

Chemical Analysis Report

SO-DIST-2023-05-26-01

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

Event Description: **2022 SMP : Myakka**
Request ID: **RQ-2023-05-15-29**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 19-JUN-2023 10:13

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: LAKE MYAKKA (UPPER) AT MIDDLE

Collection Date/Time: 05/25/2023 10:15

Field ID: G3SD0133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2413037	DEP SOP: NU-094-1	Color (true)	67		PCU	P430491	
	EPA 180.1 Rev. 2.0	Turbidity	29		NTU	P430492	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P430619	
		Sulfate	240		mg SO4/L	P430761	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P430787	
	SM 2540 C-2015	TDS	465		mg/L	P430935	
	SM 2540 D-2015	TSS	40		mg/L	P430936	
	SM 4500-F- C-2011	Fluoride	0.38		mg F/L	P431100	
2413038	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P430741	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P430518	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.075		mg N/L	P430837	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P430546	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P430726	
2413053	EPA 8270E	Aldrin	0.67	U	ng/L	P430434	
		Alpha-BHC	0.10	U	ng/L	P430434	
		Alpha-Chlordane	0.21	U	ng/L	P430434	
		PCB-1016	2.1	U	ng/L	P430434	
		Beta-BHC	0.10	U	ng/L	P430434	
		PCB-1221	2.1	U	ng/L	P430434	
		Beta-Cyfluthrin	1.3	U	ng/L	P430434	
		PCB-1232	2.1	U	ng/L	P430434	
		Bifenthrin	0.51	U	ng/L	P430434	
		PCB-1242	2.1	U	ng/L	P430434	
		Carbophenothion	0.93	U	ng/L	P430434	
		PCB-1248	2.1	U	ng/L	P430434	
		Chlorothalonil	3.7	U	ng/L	P430434	
		PCB-1254	2.1	U	ng/L	P430434	
		Cis-Nonachlor	0.21	U	ng/L	P430434	
		PCB-1260	2.1	U	ng/L	P430434	
		Cypermethrin	1.5	U	ng/L	P430434	
		Dacthal	0.15	U	ng/L	P430434	
		DDD-p,p'	0.26	U	ng/L	P430434	
		DDE-p,p'	0.21	U	ng/L	P430434	
		DDT-p,p'	0.26	U	ng/L	P430434	
		Delta-BHC	0.41	U	ng/L	P430434	
		Deltamethrin	1.3	U	ng/L	P430434	
		Dichlobenil	0.26	U	ng/L	P430434	
		Dicofol	1.3	U	ng/L	P430434	
		Dieldrin	0.41	U	ng/L	P430434	
		Endosulfan I	0.41	U	ng/L	P430434	
		Endosulfan II	0.41	U	ng/L	P430434	
		Endosulfan Sulfate	0.31	U	ng/L	P430434	
		Endrin	0.41	U	ng/L	P430434	
		Endrin Aldehyde	0.77	U	ng/L	P430434	

Field ID: G3SD0133

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2413053	EPA 8270E	Endrin Ketone	0.41	U	ng/L	P430434	
		Esfenvalerate	0.77	U	ng/L	P430434	
		Ethalfuralin	0.15	U	ng/L	P430434	
		Fenpropathrin	0.26	U	ng/L	P430434	
		Gamma-BHC	0.13	U	ng/L	P430434	RPD
		Gamma-Chlordane	0.21	U	ng/L	P430434	
		Heptachlor	0.21	U	ng/L	P430434	
		Heptachlor Epoxide	0.26	U	ng/L	P430434	
		Hexachlorobenzene**	1.0	U	ng/L	P430434	
		Kepone	5.1	UJ	ng/L	P430434	CCV
		Lambda-Cyhalothrin	0.77	U	ng/L	P430434	
		Methoprene	0.77	U	ng/L	P430434	
		Methoxychlor	0.31	U	ng/L	P430434	
		MGK-264	0.21	U	ng/L	P430434	
		Mirex	0.36	U	ng/L	P430434	
		Oxychlordane	0.31	U	ng/L	P430434	
		Permethrin	1.6	U	ng/L	P430434	
		Phenothrin	0.93	U	ng/L	P430434	
		Piperonyl Butoxide	0.15	U	ng/L	P430434	
		Prallethrin	2.1	U	ng/L	P430434	
		Tau-Fluvalinate	0.26	U	ng/L	P430434	
		Tetramethrin	0.77	U	ng/L	P430434	
		Trans-Nonachlor	0.21	U	ng/L	P430434	
		Triclosan Methyl	0.15	U	ng/L	P430434	
		Trifluralin	0.21	U	ng/L	P430434	
	EPA 8276	Chlordane	2.1	U	ng/L	P430434	
		Toxaphene	15	U	ng/L	P430434	

Ref. Method and Comment:

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

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

Sample Location: LAKE MYAKKA (LOWER) AT MIDDLE

Collection Date/Time: 05/25/2023 11:25

Field ID: G3SD0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2413035	DEP SOP: NU-094-1	Color (true)	45	A	PCU	P430491	
	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P430492	
	EPA 300.0 Rev. 2.1	Chloride	57		mg Cl/L	P430619	
		Sulfate	330		mg SO4/L	P430761	
	SM 2320 B-2011	Total Alkalinity	2.7		mg CaCO3/L	P430787	
	SM 2540 C-2015	TDS	642		mg/L	P430935	
	SM 2540 D-2015	TSS	28		mg/L	P430936	
	SM 4500-F- C-2011	Fluoride	0.41		mg F/L	P431100	
2413036	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P430740	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P430517	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430837	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P430546	
	SM 5310 B-2011	Organic Carbon	26		mg C/L	P430726	

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: FB

Collection Date/Time: 05/25/2023 14:00

Field ID: FB_05252023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2413039	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P430489	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P430492	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P430619	
		Sulfate	0.20	U	mg SO4/L	P430621	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P430787	
	SM 2540 C-2015	TDS	15	U	mg/L	P430935	
	SM 2540 D-2015	TSS	2	U	mg/L	P430936	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P431100	
2413040	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P430741	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P430518	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430838	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P430546	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P430726	

Ref. Method and Comment:

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: P430489

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P430491

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430492

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430619

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430621

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430740

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430741

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430517

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430518

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430837

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430838

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430546

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

Reference Method: EPA 8270E
Batch ID: P430434

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430434

Component	Result	Code	Units
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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430434

Component	Result	Code	Units
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
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: P430434

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: P430787

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

Reference Method: SM 2540 C-2015

Batch ID: P430935

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P430935

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P430936

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P431100

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P430726

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: P430489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.4		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P430491

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430619

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430621

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430741

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430517

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430518

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430837

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: P430838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430546

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

Reference Method: EPA 8270E
Batch ID: P430434

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.4		P	10 - 92.0
Alpha-BHC	81.6		P	75 - 107
Alpha-Chlordane	78.4		P	50 - 108
Beta-BHC	90.5		P	36 - 138
Beta-Cyfluthrin	76.0		P	20 - 161
Bifenthrin	43.0		P	10 - 119
Carbophenothion	49.3		P	19 - 94.0
Chlorothalonil	56.8		P	26 - 186
Cis-Nonachlor	72.9		P	42 - 119
Cypermethrin	80.3		P	22 - 150
Dacthal	85.5		P	72 - 119
DDD-p,p'	74.4		P	45 - 107
DDE-p,p'	78.2		P	48 - 106
DDT-p,p'	68.1		P	48 - 110
Delta-BHC	89.9		P	54 - 140
Deltamethrin	85.3		P	22 - 189
Dichlobenil	71.3		P	36 - 117
Dicofol	65.8		P	46 - 155
Dieldrin	81.6		P	54 - 110
Endosulfan I	77.2		P	59 - 105
Endosulfan II	85.1		P	51 - 118
Endosulfan Sulfate	79.0		P	57 - 121
Endrin	82.4		P	10 - 120
Endrin Aldehyde	69.1		P	34 - 118
Endrin Ketone	92.3		P	69 - 177
Esfenvalerate	69.4		P	23 - 168
Ethalfuralin	75.0		P	49 - 99.0
Fenpropathrin	61.5		P	34 - 117

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P430434

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Gamma-BHC	95.7		P	72 - 117
Gamma-Chlordane	70.2		P	43 - 106
Heptachlor	65.9		P	41 - 98.0
Heptachlor Epoxide	77.2		P	57 - 106
Hexachlorobenzene	57.7		P	36 - 99.0
Kepone	114		P	16 - 215
Lambda-Cyhalothrin	65.6		P	21 - 177
Methoprene	55.6		P	10 - 119
Methoxychlor	74.2		P	60 - 112
MGK-264	81.3		P	26 - 122
Mirex	58.2		P	10 - 169
Oxychlordane	71.6		P	43 - 105
PCB-1016	69.6		P	48 - 112
PCB-1260	63.7		P	44 - 118
Permethrin	57.1		P	24 - 148
Phenothrin	40.1		P	10 - 106
Piperonyl Butoxide	92.4		P	10 - 139
Prallethrin	70.3		P	17 - 109
Tau-Fluvalinate	62.1		P	13 - 131
Tetramethrin	62.1		P	10 - 132
Trans-Nonachlor	72.9		P	44 - 106
Triclosan Methyl	78.7		P	59 - 109
Trifluralin	71.4		P	44 - 101

Reference Method: EPA 8276

Batch ID: P430434

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	88.7		P	61 - 116
Toxaphene	96.2		P	48 - 124

Reference Method: SM 2320 B-2011

Batch ID: P430787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.0		P	92 - 105

Reference Method: SM 2540 C-2015

Batch ID: P430935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	109		P	90 - 110

Reference Method: SM 2540 D-2015

Batch ID: P430936

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.8		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P431100

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

Reference Method: SM 5310 B-2011
Batch ID: P430726

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412791	Chloride	100		P	90 - 110
2412930	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412791	Sulfate	96.2		P	90 - 110
2412930	Sulfate	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412215	Sulfate	97.4		P	90 - 110
2412322	Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430740

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412931	Ammonia-N	94.6	97.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430741

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413058	Ammonia-N	96.6	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412989	Kjeldahl Nitrogen	99.9	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430518

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413072	Kjeldahl Nitrogen	99.9	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412988	NO2NO3-N	106	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413058	NO2NO3-N	104	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P430546

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413071	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P430434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412668	Aldrin	47.3	51.2	P/P	20 - 82.0
2412668	Alpha-BHC	76.1	78.7	P/P	71 - 109
2412668	Alpha-Chlordane	63.6	69.0	P/P	42 - 106
2412668	Beta-BHC	89.9	83.0	P/P	69 - 180
2412668	Beta-Cyfluthrin	84.1	75.9	P/P	18 - 175
2412668	Bifenthrin	50.7	45.9	P/P	21 - 128
2412668	Carbophenothion	63.3	62.4	P/P	10 - 126
2412668	Chlorothalonil	84.0	58.9	P/P	10 - 300
2412668	Cis-Nonachlor	62.4	61.6	P/P	34 - 106
2412668	Cypermethrin	85.7	79.5	P/P	22 - 158
2412668	Dacthal	90.4	75.4	P/P	54 - 116
2412668	DDD-p,p'	62.4	62.3	P/P	34 - 107
2412668	DDE-p,p'	69.1	69.0	P/P	33 - 110
2412668	DDT-p,p'	62.3	61.4	P/P	50 - 122
2412668	Delta-BHC	87.8	79.3	P/P	77 - 193
2412668	Deltamethrin	96.4	87.8	P/P	10 - 195
2412668	Dichlobenil	46.2	53.3	P/P	25 - 113
2412668	Dicofol	67.2	59.0	P/P	38 - 247
2412668	Dieldrin	74.1	71.3	P/P	45 - 118
2412668	Endosulfan I	69.1	67.8	P/P	51 - 106
2412668	Endosulfan II	75.7	75.4	P/P	37 - 122
2412668	Endosulfan Sulfate	73.4	69.8	P/P	43 - 132
2412668	Endrin	69.2	72.3	P/P	29 - 101
2412668	Endrin Aldehyde	60.3	64.4	P/P	19 - 110
2412668	Endrin Ketone	110	115	P/P	60 - 140
2412668	Esfenvalerate	81.1	75.0	P/P	26 - 199
2412668	Ethalfuralin	66.6	70.9	P/P	45 - 99.0
2412668	Fenpropathrin	65.8	64.2	P/P	35 - 120
2412668	Gamma-BHC	105	86.8	P/P	63 - 128
2412668	Gamma-Chlordane	67.7	67.5	P/P	40 - 104
2412668	Heptachlor	55.2	62.6	P/P	36 - 97.0
2412668	Heptachlor Epoxide	66.7	74.4	P/P	49 - 184
2412668	Hexachlorobenzene	43.3	53.5	P/P	39 - 96.0
2412668	Kepone	140	95.2	P/P	10 - 217
2412668	Lambda-Cyhalothrin	75.5	65.2	P/P	21 - 193
2412668	Methoprene	59.0	57.1	P/P	20 - 106
2412668	Methoxychlor	71.2	63.7	P/P	53 - 118
2412668	MGK-264	75.6	75.9	P/P	40 - 118
2412668	Mirex	58.0	55.1	P/P	26 - 92.0
2412668	Oxychlordane	63.8	67.3	P/P	44 - 99.0
2412668	Permethrin	57.4	59.2	P/P	33 - 182
2412668	Phenothrin	48.9	47.8	P/P	10 - 129
2412668	Piperonyl Butoxide	83.2	79.0	P/P	10 - 211
2412668	Prallethrin	64.3	64.0	P/P	24 - 113
2412668	Tau-Fluvalinate	80.3	71.9	P/P	14 - 149
2412668	Tetramethrin	59.6	58.5	P/P	17 - 151

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P430434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412668	Trans-Nonachlor	64.9	66.8	P/P	42 - 102
2412668	Triclosan Methyl	71.0	66.8	P/P	48 - 108
2412668	Trifluralin	71.3	63.8	P/P	47 - 96.0
2413053	PCB-1016	73.4	81.6	P/P	46 - 111
2413053	PCB-1260	64.5	67.4	P/P	45 - 114

Reference Method: EPA 8276
Batch ID: P430434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413053	Chlordane	71.0	76.9	P/P	53 - 126
2413053	Toxaphene	59.8	64.6	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P431100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413223	Fluoride	101	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P430726

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2413018	Organic Carbon	95.2	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P430489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412930	Color (true)	2.56	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P430491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413035	Color (true)	0.416	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412928	Turbidity	0.985	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412791	Chloride	2.19	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412791	Sulfate	2.32	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412215	Sulfate	0.961	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430740

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412931	Ammonia-N	1.69	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430741

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413058	Ammonia-N	1.29	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412989	Kjeldahl Nitrogen	1.21	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430518

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413072	Kjeldahl Nitrogen	1.90	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412988	NO2NO3-N	1.43	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413058	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430546

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413071	Total-P	1.48	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P430434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412668	Aldrin	7.86	Spike	P	0 - 41
2412668	Alpha-BHC	3.43	Spike	P	0 - 25
2412668	Alpha-Chlordane	8.27	Spike	P	0 - 33
2412668	Beta-BHC	8.01	Spike	P	0 - 36
2412668	Beta-Cyfluthrin	10.2	Spike	P	0 - 42
2412668	Bifenthrin	10.0	Spike	P	0 - 53
2412668	Carbophenothion	1.46	Spike	P	0 - 49
2412668	Chlorothalonil	35.2	Spike	P	0 - 71
2412668	Cis-Nonachlor	1.27	Spike	P	0 - 29
2412668	Cypermethrin	7.50	Spike	P	0 - 40
2412668	Dacthal	18.1	Spike	P	0 - 26
2412668	DDD-p,p'	0.135	Spike	P	0 - 39
2412668	DDE-p,p'	0.199	Spike	P	0 - 33
2412668	DDT-p,p'	1.39	Spike	P	0 - 40
2412668	Delta-BHC	10.2	Spike	P	0 - 37
2412668	Deltamethrin	9.32	Spike	P	0 - 100

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P430434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412668	Dichlobenil	14.4	Spike	P	0 - 40
2412668	Dicofol	13.1	Spike	P	0 - 31
2412668	Dieldrin	2.91	Spike	P	0 - 27
2412668	Endosulfan I	1.90	Spike	P	0 - 23
2412668	Endosulfan II	0.455	Spike	P	0 - 28
2412668	Endosulfan Sulfate	5.08	Spike	P	0 - 38
2412668	Endrin	4.44	Spike	P	0 - 63
2412668	Endrin Aldehyde	6.65	Spike	P	0 - 60
2412668	Endrin Ketone	4.50	Spike	P	0 - 37
2412668	Esfenvalerate	7.74	Spike	P	0 - 52
2412668	Ethalfuralin	6.20	Spike	P	0 - 23
2412668	Fenpropathrin	2.50	Spike	P	0 - 32
2412668	Gamma-BHC	19.4	Spike	F	0 - 17
2412668	Gamma-Chlordane	0.296	Spike	P	0 - 40
2412668	Heptachlor	12.6	Spike	P	0 - 29
2412668	Heptachlor Epoxide	10.9	Spike	P	0 - 25
2412668	Hexachlorobenzene	21.0	Spike	P	0 - 36
2412668	Kepone	37.9	Spike	P	0 - 93
2412668	Lambda-Cyhalothrin	14.6	Spike	P	0 - 55
2412668	Methoprene	3.28	Spike	P	0 - 53
2412668	Methoxychlor	11.2	Spike	P	0 - 29
2412668	MGK-264	0.483	Spike	P	0 - 35
2412668	Mirex	5.11	Spike	P	0 - 46
2412668	Oxychlordane	5.28	Spike	P	0 - 29
2412668	Permethrin	3.09	Spike	P	0 - 44
2412668	Phenothrin	2.26	Spike	P	0 - 56
2412668	Piperonyl Butoxide	5.23	Spike	P	0 - 100
2412668	Prallethrin	0.492	Spike	P	0 - 42
2412668	Tau-Fluvalinate	11.0	Spike	P	0 - 54
2412668	Tetramethrin	1.85	Spike	P	0 - 51
2412668	Trans-Nonachlor	2.88	Spike	P	0 - 37
2412668	Triclosan Methyl	6.09	Spike	P	0 - 31
2412668	Trifluralin	11.1	Spike	P	0 - 30
2413053	PCB-1016	10.5	Spike	P	0 - 32
2413053	PCB-1260	4.29	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P430434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413053	Chlordane	7.98	Spike	P	0 - 25
2413053	Toxaphene	7.08	Spike	P	0 - 26

Reference Method: SM 2320 B-2011
Batch ID: P430787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413223	Total Alkalinity	2.71	Sample	P	0 - 3.9

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P430935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413016	TDS	0.844	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P431100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413223	Fluoride	0.483	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P430726

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2413018	Organic Carbon	1.56	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2413053
Field Sample ID: G3SD0133

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	80.0	P	29 - 130
EPA 8270E	Decachlorobiphenyl	70.7	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	52.0	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	39.5	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	59.6	P	30 - 101
EPA 8276	PCNB	83.7	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A119439

Included Lab Sample IDs: 2413035, 2413037, 2413039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	99.9	P/P	90 - 110
Color (true)	97.3	98.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119440

Included Lab Sample IDs: 2413035, 2413037, 2413039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	97.5	98.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119476

Included Lab Sample IDs: 2413036, 2413038

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119488

Included Lab Sample IDs: 2413036, 2413038, 2413040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.8	P/P	90 - 110
Kjeldahl Nitrogen	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119491

Included Lab Sample IDs: 2413040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	96.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119496

Included Lab Sample IDs: 2413035, 2413037, 2413039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.5	99.7	P/P	90 - 110
Sulfate	96.8	97.7	P/P	90 - 110
Sulfate	97.1	98.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119528

Included Lab Sample IDs: 2413053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	103		P	80 - 120
PCB-1260	99.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A119540

Included Lab Sample IDs: 2413036, 2413038, 2413040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.7	97.4	P/P	90 - 110
Organic Carbon	98.2	97.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119550

Included Lab Sample IDs: 2413036, 2413038, 2413040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	99.5	P/P	90 - 110
Ammonia-N	99.4	98.9	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119556

Included Lab Sample IDs: 2413053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	99.8		P	80 - 120
Alpha-Chlordane	89.9		P	80 - 120
Beta-BHC	103		P	80 - 120
Beta-Cyfluthrin	95.1		P	80 - 120
Bifenthrin	104		P	80 - 120
Carbophenothion	94.7		P	80 - 120
Chlorothalonil	94.4		P	80 - 120
Cis-Nonachlor	93.6		P	80 - 120
Cypermethrin	98.6		P	80 - 120
Dacthal	98.9		P	80 - 120
DDD-p,p'	101		P	80 - 120
DDE-p,p'	99.9		P	80 - 120
DDT-p,p'	102		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	95.4		P	80 - 120
Dichlobenil	106		P	80 - 120
Dicofol	94.2		P	80 - 120
Dieldrin	96.6		P	80 - 120
Endosulfan I	97.6		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	90.7		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	87.7		P	80 - 120
Endrin Ketone	118		P	80 - 120
Esfenvalerate	97.9		P	80 - 120
Ethalfuralin	98.1		P	80 - 120
Fenpropathrin	89.1		P	80 - 120
Gamma-BHC	98.0		P	80 - 120
Gamma-Chlordane	96.7		P	80 - 120
Heptachlor	98.6		P	80 - 120
Heptachlor Epoxide	97.1		P	80 - 120
Hexachlorobenzene	95.7		P	80 - 120
Kepone	75.2*		F	80 - 120
Lambda-Cyhalothrin	98.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A119556
Included Lab Sample IDs: 2413053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoprene	102		P	80 - 120
Methoxychlor	98.8		P	80 - 120
MGK-264	101		P	80 - 120
Mirex	101		P	80 - 120
Oxychlordane	98.0		P	80 - 120
Permethrin	103		P	80 - 120
Phenothrin	101		P	80 - 120
Piperonyl Butoxide	101		P	80 - 120
Prallethrin	99.5		P	80 - 120
Tau-Fluvalinate	93.7		P	80 - 120
Tetramethrin	96.3		P	80 - 120
Trans-Nonachlor	96.9		P	80 - 120
Triclosan Methyl	93.1		P	80 - 120
Trifluralin	99.2		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A119566
Included Lab Sample IDs: 2413035, 2413037, 2413039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.7	97.2	P/P	90 - 110
Total Alkalinity	97.2	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A119596
Included Lab Sample IDs: 2413036, 2413038, 2413040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A119627
Included Lab Sample IDs: 2413053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: SM 4500-F- C-2011
Run ID: A119707
Included Lab Sample IDs: 2413035, 2413037, 2413039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	105	103	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	98.4				2.56	
	Color (true)	99.3				0.416	
EPA 180.1 Rev. 2.0	Turbidity	97.9				0.985	
EPA 300.0 Rev. 2.1	Chloride	100	100	96.3		2.19	
	Sulfate	98.2	96.2	95.5		2.32	
	Sulfate	97.8	97.4	95.6		0.961	
EPA 350.1 Rev. 2.0	Ammonia-N	96.2	94.6	97.0			1.69
	Ammonia-N	95.0	96.6	98.0			1.29
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	99.9	102			1.21
	Kjeldahl Nitrogen	105	99.9	103			1.90
EPA 353.2 Rev. 2.0	NO2NO3-N	102	106	104			1.43
	NO2NO3-N	104	104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	101	102	103			1.48
EPA 8270E	Aldrin	46.4	47.3	51.2			7.86
	Alpha-BHC	81.6	76.1	78.7			3.43
	Alpha-Chlordane	78.4	63.6	69.0			8.27
	Beta-BHC	90.5	89.9	83.0			8.01
	Beta-Cyfluthrin	76.0	84.1	75.9			10.2
	Bifenthrin	43.0	50.7	45.9			10.0
	Carbophenothion	49.3	63.3	62.4			1.46
	Chlorothalonil	56.8	84.0	58.9			35.2
	Cis-Nonachlor	72.9	62.4	61.6			1.27
	Cypermethrin	80.3	85.7	79.5			7.50
	Dacthal	85.5	90.4	75.4			18.1
	DDD-p,p'	74.4	62.4	62.3			0.135
	DDE-p,p'	78.2	69.1	69.0			0.199
	DDT-p,p'	68.1	62.3	61.4			1.39
	Delta-BHC	89.9	87.8	79.3			10.2
	Deltamethrin	85.3	96.4	87.8			9.32
	Dichlobenil	71.3	46.2	53.3			14.4
	Dicofol	65.8	67.2	59.0			13.1
	Dieldrin	81.6	74.1	71.3			2.91
	Endosulfan I	77.2	69.1	67.8			1.90
	Endosulfan II	85.1	75.7	75.4			0.455
	Endosulfan Sulfate	79.0	73.4	69.8			5.08
	Endrin	82.4	69.2	72.3			4.44
	Endrin Aldehyde	69.1	60.3	64.4			6.65
	Endrin Ketone	92.3	110	115			4.50
	Esfenvalerate	69.4	81.1	75.0			7.74
	Ethalfuralin	75.0	66.6	70.9			6.20
	Fenpropathrin	61.5	65.8	64.2			2.50
	Gamma-BHC	95.7	105	86.8			19.4
	Gamma-Chlordane	70.2	67.7	67.5			0.296
	Heptachlor	65.9	55.2	62.6			12.6
	Heptachlor Epoxide	77.2	66.7	74.4			10.9
	Hexachlorobenzene	57.7	43.3	53.5			21.0
	Kepone	114	140	95.2			37.9
	Lambda-Cyhalothrin	65.6	75.5	65.2			14.6
	Methoprene	55.6	59.0	57.1			3.28
	Methoxychlor	74.2	71.2	63.7			11.2
	MGK-264	81.3	75.6	75.9			0.483
	Mirex	58.2	58.0	55.1			5.11
	Oxychlordane	71.6	63.8	67.3			5.28
	PCB-1016	69.6	73.4	81.6			10.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	PCB-1260	63.7	64.5	67.4		4.29
	Permethrin	57.1	57.4	59.2		3.09
	Phenothrin	40.1	48.9	47.8		2.26
	Piperonyl Butoxide	92.4	83.2	79.0		5.23
	Prallethrin	70.3	64.3	64.0		0.492
	Tau-Fluvalinate	62.1	80.3	71.9		11.0
	Tetramethrin	62.1	59.6	58.5		1.85
	Trans-Nonachlor	72.9	64.9	66.8		2.88
	Triclosan Methyl	78.7	71.0	66.8		6.09
	Trifluralin	71.4	71.3	63.8		11.1
EPA 8276	Chlordane	88.7	71.0	76.9		7.98
	Toxaphene	96.2	59.8	64.6		7.08
SM 2320 B-2011	Total Alkalinity	97.0			2.71	
SM 2540 C-2015	TDS	109			0.844	
SM 2540 D-2015	TSS	94.8				
SM 4500-F- C-2011	Fluoride	101	101	102		0.483
SM 5310 B-2011	Organic Carbon	95.8	95.2	97.6		1.56

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2413035, 2413037, 2413039
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2413035, 2413037, 2413039
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2413035, 2413037, 2413039
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2413035, 2413037, 2413039
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2413036, 2413038, 2413040
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2413036, 2413038, 2413040
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2413036, 2413038, 2413040
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2413036, 2413038, 2413040
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2413053
EPA 8270E	PCBs in water matrices by GC/MS/MS	2413053
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2413053
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2413035, 2413037, 2413039
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2413035, 2413037, 2413039
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2413035, 2413037, 2413039
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2413035, 2413037, 2413039
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2413036, 2413038, 2413040

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	05/26/2023			05/26/2023 14:32	Alexis Price	2413039
	05/26/2023			05/26/2023 14:50	Alexis Price	2413035
	05/26/2023			05/26/2023 14:51	Alexis Price	2413037
EPA 180.1 Rev. 2.0	05/26/2023			05/26/2023 13:55	Anna M. Plaviak	2413035
	05/26/2023			05/26/2023 13:56	Anna M. Plaviak	2413037
	05/26/2023			05/26/2023 13:58	Anna M. Plaviak	2413039
EPA 300.0 Rev. 2.1	05/26/2023			05/31/2023 06:42	James L Waggeberby	2413035
	05/26/2023			05/31/2023 06:57	James L Waggeberby	2413037
	05/26/2023			05/31/2023 07:12	James L Waggeberby	2413039
	05/26/2023			06/01/2023 15:03	James L Waggeberby	2413035
	05/26/2023			06/01/2023 15:18	James L Waggeberby	2413037
EPA 350.1 Rev. 2.0	05/26/2023			06/02/2023 13:53	Khloe J Berg	2413036
	05/26/2023			06/02/2023 14:09	Khloe J Berg	2413038
	05/26/2023			06/02/2023 14:10	Khloe J Berg	2413040
EPA 351.2 Rev. 2.0	05/26/2023	05/30/2023 12:30	Simonne.V. Calhoun	05/31/2023 12:43	Ping Hua	2413036
	05/26/2023	05/30/2023 12:30	Simonne.V. Calhoun	05/31/2023 12:48	Ping Hua	2413038
	05/26/2023	05/30/2023 12:30	Simonne.V. Calhoun	05/31/2023 14:45	Ping Hua	2413040
EPA 353.2 Rev. 2.0	05/26/2023			06/06/2023 10:03	Beverly Y. Sanders	2413036
	05/26/2023			06/06/2023 10:04	Beverly Y. Sanders	2413038
	05/26/2023			06/06/2023 10:17	Beverly Y. Sanders	2413040
EPA 365.1 Rev. 2.0	05/26/2023	05/30/2023 12:20	Alexis Price	05/30/2023 16:19	James L Waggeberby	2413036
	05/26/2023	05/30/2023 12:20	Alexis Price	05/30/2023 16:20	James L Waggeberby	2413038
	05/26/2023	05/30/2023 12:20	Alexis Price	05/31/2023 14:48	James L Waggeberby	2413040
EPA 8270E	05/26/2023	05/30/2023 08:00	Fe-Val Siddell	06/01/2023 23:39	Michael Poppell	2413053
	05/26/2023	05/30/2023 08:00	Fe-Val Siddell	06/02/2023 00:09	Michael Poppell	2413053
EPA 8276	05/26/2023	05/30/2023 08:00	Fe-Val Siddell	06/03/2023 04:01	Lipi Saha	2413053
SM 2320 B-2011	05/26/2023			06/03/2023 07:53	Dale L. Simmons	2413035
	05/26/2023			06/03/2023 08:03	Dale L. Simmons	2413037
	05/26/2023			06/03/2023 08:41	Dale L. Simmons	2413039
SM 2540 C-2015	05/26/2023			05/31/2023 14:41	Yijie Li	2413035, 2413037, 2413039
SM 2540 D-2015	05/26/2023			05/31/2023 14:41	Yijie Li	2413035, 2413037, 2413039
SM 4500-F- C-2011	05/26/2023			06/09/2023 19:01	Dale L. Simmons	2413035
	05/26/2023			06/09/2023 19:06	Dale L. Simmons	2413037
	05/26/2023			06/09/2023 19:11	Dale L. Simmons	2413039
SM 5310 B-2011	05/26/2023			06/01/2023 16:04	Elise M. Gillis	2413036
	05/26/2023			06/01/2023 16:46	Elise M. Gillis	2413038
	05/26/2023			06/01/2023 17:00	Elise M. Gillis	2413040