

Chemical Analysis Report

NE-DIST-2023-08-08-02

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

Event Description: **Gainesville Lakes**
Request ID: **RQ-2023-07-17-14**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 23-AUG-2023 14:06



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: BIVENS ARM LAKE

Collection Date/Time: 08/07/2023 10:30

Field ID: 20020097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429302	DEP SOP: NU-094-1	Color (true)	16	A	PCU	P433595	
	EPA 180.1 Rev. 2.0	Turbidity	27		NTU	P433580	
	EPA 300.0 Rev. 2.1	Chloride	8.8		mg Cl/L	P434076	
		Sulfate	10		mg SO4/L	P434079	
	SM 2320 B-2011	Total Alkalinity	53		mg CaCO3/L	P433672	
	SM 2540 C-2015	TDS	108		mg/L	P433933	
	SM 2540 D-2015	TSS	27		mg/L	P433896	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P433676	
2429304	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P433779	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.2		mg N/L	P433592	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433685	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P433606	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P433659	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: LAKE ALICE CENTER

Collection Date/Time: 08/07/2023 11:05

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429300	DEP SOP: NU-094-1	Color (true)	31		PCU	P433587	
	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P433580	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P434076	
		Sulfate	22		mg SO4/L	P434079	
	SM 2320 B-2011	Total Alkalinity	72		mg CaCO3/L	P433672	
	SM 2540 C-2015	TDS	148		mg/L	P433933	
	SM 2540 D-2015	TSS	4	I	mg/L	P433896	
2429301	SM 4500-F- C-2011	Fluoride	0.27		mg F/L	P433676	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P433779	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P433592	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433685	
	EPA 365.1 Rev. 2.0	Total-P	0.47		mg P/L	P433606	
2429311	SM 5310 B-2011	Organic Carbon	6.3		mg C/L	P433659	
	EPA 8270E	Aldrin	0.67	U	ng/L	P433548	
		Alpha-BHC	0.10	U	ng/L	P433548	
		Alpha-Chlordane	0.21	U	ng/L	P433548	
		PCB-1016	2.1	U	ng/L	P433548	
		Beta-BHC	0.10	U	ng/L	P433548	
		PCB-1221	2.1	U	ng/L	P433548	
		Beta-Cyfluthrin	1.3	U	ng/L	P433548	
		PCB-1232	2.1	U	ng/L	P433548	
		Bifenthrin	0.51	U	ng/L	P433548	
		PCB-1242	2.1	U	ng/L	P433548	
		PCB-1248	2.1	U	ng/L	P433548	
		Chlorothalonil	3.7	U	ng/L	P433548	
		PCB-1254	2.1	U	ng/L	P433548	
		Cis-Nonachlor	0.21	U	ng/L	P433548	
		PCB-1260	2.1	U	ng/L	P433548	
		Cypermethrin	1.5	U	ng/L	P433548	
		Dacthal	0.15	U	ng/L	P433548	RPD
		DDD-p,p'	0.26	U	ng/L	P433548	
		DDE-p,p'	0.21	U	ng/L	P433548	
		DDT-p,p'	0.82	U	ng/L	P433548	
		Delta-BHC	0.41	U	ng/L	P433548	
		Deltamethrin	1.3	U	ng/L	P433548	
		Dichlobenil	0.26	U	ng/L	P433548	
		Dicofol	1.3	U	ng/L	P433548	
		Diieldrin	0.41	U	ng/L	P433548	
		Endosulfan I	0.41	U	ng/L	P433548	
		Endosulfan II	0.93	U	ng/L	P433548	
		Endosulfan Sulfate	0.31	U	ng/L	P433548	
		Endrin	0.93	U	ng/L	P433548	
		Endrin Aldehyde	0.77	U	ng/L	P433548	
		Endrin Ketone	0.41	U	ng/L	P433548	

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429311	EPA 8270E	Esfenvalerate	0.77	U	ng/L	P433548	
		Ethalfuralin	0.15	U	ng/L	P433548	
		Fenpropathrin	0.26	U	ng/L	P433548	
		Gamma-BHC	0.13	U	ng/L	P433548	
		Gamma-Chlordane	0.21	U	ng/L	P433548	
		Heptachlor	0.21	U	ng/L	P433548	
		Heptachlor Epoxide	0.26	U	ng/L	P433548	
		Hexachlorobenzene**	1.0	U	ng/L	P433548	
		Kepone	14	U	ng/L	P433548	
		Lambda-Cyhalothrin	0.77	U	ng/L	P433548	
		Methoprene	0.77	U	ng/L	P433548	
		Methoxychlor	0.31	U	ng/L	P433548	
		MGK-264	0.21	U	ng/L	P433548	
		Mirex	0.36	U	ng/L	P433548	
		Oxychlordane	0.31	U	ng/L	P433548	
		Permethrin	1.6	U	ng/L	P433548	
		Phenothrin	0.93	U	ng/L	P433548	
		Piperonyl Butoxide	0.36	I	ng/L	P433548	
		Prallethrin	2.1	U	ng/L	P433548	
		Tau-Fluvalinate	0.26	U	ng/L	P433548	
		Tetramethrin	0.77	U	ng/L	P433548	
		Trans-Nonachlor	0.21	U	ng/L	P433548	
		Triclosan Methyl	0.15	U	ng/L	P433548	
		Trifluralin	0.21	U	ng/L	P433548	
	EPA 8276	Chlordane	2.1	U	ng/L	P433548	
		Toxaphene	15	U	ng/L	P433548	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: HAMMOCK LAKE

Collection Date/Time: 08/07/2023 11:50

Field ID: G3NE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429303	DEP SOP: NU-094-1	Color (true)	48		PCU	P433587	
	EPA 180.1 Rev. 2.0	Turbidity	9.4	A	NTU	P433581	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P434076	
		Sulfate	7.6		mg SO4/L	P434079	
	SM 2320 B-2011	Total Alkalinity	65		mg CaCO3/L	P433672	
	SM 2540 C-2015	TDS	171		mg/L	P433933	
	SM 2540 D-2015	TSS	9	I	mg/L	P433896	
	SM 4500-F- C-2011	Fluoride	0.24		mg F/L	P433676	
2429305	EPA 350.1 Rev. 2.0	Ammonia-N	0.081		mg N/L	P433779	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.3		mg N/L	P433840	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.022		mg N/L	P433685	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P433606	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P433659	

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 365.1 Rev. 2.0: Total-P: 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: P433587

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P433595

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433580

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433581

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434076

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434079

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433779

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433592

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433840

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P433685

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433606

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

Reference Method: EPA 8270E

Batch ID: P433548

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
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
Endosulfan II	0.90	U	ng/L
Endosulfan II	0.90	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P433548

Component	Result	Code	Units
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
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P433548

Component	Result	Code	Units
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: P433548

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: P433672

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

Reference Method: SM 2540 C-2015

Batch ID: P433933

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P433896

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P433676

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P433659

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: P433587

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.8		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P433595

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433580

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434079

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433779

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433592

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433840

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P433685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433606

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

Reference Method: EPA 8270E

Batch ID: P433548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	44.8		P	30 - 96.0
Alpha-BHC	105		P	70 - 109
Alpha-Chlordane	60.3		P	45 - 107
Beta-BHC	65.7		P	64 - 138
Beta-Cyfluthrin	79.2		P	17 - 141
Bifenthrin	52.6		P	10 - 113
Chlorothalonil	52.2		P	26 - 180
Cis-Nonachlor	61.4		P	37 - 102
Cypermethrin	74.5		P	20 - 133
Dacthal	73.8		P	69 - 114
DDD-p,p'	60.1		P	42 - 105
DDE-p,p'	61.2		P	42 - 106
DDT-p,p'	67.2		P	42 - 107
Delta-BHC	67.2		P	67 - 144
Deltamethrin	99.5		P	15 - 149
Dichlobenil	63.6		P	46 - 117
Dicofol	67.4		P	34 - 114
Dieldrin	65.5		P	50 - 108
Endosulfan I	65.5		P	55 - 104
Endosulfan II	77.6		P	51 - 111
Endosulfan Sulfate	71.2		P	56 - 121
Endrin	67.0		P	10 - 106
Endrin Aldehyde	66.2		P	34 - 114
Endrin Ketone	79.7		P	63 - 177
Esfenvalerate	84.0		P	29 - 143
Ethalfuralin	52.1		P	46 - 96.0
Fenpropathrin	54.3		P	28 - 115
Gamma-BHC	68.0		P	65 - 121
Gamma-Chlordane	60.2		P	39 - 103
Heptachlor	59.4		P	39 - 94.0
Heptachlor Epoxide	71.6		P	54 - 104
Hexachlorobenzene	46.6		P	36 - 100
Kepone	40.5		P	10 - 225
Lambda-Cyhalothrin	69.2		P	10 - 135
Methoprene	49.6		P	10 - 109
Methoxychlor	75.1		P	52 - 112
MGK-264	82.6		P	44 - 117
Mirex	57.8		P	20 - 90.0
Oxychlordane	65.1		P	44 - 102
PCB-1016	56.5		P	45 - 107

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P433548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1260	71.1		P	40 - 118
Permethrin	72.1		P	18 - 135
Phenothrin	51.8		P	10 - 102
Piperonyl Butoxide	86.6		P	28 - 156
Prallethrin	65.9		P	28 - 113
Tau-Fluvalinate	70.8		P	10 - 123
Tetramethrin	80.4		P	18 - 158
Trans-Nonachlor	69.6		P	39 - 104
Triclosan Methyl	60.7		P	54 - 108
Trifluralin	73.0		P	46 - 97.0

Reference Method: EPA 8276

Batch ID: P433548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.1		P	52 - 117
Toxaphene	88.7		P	44 - 125

Reference Method: SM 2320 B-2011

Batch ID: P433672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	92 - 105

Reference Method: SM 2540 C-2015

Batch ID: P433933

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

Reference Method: SM 2540 D-2015

Batch ID: P433896

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.4		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P433676

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P433659

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429040	Chloride	97.7		P	90 - 110
2429302	Chloride	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429040	Sulfate	94.2		P	90 - 110
2429302	Sulfate	93.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433779

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429262	Ammonia-N	97.0	96.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429123	Kjeldahl Nitrogen	88.5	96.6	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429263	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P433548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429311	PCB-1016	60.0	59.6	P/P	45 - 107
2429311	PCB-1260	66.7	66.0	P/P	40 - 112
2429416	Aldrin	53.4	41.6	P/P	24 - 81.0
2429416	Alpha-BHC	93.8	98.8	P/P	65 - 110
2429416	Alpha-Chlordane	68.2	61.1	P/P	43 - 119
2429416	Beta-BHC	85.2	69.5	P/P	54 - 165
2429416	Beta-Cyfluthrin	93.0	81.1	P/P	27 - 165
2429416	Bifenthrin	80.3	73.9	P/P	17 - 117
2429416	Chlorothalonil	70.7	63.9	P/P	10 - 255
2429416	Cis-Nonachlor	83.3	69.9	P/P	34 - 98.0
2429416	Cypermethrin	69.2	67.8	P/P	25 - 143
2429416	Dacthal	85.6	63.4	P/P	55 - 139
2429416	DDD-p,p'	70.3	64.7	P/P	30 - 109
2429416	DDE-p,p'	69.1	59.9	P/P	35 - 106
2429416	DDT-p,p'	66.9	67.3	P/P	41 - 101
2429416	Delta-BHC	93.2	89.2	P/P	58 - 165
2429416	Deltamethrin	103	89.8	P/P	10 - 194
2429416	Dichlobenil	54.6	47.5	P/P	22 - 114
2429416	Dicofol	73.6	70.1	P/P	17 - 133
2429416	Dieldrin	72.3	62.1	P/P	45 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P433548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429416	Endosulfan I	86.1	73.6	P/P	49 - 104
2429416	Endosulfan II	72.8	53.0	P/P	37 - 117
2429416	Endosulfan Sulfate	54.9	51.3	P/P	38 - 128
2429416	Endrin	76.3	63.2	P/P	35 - 116
2429416	Endrin Aldehyde	70.5	61.8	P/P	19 - 108
2429416	Endrin Ketone	81.5	79.0	P/P	44 - 134
2429416	Esfenvalerate	117	104	P/P	27 - 176
2429416	Ethalfuralin	72.2	61.5	P/P	49 - 100
2429416	Fenpropathrin	76.2	79.9	P/P	34 - 117
2429416	Gamma-BHC	83.8	64.1	P/P	59 - 129
2429416	Gamma-Chlordane	63.4	56.8	P/P	33 - 107
2429416	Heptachlor	72.0	59.6	P/P	37 - 94.0
2429416	Heptachlor Epoxide	88.2	81.1	P/P	38 - 118
2429416	Hexachlorobenzene	55.8	50.0	P/P	35 - 97.0
2429416	Kepone	42.1	34.0	P/P	10 - 221
2429416	Lambda-Cyhalothrin	91.0	91.0	P/P	23 - 190
2429416	Methoprene	66.9	65.0	P/P	21 - 109
2429416	Methoxychlor	64.6	62.2	P/P	46 - 118
2429416	MGK-264	73.2	68.2	P/P	39 - 122
2429416	Mirex	79.0	67.8	P/P	25 - 90.0
2429416	Oxychlordane	71.3	69.6	P/P	42 - 100
2429416	Permethrin	77.5	56.6	P/P	33 - 181
2429416	Phenothrin	90.2	78.4	P/P	12 - 125
2429416	Piperonyl Butoxide	114	118	P/P	10 - 178
2429416	Prallethrin	92.0	92.8	P/P	24 - 122
2429416	Tau-Fluvalinate	99.1	108	P/P	13 - 151
2429416	Tetramethrin	99.8	102	P/P	16 - 172
2429416	Trans-Nonachlor	64.2	52.7	P/P	39 - 100
2429416	Triclosan Methyl	70.6	58.6	P/P	43 - 110
2429416	Trifluralin	64.7	60.8	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P433548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429311	Chlordane	71.6	74.9	P/P	43 - 123
2429311	Toxaphene	86.5	83.7	P/P	27 - 156

Reference Method: SM 4500-F- C-2011

Batch ID: P433676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429321	Fluoride	98.3	99.7	P/P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P433659

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429301	Organic Carbon	96.3	98.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429225	Color (true)	14.3	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P433595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429302	Color (true)	0.286	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429211	Turbidity	13.9	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429303	Turbidity	3.62	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429040	Chloride	0.143	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429040	Sulfate	0.164	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429262	Ammonia-N	0.369	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429123	Kjeldahl Nitrogen	5.98	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433840

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429305	Kjeldahl Nitrogen	3.39	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429263	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429301	Total-P	0.388	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P433548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429311	PCB-1016	0.635	Spike	P	0 - 25
2429311	PCB-1260	1.05	Spike	P	0 - 30
2429416	Aldrin	24.9	Spike	P	0 - 41
2429416	Alpha-BHC	5.19	Spike	P	0 - 25
2429416	Alpha-Chlordane	11.0	Spike	P	0 - 32
2429416	Beta-BHC	20.3	Spike	P	0 - 33
2429416	Beta-Cyfluthrin	13.7	Spike	P	0 - 43
2429416	Bifenthrin	8.21	Spike	P	0 - 52
2429416	Chlorothalonil	10.0	Spike	P	0 - 82
2429416	Cis-Nonachlor	17.6	Spike	P	0 - 33
2429416	Cypermethrin	1.94	Spike	P	0 - 51
2429416	Dacthal	29.8	Spike	F	0 - 27
2429416	DDD-p,p'	8.31	Spike	P	0 - 39
2429416	DDE-p,p'	14.3	Spike	P	0 - 31
2429416	DDT-p,p'	0.646	Spike	P	0 - 29
2429416	Delta-BHC	4.35	Spike	P	0 - 35
2429416	Deltamethrin	13.7	Spike	P	0 - 100
2429416	Dichlobenil	14.0	Spike	P	0 - 40
2429416	Dicofol	4.79	Spike	P	0 - 37
2429416	Dieldrin	14.1	Spike	P	0 - 27
2429416	Endosulfan I	15.7	Spike	P	0 - 23
2429416	Endosulfan II	31.4	Spike	P	0 - 34
2429416	Endosulfan Sulfate	6.73	Spike	P	0 - 36
2429416	Endrin	18.8	Spike	P	0 - 45
2429416	Endrin Aldehyde	13.2	Spike	P	0 - 76
2429416	Endrin Ketone	3.13	Spike	P	0 - 43
2429416	Esfenvalerate	11.6	Spike	P	0 - 51
2429416	Ethalfuralin	15.9	Spike	P	0 - 22
2429416	Fenpropathrin	4.74	Spike	P	0 - 49
2429416	Gamma-BHC	26.7	Spike	P	0 - 28

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P433548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429416	Gamma-Chlordane	11.0	Spike	P	0 - 40
2429416	Heptachlor	18.9	Spike	P	0 - 29
2429416	Heptachlor Epoxide	8.38	Spike	P	0 - 33
2429416	Hexachlorobenzene	10.9	Spike	P	0 - 36
2429416	Kepone	21.2	Spike	P	0 - 85
2429416	Lambda-Cyhalothrin	0.0390	Spike	P	0 - 55
2429416	Methoprene	2.91	Spike	P	0 - 53
2429416	Methoxychlor	3.79	Spike	P	0 - 50
2429416	MGK-264	7.14	Spike	P	0 - 43
2429416	Mirex	15.2	Spike	P	0 - 40
2429416	Oxychlordane	2.48	Spike	P	0 - 31
2429416	Permethrin	31.1	Spike	P	0 - 50
2429416	Phenothrin	14.0	Spike	P	0 - 58
2429416	Piperonyl Butoxide	2.69	Spike	P	0 - 100
2429416	Prallethrin	0.914	Spike	P	0 - 39
2429416	Tau-Fluvalinate	8.81	Spike	P	0 - 54
2429416	Tetramethrin	1.99	Spike	P	0 - 51
2429416	Trans-Nonachlor	19.8	Spike	P	0 - 39
2429416	Triclosan Methyl	18.6	Spike	P	0 - 31
2429416	Trifluralin	6.22	Spike	P	0 - 22

Reference Method: EPA 8276

Batch ID: P433548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429311	Chlordane	4.47	Spike	P	0 - 28
2429311	Toxaphene	3.32	Spike	P	0 - 27

Reference Method: SM 2320 B-2011

Batch ID: P433672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429321	Total Alkalinity	0.483	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P433933

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2428838	TDS	2.32	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P433676

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429321	Fluoride	0.960	Spike	P	0 - 1.9

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P433659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429301	Organic Carbon	2.01	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2429311
Field Sample ID: 20020052

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	83.1	P	37 - 129
EPA 8270E	Decachlorobiphenyl	67.7	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	52.6	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	66.3	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	53.8	P	28 - 102
EPA 8276	PCNB	102	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A120899

Included Lab Sample IDs: 2429300, 2429302, 2429303

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

Reference Method: DEP SOP: NU-094-1

Run ID: A120900

Included Lab Sample IDs: 2429300, 2429303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.6	98.7	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A120901

Included Lab Sample IDs: 2429302

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

Reference Method: SM 5310 B-2011

Run ID: A120947

Included Lab Sample IDs: 2429301, 2429304, 2429305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	99.2	P/P	90 - 110
Organic Carbon	99.2	97.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A120949

Included Lab Sample IDs: 2429300, 2429302, 2429303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.6	94.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120949

Included Lab Sample IDs: 2429300, 2429302, 2429303

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120956

Included Lab Sample IDs: 2429301, 2429304, 2429305

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120965

Included Lab Sample IDs: 2429301, 2429304, 2429305

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120965

Included Lab Sample IDs: 2429301, 2429304, 2429305

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A120988

Included Lab Sample IDs: 2429301, 2429304

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	104	P/P	90 - 110
Kjeldahl Nitrogen	99.5	105	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A120998

Included Lab Sample IDs: 2429301, 2429304, 2429305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	98.9	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A121006

Included Lab Sample IDs: 2429311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8270E

Run ID: A121013

Included Lab Sample IDs: 2429311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	88.8		P	80 - 120
Alpha-BHC	117		P	80 - 120
Alpha-Chlordane	99.6		P	80 - 120
Beta-BHC	96.8		P	80 - 120
Beta-Cyfluthrin	104		P	80 - 120
Bifenthrin	102		P	80 - 120
Chlorothalonil	104		P	80 - 120
Cis-Nonachlor	95.8		P	80 - 120
Cypermethrin	91.2		P	80 - 120
Dacthal	93.7		P	80 - 120
DDD-p,p'	89.8		P	80 - 120
DDE-p,p'	97.5		P	80 - 120
DDT-p,p'	95.9		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	113		P	80 - 120
Dichlobenil	98.7		P	80 - 120
Dicofol	90.5		P	80 - 120
Dieldrin	105		P	80 - 120
Endosulfan I	96.1		P	80 - 120
Endosulfan II	95.0		P	80 - 120
Endosulfan Sulfate	94.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A121013
Included Lab Sample IDs: 2429311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin	98.3		P	80 - 120
Endrin Aldehyde	88.1		P	80 - 120
Endrin Ketone	99.5		P	80 - 120
Esfenvalerate	108		P	80 - 120
Ethalfuralin	88.3		P	80 - 120
Fenpropathrin	93.6		P	80 - 120
Gamma-BHC	93.2		P	80 - 120
Gamma-Chlordane	95.4		P	80 - 120
Heptachlor	103		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Hexachlorobenzene	84.0		P	80 - 120
Kepone	81.6		P	80 - 120
Lambda-Cyhalothrin	102		P	80 - 120
Methoprene	94.6		P	80 - 120
Methoxychlor	96.9		P	80 - 120
MGK-264	98.4		P	80 - 120
Mirex	106		P	80 - 120
Oxychlordane	98.3		P	80 - 120
Permethrin	107		P	80 - 120
Phenothrin	106		P	80 - 120
Piperonyl Butoxide	93.3		P	80 - 120
Prallethrin	92.6		P	80 - 120
Tau-Fluvalinate	103		P	80 - 120
Tetramethrin	102		P	80 - 120
Trans-Nonachlor	104		P	80 - 120
Triclosan Methyl	97.5		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8270E
Run ID: A121030
Included Lab Sample IDs: 2429311

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	94.3		P	80 - 120
PCB-1260	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A121057
Included Lab Sample IDs: 2429300, 2429302, 2429303

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.7	96.6	P/P	90 - 110
Chloride	96.6	96.8	P/P	90 - 110
Sulfate	95.5	96.4	P/P	90 - 110
Sulfate	96.4	96.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A121065
Included Lab Sample IDs: 2429305

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

Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121065

Included Lab Sample IDs: 2429305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.2	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)	97.8				14.3	
	Color (true)	99.9				0.286	
EPA 180.1 Rev. 2.0	Turbidity	99.0				13.9	
	Turbidity	99.1				3.62	
EPA 300.0 Rev. 2.1	Chloride	96.1	97.7	96.4		0.143	
	Sulfate	94.3	94.2	93.0		0.164	
EPA 350.1 Rev. 2.0	Ammonia-N	95.6	97.0	96.6			0.369
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	110	88.5	96.6			5.98
	Kjeldahl Nitrogen	99.5					3.39
EPA 353.2 Rev. 2.0	NO2NO3-N	103	104	104			0.480
EPA 365.1 Rev. 2.0	Total-P	102					0.388
EPA 8270E	Aldrin	44.8	53.4	41.6			24.9
	Alpha-BHC	105	93.8	98.8			5.19
	Alpha-Chlordane	60.3	68.2	61.1			11.0
	Beta-BHC	65.7	85.2	69.5			20.3
	Beta-Cyfluthrin	79.2	93.0	81.1			13.7
	Bifenthrin	52.6	80.3	73.9			8.21
	Chlorothalonil	52.2	70.7	63.9			10.0
	Cis-Nonachlor	61.4	83.3	69.9			17.6
	Cypermethrin	74.5	69.2	67.8			1.94
	Dacthal	73.8	85.6	63.4			29.8
	DDD-p,p'	60.1	70.3	64.7			8.31
	DDE-p,p'	61.2	69.1	59.9			14.3
	DDT-p,p'	67.2	66.9	67.3			0.646
	Delta-BHC	67.2	93.2	89.2			4.35
	Deltamethrin	99.5	103	89.8			13.7
	Dichlobenil	63.6	54.6	47.5			14.0
	Dicofol	67.4	73.6	70.1			4.79
	Dieldrin	65.5	72.3	62.1			14.1
	Endosulfan I	65.5	86.1	73.6			15.7
	Endosulfan II	77.6	72.8	53.0			31.4
	Endosulfan Sulfate	71.2	54.9	51.3			6.73
	Endrin	67.0	76.3	63.2			18.8
	Endrin Aldehyde	66.2	70.5	61.8			13.2
	Endrin Ketone	79.7	81.5	79.0			3.13
	Esfenvalerate	84.0	117	104			11.6
	Ethalfuralin	52.1	72.2	61.5			15.9
	Fenpropathrin	54.3	76.2	79.9			4.74
	Gamma-BHC	68.0	83.8	64.1			26.7
	Gamma-Chlordane	60.2	63.4	56.8			11.0
	Heptachlor	59.4	72.0	59.6			18.9
	Heptachlor Epoxide	71.6	88.2	81.1			8.38
	Hexachlorobenzene	46.6	55.8	50.0			10.9
	Kepone	40.5	42.1	34.0			21.2
	Lambda-Cyhalothrin	69.2	91.0	91.0			0.0390
	Methoprene	49.6	66.9	65.0			2.91
	Methoxychlor	75.1	64.6	62.2			3.79
	MGK-264	82.6	73.2	68.2			7.14
	Mirex	57.8	79.0	67.8			15.2
	Oxychlordane	65.1	71.3	69.6			2.48
	PCB-1016	56.5	60.0	59.6			0.635
	PCB-1260	71.1	66.7	66.0			1.05
	Permethrin	72.1	77.5	56.6			31.1
	Phenothrin	51.8	90.2	78.4			14.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Piperonyl Butoxide	86.6	114	118		2.69
	Prallethrin	65.9	92.0	92.8		0.914
	Tau-Fluvalinate	70.8	99.1	108		8.81
	Tetramethrin	80.4	99.8	102		1.99
	Trans-Nonachlor	69.6	64.2	52.7		19.8
	Triclosan Methyl	60.7	70.6	58.6		18.6
	Trifluralin	73.0	60.8	64.7		6.22
EPA 8276	Chlordane	79.1	71.6	74.9		4.47
	Toxaphene	88.7	86.5	83.7		3.32
SM 2320 B-2011	Total Alkalinity	96.6			0.483	
SM 2540 C-2015	TDS	103			2.32	
SM 2540 D-2015	TSS	91.4				
SM 4500-F- C-2011	Fluoride	99.8	98.3	99.7		0.960
SM 5310 B-2011	Organic Carbon	97.0	96.3	98.9		2.01

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2429300, 2429302, 2429303
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2429300, 2429302, 2429303
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2429300, 2429302, 2429303
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2429300, 2429302, 2429303
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2429301, 2429304, 2429305
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2429301, 2429304, 2429305
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2429301, 2429304, 2429305
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2429301, 2429304, 2429305
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2429311
EPA 8270E	PCBs in water matrices by GC/MS/MS	2429311
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2429311
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2429300, 2429302, 2429303
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2429300, 2429302, 2429303
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2429300, 2429302, 2429303
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2429300, 2429302, 2429303
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2429301, 2429304, 2429305

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	08/08/2023			08/08/2023 15:50	Anna M. Plaviak	2429300, 2429303
	08/08/2023			08/08/2023 16:31	Anna M. Plaviak	2429302
EPA 180.1 Rev. 2.0	08/08/2023			08/08/2023 13:41	Alexis Price	2429300
	08/08/2023			08/08/2023 13:42	Alexis Price	2429302
EPA 300.0 Rev. 2.1	08/08/2023			08/08/2023 13:49	Alexis Price	2429303
	08/08/2023			08/18/2023 13:31	James L Waggeberby	2429302
	08/08/2023			08/18/2023 18:40	James L Waggeberby	2429300
EPA 350.1 Rev. 2.0	08/08/2023			08/18/2023 18:55	James L Waggeberby	2429303
	08/08/2023			08/11/2023 15:30	Ping Hua	2429301
	08/08/2023			08/11/2023 15:31	Ping Hua	2429304
EPA 351.2 Rev. 2.0	08/08/2023			08/11/2023 15:32	Ping Hua	2429305
	08/08/2023	08/09/2023 12:44	Simonne.V. Calhoun	08/11/2023 10:26	Samantha L Bates	2429301
	08/08/2023	08/09/2023 12:44	Simonne.V. Calhoun	08/11/2023 10:31	Samantha L Bates	2429304
EPA 353.2 Rev. 2.0	08/08/2023	08/15/2023 11:03	Simonne.V. Calhoun	08/16/2023 10:42	Samantha L Bates	2429305
	08/08/2023			08/10/2023 10:17	Beverly Y. Sanders	2429301
	08/08/2023			08/10/2023 10:18	Beverly Y. Sanders	2429304
EPA 365.1 Rev. 2.0	08/08/2023			08/10/2023 10:19	Beverly Y. Sanders	2429305
	08/08/2023	08/09/2023 14:50	Simonne.V. Calhoun	08/10/2023 14:29	Simonne.V. Calhoun	2429301
	08/08/2023	08/09/2023 14:50	Simonne.V. Calhoun	08/10/2023 14:34	Simonne.V. Calhoun	2429304
EPA 8270E	08/08/2023	08/09/2023 14:50	Simonne.V. Calhoun	08/10/2023 14:37	Simonne.V. Calhoun	2429305
	08/08/2023	08/08/2023 11:00	Rasheda Ghaffari	08/11/2023 05:35	Julie Wi	2429311
	08/08/2023	08/08/2023 11:00	Rasheda Ghaffari	08/11/2023 19:46	Vandana T. Nagar	2429311
EPA 8276	08/08/2023	08/08/2023 11:00	Rasheda Ghaffari	08/12/2023 02:54	Arthur Maknenko	2429311
SM 2320 B-2011	08/08/2023			08/10/2023 02:31	Dale L. Simmons	2429300
	08/08/2023			08/10/2023 02:44	Dale L. Simmons	2429302
	08/08/2023			08/10/2023 02:57	Dale L. Simmons	2429303
SM 2540 C-2015	08/08/2023			08/09/2023 15:59	Yijie Li	2429300, 2429302, 2429303
SM 2540 D-2015	08/08/2023			08/09/2023 15:59	Yijie Li	2429300, 2429302, 2429303
SM 4500-F- C-2011	08/08/2023			08/10/2023 02:31	Dale L. Simmons	2429300
	08/08/2023			08/10/2023 02:44	Dale L. Simmons	2429302
	08/08/2023			08/10/2023 02:57	Dale L. Simmons	2429303
SM 5310 B-2011	08/08/2023			08/09/2023 21:17	Elise M. Gillis	2429301
	08/08/2023			08/10/2023 00:39	Elise M. Gillis	2429304
	08/08/2023			08/10/2023 00:54	Elise M. Gillis	2429305