDD-p,p'	0.26	U	ng/L	P433074	
		DDE-p,p'	0.21	U	ng/L	P433074	
		DDT-p,p'	0.85	U	ng/L	P433074	
		Delta-BHC	0.42	U	ng/L	P433074	
		Deltamethrin	1.3	U	ng/L	P433074	
		Dichlobenil	0.26	U	ng/L	P433074	
		Dicofol	1.3	U	ng/L	P433074	
		Dieldrin	0.42	U	ng/L	P433074	
		Endosulfan I	0.42	U	ng/L	P433074	
		Endosulfan II	0.95	U	ng/L	P433074	
		Endosulfan Sulfate	0.32	U	ng/L	P433074	
		Endrin	0.95	U	ng/L	P433074	
		Endrin Aldehyde	0.79	U	ng/L	P433074	

Field ID: G1SW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427589	EPA 8270E	Endrin Ketone	0.42	U	ng/L	P433074	
		Esfenvalerate	0.79	U	ng/L	P433074	
		Ethalfuralin	0.16	U	ng/L	P433074	
		Fenpropathrin	0.26	U	ng/L	P433074	
		Gamma-BHC	0.13	U	ng/L	P433074	
		Gamma-Chlordane	0.21	U	ng/L	P433074	
		Heptachlor	0.21	U	ng/L	P433074	
		Heptachlor Epoxide	0.26	U	ng/L	P433074	
		Hexachlorobenzene**	1.1	U	ng/L	P433074	
		Kepone	14	UJ	ng/L	P433074	CCV
		Lambda-Cyhalothrin	0.79	U	ng/L	P433074	
		Methoprene	0.79	U	ng/L	P433074	
		Methoxychlor	0.32	U	ng/L	P433074	
		MGK-264	0.21	U	ng/L	P433074	
		Mirex	0.37	U	ng/L	P433074	
		Oxychlordane	0.32	U	ng/L	P433074	
		Permethrin	1.7	U	ng/L	P433074	
		Phenothrin	0.95	U	ng/L	P433074	
		Piperonyl Butoxide	0.16	U	ng/L	P433074	
		Prallethrin	2.1	U	ng/L	P433074	
		Tau-Fluvalinate	0.26	U	ng/L	P433074	MS
		Tetramethrin	0.79	U	ng/L	P433074	
		Trans-Nonachlor	0.21	U	ng/L	P433074	
		Triclosan Methyl	0.16	U	ng/L	P433074	
		Trifluralin	0.21	U	ng/L	P433074	
	EPA 8276	Chlordane	2.1	U	ng/L	P433074	
		Toxaphene	16	U	ng/L	P433074	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: White Trout Lake at Center

Collection Date/Time: 07/27/2023 11:30

Field ID: G1SW0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427562	DEP SOP: NU-094-1	Color (true)	11		PCU	P433184	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I	NTU	P433186	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P433407	
		Sulfate	23		mg SO4/L	P433410	
	SM 2320 B-2011	Total Alkalinity	38		mg CaCO3/L	P433355	
	SM 2540 C-2015	TDS	147		mg/L	P433608	
	SM 2540 D-2015	TSS	2	I	mg/L	P433521	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P433358	
2427564	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P433463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P433318	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433245	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P433212	
	SM 5310 B-2011	Organic Carbon	6.2		mg C/L	P433376	

Ref. Method and Comment:

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

Sample Location: Lake Jackson at Center

Collection Date/Time: 07/27/2023 12:30

Field ID: G1SW0124

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427563	DEP SOP: NU-094-1	Color (true)	70		PCU	P433184	
	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P433186	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P433407	
		Sulfate	3.3		mg SO4/L	P433410	
	SM 2320 B-2011	Total Alkalinity	9.5		mg CaCO3/L	P433355	
	SM 2540 C-2015	TDS	124	A	mg/L	P433609	
	SM 2540 D-2015	TSS	3	IA	mg/L	P433522	
2427565	SM 4500-F- C-2011	Fluoride	0.078	I	mg F/L	P433358	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P433463	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P433319	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433245	
	EPA 365.1 Rev. 2.0	Total-P	0.024		mg P/L	P433293	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P433376	

Ref. Method and Comment:

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

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P433184

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433186

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433410

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433463

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433318

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433319

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433245

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433246

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433212

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433293

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

Reference Method: EPA 8270E
Batch ID: P433074

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'	0.80	U	ng/L
DDT-p,p'	0.80	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P433074

Component	Result	Code	Units
Endosulfan II	0.90	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Kepone	14	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P433074

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

Reference Method: EPA 8276

Batch ID: P433074

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: P433355

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

Reference Method: SM 2540 C-2015

Batch ID: P433608

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015

Batch ID: P433609

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P433521

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P433521

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P433522

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P433376

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: P433184

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.0		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433186

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433410

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433463

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433319

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433245

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433246

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433212

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433293

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

Reference Method: EPA 8270E

Batch ID: P433074

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.0		P	30 - 96.0
Alpha-BHC	86.8		P	70 - 109
Alpha-Chlordane	82.5		P	45 - 107
Beta-BHC	83.3		P	64 - 138
Beta-Cyfluthrin	81.5		P	17 - 141
Bifenthrin	53.3		P	10 - 113
Carbophenothion	48.9		P	24 - 91.0
Chlorothalonil	90.6		P	26 - 180
Cis-Nonachlor	74.6		P	37 - 102
Cypermethrin	94.8		P	20 - 133
Dacthal	85.8		P	69 - 114
DDD-p,p'	73.8		P	42 - 105
DDE-p,p'	77.5		P	42 - 106
DDT-p,p'	70.0		P	42 - 107
Delta-BHC	96.3		P	67 - 144
Deltamethrin	128		P	15 - 149
Dichlobenil	74.9		P	46 - 117
Dicofol	76.8		P	34 - 114
Dieldrin	79.2		P	50 - 108
Endosulfan I	89.0		P	55 - 104
Endosulfan II	60.6		P	51 - 111
Endosulfan Sulfate	77.2		P	56 - 121
Endrin	80.1		P	10 - 106
Endrin Aldehyde	69.6		P	34 - 114
Endrin Ketone	82.6		P	63 - 177
Esfenvalerate	88.4		P	29 - 143
Ethalfuralin	75.8		P	46 - 96.0
Fenpropathrin	85.0		P	28 - 115
Gamma-BHC	83.6		P	65 - 121
Gamma-Chlordane	56.3		P	39 - 103
Heptachlor	71.1		P	39 - 94.0
Heptachlor Epoxide	81.9		P	54 - 104
Hexachlorobenzene	67.7		P	36 - 100
Kepone	79.9		P	10 - 225
Lambda-Cyhalothrin	64.8		P	10 - 135
Methoprene	48.7		P	10 - 109
Methoxychlor	77.7		P	52 - 112
MGK-264	63.0		P	44 - 117
Mirex	65.4		P	20 - 90.0
Oxychlordane	73.8		P	44 - 102

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P433074

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1016	66.9		P	45 - 107
PCB-1260	70.1		P	40 - 118
Permethrin	73.5		P	18 - 135
Phenothrin	57.8		P	10 - 102
Piperonyl Butoxide	66.0		P	28 - 156
Prallethrin	69.7		P	28 - 113
Tau-Fluvalinate	88.3		P	10 - 123
Tetramethrin	116		P	18 - 158
Trans-Nonachlor	54.1		P	39 - 104
Triclosan Methyl	82.4		P	54 - 108
Trifluralin	72.1		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P433074

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.7		P	52 - 117
Toxaphene	89.4		P	44 - 125

Reference Method: SM 2320 B-2011
Batch ID: P433355

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.9		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P433608

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.3		P	90 - 110

Reference Method: SM 2540 C-2015
Batch ID: P433609

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

Reference Method: SM 2540 D-2015
Batch ID: P433521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.9		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P433522

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	103		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433376

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427501	Chloride	102		P	90 - 110
2427752	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433410

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427501	Sulfate	102		P	90 - 110
2427752	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427564	Ammonia-N	98.0	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427564	Kjeldahl Nitrogen	93.3	96.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427485	NO2NO3-N	96.0	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433246

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427567	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427502	Total-P	102	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427567	Total-P	108	107	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P433074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2426826	PCB-1016	61.7	57.3	P/P	45 - 107
2426826	PCB-1260	60.2	63.9	P/P	40 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P433074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2426849	Aldrin	53.6	51.8	P/P	24 - 81.0
2426849	Alpha-BHC	99.0	94.2	P/P	65 - 110
2426849	Alpha-Chlordane	78.5	75.3	P/P	43 - 119
2426849	Beta-BHC	77.7	65.6	P/P	54 - 165
2426849	Beta-Cyfluthrin	99.0	123	P/P	27 - 165
2426849	Bifenthrin	76.9	84.5	P/P	17 - 117
2426849	Carbophenothion	53.7	65.2	P/P	21 - 108
2426849	Chlorothalonil	116	133	P/P	10 - 255
2426849	Cis-Nonachlor	85.4	76.6	P/P	34 - 98.0
2426849	Cypermethrin	103	120	P/P	25 - 143
2426849	Dacthal	96.5	86.5	P/P	55 - 139
2426849	DDD-p,p'	83.0	76.1	P/P	30 - 109
2426849	DDE-p,p'	78.8	74.9	P/P	35 - 106
2426849	DDT-p,p'	74.3	80.4	P/P	41 - 101
2426849	Delta-BHC	117	115	P/P	58 - 165
2426849	Deltamethrin	154	187	P/P	10 - 194
2426849	Dichlobenil	61.2	64.2	P/P	22 - 114
2426849	Dicofol	82.2	81.4	P/P	17 - 133
2426849	Dieldrin	76.7	74.8	P/P	45 - 129
2426849	Endosulfan I	90.4	81.8	P/P	49 - 104
2426849	Endosulfan II	61.5	68.1	P/P	37 - 117
2426849	Endosulfan Sulfate	67.5	70.8	P/P	38 - 128
2426849	Endrin	77.7	80.7	P/P	35 - 116
2426849	Endrin Aldehyde	57.1	49.3	P/P	19 - 108
2426849	Endrin Ketone	87.1	75.1	P/P	44 - 134
2426849	Esfenvalerate	126	155	P/P	27 - 176
2426849	Ethalfuralin	77.8	71.2	P/P	49 - 100
2426849	Fenpropathrin	107	103	P/P	34 - 117
2426849	Gamma-BHC	100	91.3	P/P	59 - 129
2426849	Gamma-Chlordane	51.6	59.5	P/P	33 - 107
2426849	Heptachlor	73.6	67.6	P/P	37 - 94.0
2426849	Heptachlor Epoxide	86.9	82.8	P/P	38 - 118
2426849	Hexachlorobenzene	65.8	64.7	P/P	35 - 97.0
2426849	Kepone	84.3	80.4	P/P	10 - 221
2426849	Lambda-Cyhalothrin	164	187	P/P	23 - 190
2426849	Methoprene	63.3	81.7	P/P	21 - 109
2426849	Methoxychlor	68.1	75.8	P/P	46 - 118
2426849	MGK-264	66.8	80.7	P/P	39 - 122
2426849	Mirex	75.4	73.0	P/P	25 - 90.0
2426849	Oxychlordane	66.2	64.1	P/P	42 - 100
2426849	Permethrin	86.7	97.5	P/P	33 - 181
2426849	Phenothrin	70.1	87.6	P/P	12 - 125
2426849	Piperonyl Butoxide	67.6	77.0	P/P	10 - 178
2426849	Prallethrin	100	120	P/P	24 - 122
2426849	Tau-Fluvalinate	128	157	P/F	13 - 151
2426849	Tetramethrin	166	169	P/P	16 - 172
2426849	Trans-Nonachlor	47.1	55.1	P/P	39 - 100
2426849	Triclosan Methyl	78.4	62.0	P/P	43 - 110
2426849	Trifluralin	70.5	66.9	P/P	45 - 94.0

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P433074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2426826	Chlordane	69.7	69.1	P/P	43 - 123
2426826	Toxaphene	84.7	82.5	P/P	27 - 156

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427387	Fluoride	101	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433376

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427388	Organic Carbon	92.2	93.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433184

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427500	Color (true)	5.21	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427400	Turbidity	1.52	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433407

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427501	Chloride	0.0568	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427501	Sulfate	0.0167	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427564	Ammonia-N	2.63	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427564	Kjeldahl Nitrogen	2.29	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433319

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427675	Kjeldahl Nitrogen	14.2	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427485	NO2NO3-N	0.506	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P433246

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427567	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433212

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427502	Total-P	1.75	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433293

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427567	Total-P	0.567	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P433074

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2426826	PCB-1016	7.46	Spike	P	0 - 25
2426826	PCB-1260	6.01	Spike	P	0 - 30
2426849	Aldrin	3.42	Spike	P	0 - 41
2426849	Alpha-BHC	4.94	Spike	P	0 - 25
2426849	Alpha-Chlordane	4.13	Spike	P	0 - 32
2426849	Beta-BHC	15.0	Spike	P	0 - 33
2426849	Beta-Cyfluthrin	21.6	Spike	P	0 - 43
2426849	Bifenthrin	9.52	Spike	P	0 - 52
2426849	Carbophenothion	19.2	Spike	P	0 - 49
2426849	Chlorothalonil	13.6	Spike	P	0 - 82
2426849	Cis-Nonachlor	10.9	Spike	P	0 - 33
2426849	Cypermethrin	15.5	Spike	P	0 - 51
2426849	Dacthal	10.9	Spike	P	0 - 27
2426849	DDD-p,p'	8.71	Spike	P	0 - 39
2426849	DDE-p,p'	5.07	Spike	P	0 - 31
2426849	DDT-p,p'	7.86	Spike	P	0 - 29
2426849	Delta-BHC	2.31	Spike	P	0 - 35
2426849	Deltamethrin	19.6	Spike	P	0 - 100
2426849	Dichlobenil	4.80	Spike	P	0 - 40
2426849	Dicofol	0.860	Spike	P	0 - 37
2426849	Dieldrin	2.54	Spike	P	0 - 27
2426849	Endosulfan I	9.93	Spike	P	0 - 23
2426849	Endosulfan II	10.1	Spike	P	0 - 34
2426849	Endosulfan Sulfate	4.76	Spike	P	0 - 36
2426849	Endrin	3.80	Spike	P	0 - 45
2426849	Endrin Aldehyde	14.7	Spike	P	0 - 76
2426849	Endrin Ketone	14.8	Spike	P	0 - 43
2426849	Esfenvalerate	20.6	Spike	P	0 - 51
2426849	Ethalfuralin	8.80	Spike	P	0 - 22
2426849	Fenpropathrin	3.93	Spike	P	0 - 49

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P433074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2426849	Gamma-BHC	9.43	Spike	P	0 - 28
2426849	Gamma-Chlordane	14.2	Spike	P	0 - 40
2426849	Heptachlor	8.51	Spike	P	0 - 29
2426849	Heptachlor Epoxide	4.87	Spike	P	0 - 33
2426849	Hexachlorobenzene	1.74	Spike	P	0 - 36
2426849	Kepone	4.69	Spike	P	0 - 85
2426849	Lambda-Cyhalothrin	13.2	Spike	P	0 - 55
2426849	Methoprene	25.4	Spike	P	0 - 53
2426849	Methoxychlor	10.8	Spike	P	0 - 50
2426849	MGK-264	18.8	Spike	P	0 - 43
2426849	Mirex	3.16	Spike	P	0 - 40
2426849	Oxychlordane	3.31	Spike	P	0 - 31
2426849	Permethrin	11.7	Spike	P	0 - 50
2426849	Phenothrin	22.2	Spike	P	0 - 58
2426849	Piperonyl Butoxide	12.9	Spike	P	0 - 100
2426849	Prallethrin	17.7	Spike	P	0 - 39
2426849	Tau-Fluvalinate	20.0	Spike	P	0 - 54
2426849	Tetramethrin	2.09	Spike	P	0 - 51
2426849	Trans-Nonachlor	15.6	Spike	P	0 - 39
2426849	Triclosan Methyl	23.3	Spike	P	0 - 31
2426849	Trifluralin	5.24	Spike	P	0 - 22

Reference Method: EPA 8276

Batch ID: P433074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2426826	Chlordane	0.872	Spike	P	0 - 28
2426826	Toxaphene	2.54	Spike	P	0 - 27

Reference Method: SM 2320 B-2011

Batch ID: P433355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427387	Total Alkalinity	0.00734	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P433608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427236	TDS	3.92	Sample	P	0 - 10

Reference Method: SM 2540 C-2015

Batch ID: P433609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427563	TDS	7.23	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427387	Fluoride	0.542	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P433376

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427388	Organic Carbon	1.78	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2427589

Field Sample ID: G1SW0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.3	P	37 - 129
EPA 8270E	Decachlorobiphenyl	67.4	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	49.8	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	62.8	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	66.2	P	28 - 102
EPA 8276	PCNB	93.6	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A120710

Included Lab Sample IDs: 2427562, 2427563, 2427566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	99.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A120711

Included Lab Sample IDs: 2427562, 2427563, 2427566

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120733

Included Lab Sample IDs: 2427564, 2427565, 2427567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120763

Included Lab Sample IDs: 2427562, 2427563, 2427566

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120801

Included Lab Sample IDs: 2427564

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A120803

Included Lab Sample IDs: 2427562, 2427563, 2427566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.8	94.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120803

Included Lab Sample IDs: 2427562, 2427563, 2427566

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	102	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A120808

Included Lab Sample IDs: 2427589

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A120808
Included Lab Sample IDs: 2427589

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.0		P	80 - 120
Alpha-BHC	98.5		P	80 - 120
Alpha-Chlordane	104		P	80 - 120
Beta-BHC	103		P	80 - 120
Beta-Cyfluthrin	93.2		P	80 - 120
Bifenthrin	95.3		P	80 - 120
Carbophenothion	92.9		P	80 - 120
Chlorothalonil	95.4		P	80 - 120
Cis-Nonachlor	105		P	80 - 120
Cypermethrin	104		P	80 - 120
Dacthal	106		P	80 - 120
DDD-p,p'	111		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	96.7		P	80 - 120
Delta-BHC	101		P	80 - 120
Deltamethrin	98.5		P	80 - 120
Dichlobenil	101		P	80 - 120
Dicofol	90.9		P	80 - 120
Dieldrin	103		P	80 - 120
Endosulfan I	98.5		P	80 - 120
Endosulfan II	95.0		P	80 - 120
Endosulfan Sulfate	111		P	80 - 120
Endrin	101		P	80 - 120
Endrin Aldehyde	94.3		P	80 - 120
Endrin Ketone	101		P	80 - 120
Esfenvalerate	93.7		P	80 - 120
Ethalfuralin	102		P	80 - 120
Fenpropathrin	101		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	96.5		P	80 - 120
Heptachlor	99.7		P	80 - 120
Heptachlor Epoxide	98.3		P	80 - 120
Hexachlorobenzene	105		P	80 - 120
Kepone	58.1*		F	80 - 120
Lambda-Cyhalothrin	98.0		P	80 - 120
Methoprene	97.1		P	80 - 120
Methoxychlor	92.4		P	80 - 120
MGK-264	94.9		P	80 - 120
Mirex	98.2		P	80 - 120
Oxychlordane	103		P	80 - 120
Permethrin	97.8		P	80 - 120
Phenothrin	94.1		P	80 - 120
Piperonyl Butoxide	111		P	80 - 120
Prallethrin	94.4		P	80 - 120
Tau-Fluvalinate	93.9		P	80 - 120
Tetramethrin	100		P	80 - 120
Trans-Nonachlor	93.2		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	98.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A120813

Included Lab Sample IDs: 2427564, 2427565, 2427567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120829

Included Lab Sample IDs: 2427565, 2427567

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120832

Included Lab Sample IDs: 2427564, 2427565, 2427567

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

Reference Method: EPA 8276

Run ID: A120833

Included Lab Sample IDs: 2427589

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Toxaphene	94.7		P	80 - 120

Reference Method: EPA 8270E

Run ID: A120840

Included Lab Sample IDs: 2427589

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	93.7		P	80 - 120
PCB-1260	95.2		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120846

Included Lab Sample IDs: 2427564, 2427565, 2427567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.1	97.3	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		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	98.0				5.21	
EPA 180.1 Rev. 2.0	Turbidity	99.7				1.52	
EPA 300.0 Rev. 2.1	Chloride	101	102	102		0.0568	
	Sulfate	101	102	101		0.0167	
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	98.0	101			2.63
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.7	93.3	96.1			2.29
	Kjeldahl Nitrogen	94.8					14.2
EPA 353.2 Rev. 2.0	NO2NO3-N	102	96.0	97.0			0.506
	NO2NO3-N	101	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	106	102	105			1.75
	Total-P	108	108	107			0.567
EPA 8270E	Aldrin	57.0	53.6	51.8			3.42
	Alpha-BHC	86.8	99.0	94.2			4.94
	Alpha-Chlordane	82.5	78.5	75.3			4.13
	Beta-BHC	83.3	77.7	65.6			15.0
	Beta-Cyfluthrin	81.5	99.0	123			21.6
	Bifenthrin	53.3	76.9	84.5			9.52
	Carbophenothion	48.9	53.7	65.2			19.2
	Chlorothalonil	90.6	116	133			13.6
	Cis-Nonachlor	74.6	85.4	76.6			10.9
	Cypermethrin	94.8	103	120			15.5
	Dacthal	85.8	96.5	86.5			10.9
	DDD-p,p'	73.8	83.0	76.1			8.71
	DDE-p,p'	77.5	78.8	74.9			5.07
	DDT-p,p'	70.0	74.3	80.4			7.86
	Delta-BHC	96.3	117	115			2.31
	Deltamethrin	128	154	187			19.6
	Dichlobenil	74.9	61.2	64.2			4.80
	Dicofol	76.8	82.2	81.4			0.860
	Dieldrin	79.2	76.7	74.8			2.54
	Endosulfan I	89.0	90.4	81.8			9.93
	Endosulfan II	60.6	61.5	68.1			10.1
	Endosulfan Sulfate	77.2	67.5	70.8			4.76
	Endrin	80.1	77.7	80.7			3.80
	Endrin Aldehyde	69.6	57.1	49.3			14.7
	Endrin Ketone	82.6	87.1	75.1			14.8
	Esfenvalerate	88.4	126	155			20.6
	Ethalfuralin	75.8	77.8	71.2			8.80
	Fenpropathrin	85.0	107	103			3.93
	Gamma-BHC	83.6	100	91.3			9.43
	Gamma-Chlordane	56.3	51.6	59.5			14.2
	Heptachlor	71.1	73.6	67.6			8.51
	Heptachlor Epoxide	81.9	86.9	82.8			4.87
	Hexachlorobenzene	67.7	65.8	64.7			1.74
	Kepone	79.9	84.3	80.4			4.69
	Lambda-Cyhalothrin	64.8	164	187			13.2
	Methoprene	48.7	63.3	81.7			25.4
	Methoxychlor	77.7	68.1	75.8			10.8
	MGK-264	63.0	66.8	80.7			18.8
	Mirex	65.4	75.4	73.0			3.16
	Oxychlordane	73.8	66.2	64.1			3.31
	PCB-1016	66.9	61.7	57.3			7.46
	PCB-1260	70.1	60.2	63.9			6.01
	Permethrin	73.5	86.7	97.5			11.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Phenothrin	57.8	70.1	87.6		22.2
	Piperonyl Butoxide	66.0	67.6	77.0		12.9
	Prallethrin	69.7	100	120		17.7
	Tau-Fluvalinate	88.3	128	157		20.0
	Tetramethrin	116	166	169		2.09
	Trans-Nonachlor	54.1	47.1	55.1		15.6
	Triclosan Methyl	82.4	78.4	62.0		23.3
	Trifluralin	72.1	70.5	66.9		5.24
EPA 8276	Chlordane	78.7	69.7	69.1		0.872
	Toxaphene	89.4	84.7	82.5		2.54
SM 2320 B-2011	Total Alkalinity	94.9			0.0073	
SM 2540 C-2015	TDS	94.3			3.92	
	TDS	97.1			7.23	
SM 2540 D-2015	TSS	94.9				
	TSS	103				
SM 4500-F- C-2011	Fluoride	96.9	101	102		0.542
SM 5310 B-2011	Organic Carbon	95.4	92.2	93.9		1.78

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2427562, 2427563, 2427566
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2427562, 2427563, 2427566
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2427562, 2427563, 2427566
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2427562, 2427563, 2427566
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2427564, 2427565, 2427567
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2427564, 2427565, 2427567
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2427564, 2427565, 2427567
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2427564, 2427565, 2427567
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2427589
EPA 8270E	PCBs in water matrices by GC/MS/MS	2427589
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2427589
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2427562, 2427563, 2427566
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2427562, 2427563, 2427566
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2427562, 2427563, 2427566
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2427562, 2427563, 2427566
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2427564, 2427565, 2427567

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	07/28/2023			07/28/2023 14:17	Anna M. Plaviak	2427562
	07/28/2023			07/28/2023 14:18	Anna M. Plaviak	2427563, 2427566
EPA 180.1 Rev. 2.0	07/28/2023			07/28/2023 13:05	Alexis Price	2427562, 2427563
	07/28/2023			07/28/2023 13:06	Alexis Price	2427566
EPA 300.0 Rev. 2.1	07/28/2023			08/02/2023 20:57	James L Waggeberby	2427562
	07/28/2023			08/02/2023 21:12	James L Waggeberby	2427563
	07/28/2023			08/02/2023 21:27	James L Waggeberby	2427566
EPA 350.1 Rev. 2.0	07/28/2023			08/04/2023 13:12	Ping Hua	2427564
	07/28/2023			08/04/2023 13:16	Ping Hua	2427565
	07/28/2023			08/04/2023 13:17	Ping Hua	2427567
EPA 351.2 Rev. 2.0	07/28/2023	08/02/2023 10:37	Dana G. Hughes	08/03/2023 14:41	Samantha L Bates	2427564
	07/28/2023	08/02/2023 10:37	Dana G. Hughes	08/03/2023 14:49	Samantha L Bates	2427565
	07/28/2023	08/02/2023 10:37	Dana G. Hughes	08/03/2023 14:51	Samantha L Bates	2427567
EPA 353.2 Rev. 2.0	07/28/2023			07/31/2023 10:59	Beverly Y. Sanders	2427564
	07/28/2023			07/31/2023 11:00	Beverly Y. Sanders	2427565
	07/28/2023			07/31/2023 11:16	Beverly Y. Sanders	2427567
EPA 365.1 Rev. 2.0	07/28/2023	07/31/2023 10:30	Alexis Price	08/02/2023 16:50	Simonne.V. Calhoun	2427564
	07/28/2023	08/02/2023 14:24	Alexis Price	08/03/2023 15:08	James L Waggeberby	2427567
	07/28/2023	08/02/2023 14:24	Alexis Price	08/03/2023 15:09	James L Waggeberby	2427565
EPA 8270E	07/28/2023	07/31/2023 08:30	Rasheda Ghaffari	08/02/2023 23:45	Michael Poppell	2427589
	07/28/2023	07/31/2023 08:30	Rasheda Ghaffari	08/04/2023 02:33	Julie Wi	2427589
EPA 8276	07/28/2023	07/31/2023 08:30	Rasheda Ghaffari	08/03/2023 20:30	Arthur Maknenko	2427589
SM 2320 B-2011	07/28/2023			08/02/2023 12:15	Dale L. Simmons	2427562
	07/28/2023			08/02/2023 12:28	Dale L. Simmons	2427563
	07/28/2023			08/02/2023 12:40	Dale L. Simmons	2427566
SM 2540 C-2015	07/28/2023			07/31/2023 14:17	Yijie Li	2427562, 2427563, 2427566
SM 2540 D-2015	07/28/2023			07/31/2023 14:17	Yijie Li	2427562, 2427563, 2427566
SM 4500-F- C-2011	07/28/2023			08/02/2023 12:15	Dale L. Simmons	2427562
	07/28/2023			08/02/2023 12:28	Dale L. Simmons	2427563
	07/28/2023			08/02/2023 12:40	Dale L. Simmons	2427566
SM 5310 B-2011	07/28/2023			08/03/2023 02:14	Elise M. Gillis	2427564
	07/28/2023			08/03/2023 02:28	Elise M. Gillis	2427565
	07/28/2023			08/03/2023 02:43	Elise M. Gillis	2427567