

Chemical Analysis Report

NE-DIST-2023-05-23-01

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

Event Description: **Gainesville Lakes**
Request ID: **RQ-2023-05-22-54**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 12-JUN-2023 10:36



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: 05/22/2023 10:50

Field ID: 20020097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2411830	DEP SOP: NU-094-1	Color (true)	14	A	PCU	P430307	
	EPA 180.1 Rev. 2.0	Turbidity	27		NTU	P430255	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P430451	
		Sulfate	10		mg SO4/L	P430454	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P430510	
	SM 2540 C-2015	TDS	133		mg/L	P430790	
	SM 2540 D-2015	TSS	35		mg/L	P430857	
	SM 4500-F- C-2011	Fluoride	0.21		mg F/L	P430528	
2411833	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P430658	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.9		mg N/L	P430388	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430733	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P430312	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P430383	

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.

SM 5310 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Glen Spring

Collection Date/Time: 05/22/2023 12:00

Field ID: G1NE0952

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2411831	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P430305	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P430255	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P430451	
		Sulfate	18		mg SO4/L	P430454	
	SM 2320 B-2011	Total Alkalinity	136	A	mg CaCO3/L	P430510	
	SM 2540 C-2015	TDS	206		mg/L	P430790	
	SM 2540 D-2015	TSS	2	U	mg/L	P430857	
	SM 4500-F- C-2011	Fluoride	0.31		mg F/L	P430528	
2411834	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P430658	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.087	I	mg N/L	P430388	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P430733	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P430312	
	SM 5310 B-2011	Organic Carbon	0.61	I	mg C/L	P430383	

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.

SM 5310 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lake Alice Center

Collection Date/Time: 05/22/2023 11:25

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2411828	DEP SOP: NU-094-1	Color (true)	29		PCU	P430305	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P430255	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P430451	
		Sulfate	29		mg SO4/L	P430454	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P430510	
	SM 2540 C-2015	TDS	194	A	mg/L	P430790	
	SM 2540 D-2015	TSS	3	IA	mg/L	P430857	
2411829	SM 4500-F- C-2011	Fluoride	0.34		mg F/L	P430528	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P430658	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P430388	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430733	
	EPA 365.1 Rev. 2.0	Total-P	0.59		mg P/L	P430312	
2411850	SM 5310 B-2011	Organic Carbon	8.8		mg C/L	P430383	
	EPA 8270E	Aldrin	0.66	U	ng/L	P430360	
		Alpha-BHC	0.10	U	ng/L	P430360	
		Alpha-Chlordane	0.20	U	ng/L	P430360	
		PCB-1016	2.0	U	ng/L	P430360	
		Beta-BHC	0.10	U	ng/L	P430360	
		PCB-1221	2.0	U	ng/L	P430360	
		Beta-Cyfluthrin	1.3	U	ng/L	P430360	
		PCB-1232	2.0	U	ng/L	P430360	
		Bifenthrin	0.51	U	ng/L	P430360	
		PCB-1242	2.0	U	ng/L	P430360	
		PCB-1248	2.0	U	ng/L	P430360	
		Chlorothalonil	3.7	U	ng/L	P430360	
		PCB-1254	2.0	U	ng/L	P430360	
		Cis-Nonachlor	0.20	U	ng/L	P430360	
		PCB-1260	2.0	U	ng/L	P430360	
		Cypermethrin	1.5	U	ng/L	P430360	
		Dacthal	0.15	U	ng/L	P430360	
		DDD-p,p'	0.26	U	ng/L	P430360	
		DDE-p,p'	0.20	U	ng/L	P430360	
		DDT-p,p'	0.26	U	ng/L	P430360	
		Delta-BHC	0.41	U	ng/L	P430360	
		Deltamethrin	1.3	U	ng/L	P430360	
		Dichlobenil	0.26	U	ng/L	P430360	
		Dicofol	1.3	U	ng/L	P430360	
		Diieldrin	0.41	U	ng/L	P430360	
		Endosulfan I	0.41	U	ng/L	P430360	
		Endosulfan II	0.41	U	ng/L	P430360	
		Endosulfan Sulfate	0.31	U	ng/L	P430360	
		Endrin	0.41	U	ng/L	P430360	
		Endrin Aldehyde	0.77	U	ng/L	P430360	
		Endrin Ketone	0.41	U	ng/L	P430360	

Field ID: 20020052

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2411850	EPA 8270E	Esfenvalerate	0.77	U	ng/L	P430360	
		Ethalfuralin	0.15	U	ng/L	P430360	
		Fenpropathrin	0.26	U	ng/L	P430360	
		Gamma-BHC	0.13	U	ng/L	P430360	
		Gamma-Chlordane	0.20	U	ng/L	P430360	
		Heptachlor	0.20	U	ng/L	P430360	
		Heptachlor Epoxide	0.26	U	ng/L	P430360	
		Hexachlorobenzene**	1.0	U	ng/L	P430360	
		Kepone	5.1	U	ng/L	P430360	
		Lambda-Cyhalothrin	0.77	U	ng/L	P430360	
		Methoprene	0.77	U	ng/L	P430360	
		Methoxychlor	0.31	U	ng/L	P430360	
		MGK-264	0.20	U	ng/L	P430360	
		Mirex	0.36	U	ng/L	P430360	
		Oxychlordane	0.31	U	ng/L	P430360	
		Permethrin	1.6	U	ng/L	P430360	
		Phenothrin	0.92	U	ng/L	P430360	
		Piperonyl Butoxide	0.17	I	ng/L	P430360	
		Prallethrin	2.0	U	ng/L	P430360	
		Tau-Fluvalinate	0.26	U	ng/L	P430360	
		Tetramethrin	0.77	U	ng/L	P430360	
		Trans-Nonachlor	0.20	U	ng/L	P430360	
		Triclosan Methyl	0.15	U	ng/L	P430360	
		Trifluralin	0.20	U	ng/L	P430360	
	EPA 8276	Chlordane	2.0	U	ng/L	P430360	
		Toxaphene	15	U	ng/L	P430360	

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.

SM 5310 B-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Hammock Lake

Collection Date/Time: 05/22/2023 12:40

Field ID: G3NE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2411832	DEP SOP: NU-094-1	Color (true)	29		PCU	P430305	
	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P430255	
	EPA 300.0 Rev. 2.1	Chloride	42	A	mg Cl/L	P430524	
		Sulfate	7.9	A	mg SO4/L	P430525	
	SM 2320 B-2011	Total Alkalinity	73		mg CaCO3/L	P430510	
	SM 2540 C-2015	TDS	183		mg/L	P430790	
	SM 2540 D-2015	TSS	10	I	mg/L	P430857	
	SM 4500-F- C-2011	Fluoride	0.26		mg F/L	P430528	
2411835	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P430658	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P430390	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430733	
	EPA 365.1 Rev. 2.0	Total-P	0.36		mg P/L	P430312	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P430447	

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.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P430305

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P430307

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430255

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430451

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430454

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430524

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430525

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430658

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430388

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: P430390

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430733

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430312

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

Reference Method: EPA 8270E
Batch ID: P430360

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'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430360

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P430360

Component	Result	Code	Units
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: P430360

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: P430510

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

Reference Method: SM 2540 C-2015

Batch ID: P430790

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P430857

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 4500-F- C-2011
Batch ID: P430528

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P430383

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P430447

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: P430305

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P430307

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430255

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430451

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430524

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430525

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430658

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430388

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430390

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430733

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: P430312

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

Reference Method: EPA 8270E
Batch ID: P430360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.2		P	10 - 92.0
Alpha-BHC	76.6		P	75 - 107
Alpha-Chlordane	69.8		P	50 - 108
Beta-BHC	75.7		P	36 - 138
Beta-Cyfluthrin	69.2		P	20 - 161
Bifenthrin	45.8		P	10 - 119
Chlorothalonil	76.3		P	26 - 186
Cis-Nonachlor	75.2		P	42 - 119
Cypermethrin	74.4		P	22 - 150
Dacthal	77.2		P	72 - 119
DDD-p,p'	68.6		P	45 - 107
DDE-p,p'	65.6		P	48 - 106
DDT-p,p'	62.1		P	48 - 110
Delta-BHC	87.7		P	54 - 140
Deltamethrin	75.2		P	22 - 189
Dichlobenil	62.8		P	36 - 117
Dicofol	62.4		P	46 - 155
Dieldrin	73.1		P	54 - 110
Endosulfan I	73.8		P	59 - 105
Endosulfan II	77.3		P	51 - 118
Endosulfan Sulfate	77.7		P	57 - 121
Endrin	68.4		P	10 - 120
Endrin Aldehyde	80.0		P	34 - 118
Endrin Ketone	80.5		P	69 - 177
Esfenvalerate	67.1		P	23 - 168
Ethalfuralin	70.2		P	49 - 99.0
Fenpropathrin	72.0		P	34 - 117
Gamma-BHC	84.6		P	72 - 117
Gamma-Chlordane	62.9		P	43 - 106
Heptachlor	56.5		P	41 - 98.0
Heptachlor Epoxide	71.2		P	57 - 106
Hexachlorobenzene	57.0		P	36 - 99.0
Kepone	136		P	16 - 215
Lambda-Cyhalothrin	60.9		P	21 - 177

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P430360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Methoprene	55.4		P	10 - 119
Methoxychlor	70.7		P	60 - 112
MGK-264	75.9		P	26 - 122
Mirex	54.0		P	10 - 169
Oxychlordane	64.1		P	43 - 105
PCB-1016	69.0		P	48 - 112
PCB-1260	88.1		P	44 - 118
Permethrin	59.6		P	24 - 148
Phenothrin	46.1		P	10 - 106
Piperonyl Butoxide	76.1		P	10 - 139
Prallethrin	70.0		P	17 - 109
Tau-Fluvalinate	58.4		P	13 - 131
Tetramethrin	77.3		P	10 - 132
Trans-Nonachlor	72.6		P	44 - 106
Triclosan Methyl	73.1		P	59 - 109
Trifluralin	64.7		P	44 - 101

Reference Method: EPA 8276
Batch ID: P430360

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	95.2		P	61 - 116
Toxaphene	99.6		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P430510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.3		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P430790

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

Reference Method: SM 2540 D-2015
Batch ID: P430857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	90.7		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P430528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P430383

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

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P430383

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P430447

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411586	Chloride	99.2		P	90 - 110
2411717	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411586	Sulfate	97.4		P	90 - 110
2411717	Sulfate	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430524

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411832	Chloride	96.4		P	90 - 110
2412105	Chloride	97.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430525

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411832	Sulfate	96.3		P	90 - 110
2412105	Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411771	Ammonia-N	97.8	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430388

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411834	Kjeldahl Nitrogen	94.2	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430390

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411835	Kjeldahl Nitrogen	96.6	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411833	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P430360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P430360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412203	PCB-1016	71.9	66.9	P/P	46 - 111
2412203	PCB-1260	78.2	66.0	P/P	45 - 114
2412722	Aldrin	45.7	45.3	P/P	20 - 82.0
2412722	Alpha-BHC	86.3	81.5	P/P	71 - 109
2412722	Alpha-Chlordane	71.1	81.9	P/P	42 - 106
2412722	Beta-BHC	82.6	84.7	P/P	69 - 180
2412722	Beta-Cyfluthrin	74.0	78.5	P/P	18 - 175
2412722	Bifenthrin	49.6	41.0	P/P	21 - 128
2412722	Chlorothalonil	100	100	P/P	10 - 300
2412722	Cis-Nonachlor	74.3	73.6	P/P	34 - 106
2412722	Cypermethrin	81.2	80.0	P/P	22 - 158
2412722	Dacthal	82.7	86.4	P/P	54 - 116
2412722	DDD-p,p'	72.6	75.5	P/P	34 - 107
2412722	DDE-p,p'	71.5	74.3	P/P	33 - 110
2412722	DDT-p,p'	68.2	61.3	P/P	50 - 122
2412722	Delta-BHC	97.0	98.6	P/P	77 - 193
2412722	Deltamethrin	92.6	88.5	P/P	10 - 195
2412722	Dichlobenil	44.1	38.4	P/P	25 - 113
2412722	Dicofol	70.9	65.8	P/P	38 - 247
2412722	Dieldrin	79.6	79.9	P/P	45 - 118
2412722	Endosulfan I	80.3	80.3	P/P	51 - 106
2412722	Endosulfan II	79.0	86.9	P/P	37 - 122
2412722	Endosulfan Sulfate	73.3	81.4	P/P	43 - 132
2412722	Endrin	74.3	72.4	P/P	29 - 101
2412722	Endrin Aldehyde	90.4	93.6	P/P	19 - 110
2412722	Endrin Ketone	78.1	92.4	P/P	60 - 140
2412722	Esfenvalerate	76.4	72.9	P/P	26 - 199
2412722	Ethalfuralin	70.9	67.1	P/P	45 - 99.0
2412722	Fenpropathrin	77.9	75.4	P/P	35 - 120
2412722	Gamma-BHC	122	116	P/P	63 - 128
2412722	Gamma-Chlordane	70.5	71.1	P/P	40 - 104
2412722	Heptachlor	59.9	58.8	P/P	36 - 97.0
2412722	Heptachlor Epoxide	71.5	70.4	P/P	49 - 184
2412722	Hexachlorobenzene	49.1	43.3	P/P	39 - 96.0
2412722	Kepone	138	140	P/P	10 - 217
2412722	Lambda-Cyhalothrin	67.1	66.8	P/P	21 - 193
2412722	Methoprene	58.6	56.6	P/P	20 - 106
2412722	Methoxychlor	79.7	71.2	P/P	53 - 118
2412722	MGK-264	78.3	84.7	P/P	40 - 118
2412722	Mirex	63.2	58.9	P/P	26 - 92.0
2412722	Oxychlordane	74.6	71.3	P/P	44 - 99.0
2412722	Permethrin	69.1	59.0	P/P	33 - 182
2412722	Phenothrin	60.1	52.2	P/P	10 - 129
2412722	Piperonyl Butoxide	80.3	69.4	P/P	10 - 211
2412722	Prallethrin	71.5	71.4	P/P	24 - 113
2412722	Tau-Fluvalinate	67.8	65.3	P/P	14 - 149
2412722	Tetramethrin	83.9	75.8	P/P	17 - 151
2412722	Trans-Nonachlor	74.5	77.9	P/P	42 - 102
2412722	Triclosan Methyl	78.4	79.1	P/P	48 - 108
2412722	Trifluralin	74.8	68.9	P/P	47 - 96.0

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P430360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2412203	Chlordane	84.9	80.0	P/P	53 - 126
2412203	Toxaphene	100	95.8	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P430528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411831	Fluoride	100	98.5	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P430383

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408699	Organic Carbon	96.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P430447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2411835	Organic Carbon	91.4	95.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P430305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411768	Color (true)	2.19	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P430307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411830	Color (true)	1.98	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P430255

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411724	Turbidity	1.75	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411586	Chloride	0.203	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411586	Sulfate	1.46	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411832	Chloride	0.741	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411832	Sulfate	1.29	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411771	Ammonia-N	0.697	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430388

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411834	Kjeldahl Nitrogen	0.821	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411835	Kjeldahl Nitrogen	4.50	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430733

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411833	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P430312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411829	Total-P	0.436	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P430360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412203	PCB-1016	7.17	Spike	P	0 - 32
2412203	PCB-1260	16.9	Spike	P	0 - 31
2412722	Aldrin	0.790	Spike	P	0 - 41
2412722	Alpha-BHC	5.79	Spike	P	0 - 25
2412722	Alpha-Chlordane	14.1	Spike	P	0 - 33
2412722	Beta-BHC	2.57	Spike	P	0 - 36
2412722	Beta-Cyfluthrin	5.91	Spike	P	0 - 42
2412722	Bifenthrin	19.0	Spike	P	0 - 53
2412722	Chlorothalonil	0.222	Spike	P	0 - 71
2412722	Cis-Nonachlor	0.960	Spike	P	0 - 29
2412722	Cypermethrin	1.60	Spike	P	0 - 40
2412722	Dacthal	4.46	Spike	P	0 - 26
2412722	DDD-p,p'	3.97	Spike	P	0 - 39
2412722	DDE-p,p'	3.93	Spike	P	0 - 33
2412722	DDT-p,p'	10.7	Spike	P	0 - 40
2412722	Delta-BHC	1.61	Spike	P	0 - 37
2412722	Deltamethrin	4.54	Spike	P	0 - 100
2412722	Dichlobenil	14.0	Spike	P	0 - 40
2412722	Dicofol	7.52	Spike	P	0 - 31
2412722	Dieldrin	0.175	Spike	P	0 - 27
2412722	Endosulfan I	0.0151	Spike	P	0 - 23
2412722	Endosulfan II	9.57	Spike	P	0 - 28
2412722	Endosulfan Sulfate	10.5	Spike	P	0 - 38

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P430360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412722	Endrin	2.69	Spike	P	0 - 63
2412722	Endrin Aldehyde	3.57	Spike	P	0 - 60
2412722	Endrin Ketone	16.8	Spike	P	0 - 37
2412722	Esfenvalerate	4.67	Spike	P	0 - 52
2412722	Ethalfuralin	5.52	Spike	P	0 - 23
2412722	Fenpropathrin	3.27	Spike	P	0 - 32
2412722	Gamma-BHC	5.19	Spike	P	0 - 17
2412722	Gamma-Chlordane	0.843	Spike	P	0 - 40
2412722	Heptachlor	1.82	Spike	P	0 - 29
2412722	Heptachlor Epoxide	0.796	Spike	P	0 - 25
2412722	Hexachlorobenzene	12.5	Spike	P	0 - 36
2412722	Kepone	1.65	Spike	P	0 - 93
2412722	Lambda-Cyhalothrin	0.473	Spike	P	0 - 55
2412722	Methoprene	3.43	Spike	P	0 - 53
2412722	Methoxychlor	11.2	Spike	P	0 - 29
2412722	MGK-264	7.83	Spike	P	0 - 35
2412722	Mirex	7.09	Spike	P	0 - 46
2412722	Oxychlordane	4.44	Spike	P	0 - 29
2412722	Permethrin	15.8	Spike	P	0 - 44
2412722	Phenothrin	14.1	Spike	P	0 - 56
2412722	Piperonyl Butoxide	14.6	Spike	P	0 - 100
2412722	Prallethrin	0.146	Spike	P	0 - 42
2412722	Tau-Fluvalinate	3.75	Spike	P	0 - 54
2412722	Tetramethrin	10.1	Spike	P	0 - 51
2412722	Trans-Nonachlor	4.53	Spike	P	0 - 37
2412722	Triclosan Methyl	0.922	Spike	P	0 - 31
2412722	Trifluralin	8.11	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P430360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2412203	Chlordane	5.87	Spike	P	0 - 25
2412203	Toxaphene	4.32	Spike	P	0 - 26

Reference Method: SM 2320 B-2011

Batch ID: P430510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411831	Total Alkalinity	2.68	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P430790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411828	TDS	4.65	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P430528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411831	Fluoride	0.959	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P430447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2411835	Organic Carbon	2.39	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2411850
Field Sample ID: 20020052

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	77.5	P	29 - 130
EPA 8270E	Decachlorobiphenyl	66.7	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	64.5	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	46.2	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	54.3	P	30 - 101
EPA 8276	PCNB	89.6	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119351

Included Lab Sample IDs: 2411828, 2411830, 2411831, 2411832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.0	101	P/P	90 - 110
Chloride	99.2	99.4	P/P	90 - 110
Sulfate	96.6	99.3	P/P	90 - 110
Sulfate	97.3	97.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119352

Included Lab Sample IDs: 2411828, 2411830, 2411831, 2411832

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: A119368

Included Lab Sample IDs: 2411828, 2411830, 2411831, 2411832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.3	P/P	90 - 110
Color (true)	99.8	99.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A119400

Included Lab Sample IDs: 2411829, 2411833, 2411834

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.0	94.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119406

Included Lab Sample IDs: 2411829, 2411833, 2411834, 2411835

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

Reference Method: SM 5310 B-2011

Run ID: A119426

Included Lab Sample IDs: 2411835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119430

Included Lab Sample IDs: 2411829, 2411833, 2411834, 2411835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.9	95.1	P/P	90 - 110
Kjeldahl Nitrogen	93.5	95.0	P/P	90 - 110
Kjeldahl Nitrogen	95.1	97.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A119457

Included Lab Sample IDs: 2411828, 2411830, 2411831, 2411832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.5	96.2	P/P	90 - 110
Total Alkalinity	96.2	92.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A119457

Included Lab Sample IDs: 2411828, 2411830, 2411831, 2411832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	104	P/P	90 - 110
Fluoride	104	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119511

Included Lab Sample IDs: 2411829, 2411833, 2411834, 2411835

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.2	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119541

Included Lab Sample IDs: 2411829, 2411833, 2411834, 2411835

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 8270E

Run ID: A119545

Included Lab Sample IDs: 2411850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.2		P	80 - 120
Alpha-BHC	105		P	80 - 120
Alpha-Chlordane	104		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	99.7		P	80 - 120
Bifenthrin	109		P	80 - 120
Chlorothalonil	85.6		P	80 - 120
Cis-Nonachlor	108		P	80 - 120
Cypermethrin	108		P	80 - 120
Dacthal	95.6		P	80 - 120
DDD-p,p'	107		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	100		P	80 - 120
Delta-BHC	108		P	80 - 120
Deltamethrin	93.6		P	80 - 120
Dichlobenil	113		P	80 - 120
Dicofol	91.9		P	80 - 120
Dieldrin	93.4		P	80 - 120
Endosulfan I	108		P	80 - 120
Endosulfan II	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A119545
Included Lab Sample IDs: 2411850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	93.8		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	87.0		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	104		P	80 - 120
Ethalfuralin	96.9		P	80 - 120
Fenpropathrin	103		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	103		P	80 - 120
Heptachlor Epoxide	99.2		P	80 - 120
Hexachlorobenzene	103		P	80 - 120
Kepone	90.5		P	80 - 120
Lambda-Cyhalothrin	108		P	80 - 120
Methoprene	113		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	113		P	80 - 120
Mirex	106		P	80 - 120
Oxychlordane	111		P	80 - 120
Permethrin	106		P	80 - 120
Phenothrin	107		P	80 - 120
Piperonyl Butoxide	106		P	80 - 120
Prallethrin	112		P	80 - 120
Tau-Fluvalinate	96.2		P	80 - 120
Tetramethrin	100		P	80 - 120
Trans-Nonachlor	109		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	99.9		P	80 - 120

Reference Method: EPA 8276
Run ID: A119580
Included Lab Sample IDs: 2411850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.2		P	80 - 120
Toxaphene	92.6		P	80 - 120

Reference Method: EPA 8270E
Run ID: A119585
Included Lab Sample IDs: 2411850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	96.6		P	80 - 120
PCB-1260	103		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	98.8				2.19	
	Color (true)	98.3				1.98	
EPA 180.1 Rev. 2.0	Turbidity	99.5				1.75	
EPA 300.0 Rev. 2.1	Chloride	102	99.2	101		0.203	
	Chloride	99.0	96.4	97.3		0.741	
	Sulfate	99.4	97.4	98.1		1.46	
	Sulfate	97.4	96.3	96.6		1.29	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	97.8	98.6			0.697
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.3	94.2	95.0			0.821
	Kjeldahl Nitrogen	96.8	96.6	104			4.50
EPA 353.2 Rev. 2.0	NO2NO3-N	103	104	103			0.484
EPA 365.1 Rev. 2.0	Total-P	101					0.436
EPA 8270E	Aldrin	46.2	45.7	45.3			0.790
	Alpha-BHC	76.6	86.3	81.5			5.79
	Alpha-Chlordane	69.8	71.1	81.9			14.1
	Beta-BHC	75.7	82.6	84.7			2.57
	Beta-Cyfluthrin	69.2	74.0	78.5			5.91
	Bifenthrin	45.8	49.6	41.0			19.0
	Chlorothalonil	76.3	100	100			0.222
	Cis-Nonachlor	75.2	74.3	73.6			0.960
	Cypermethrin	74.4	81.2	80.0			1.60
	Dacthal	77.2	82.7	86.4			4.46
	DDD-p,p'	68.6	72.6	75.5			3.97
	DDE-p,p'	65.6	71.5	74.3			3.93
	DDT-p,p'	62.1	68.2	61.3			10.7
	Delta-BHC	87.7	97.0	98.6			1.61
	Deltamethrin	75.2	92.6	88.5			4.54
	Dichlobenil	62.8	44.1	38.4			14.0
	Dicofol	62.4	70.9	65.8			7.52
	Dieldrin	73.1	79.6	79.9			0.175
	Endosulfan I	73.8	80.3	80.3			0.0151
	Endosulfan II	77.3	79.0	86.9			9.57
	Endosulfan Sulfate	77.7	73.3	81.4			10.5
	Endrin	68.4	74.3	72.4			2.69
	Endrin Aldehyde	80.0	90.4	93.6			3.57
	Endrin Ketone	80.5	78.1	92.4			16.8
	Esfenvalerate	67.1	76.4	72.9			4.67
	Ethalfuralin	70.2	70.9	67.1			5.52
	Fenpropathrin	72.0	77.9	75.4			3.27
	Gamma-BHC	84.6	122	116			5.19
	Gamma-Chlordane	62.9	70.5	71.1			0.843
	Heptachlor	56.5	59.9	58.8			1.82
	Heptachlor Epoxide	71.2	71.5	70.4			0.796
	Hexachlorobenzene	57.0	49.1	43.3			12.5
	Kepone	136	138	140			1.65
	Lambda-Cyhalothrin	60.9	67.1	66.8			0.473
	Methoprene	55.4	58.6	56.6			3.43
	Methoxychlor	70.7	79.7	71.2			11.2
	MGK-264	75.9	78.3	84.7			7.83
	Mirex	54.0	63.2	58.9			7.09
	Oxychlordane	64.1	74.6	71.3			4.44
	PCB-1016	69.0	71.9	66.9			7.17
	PCB-1260	88.1	78.2	66.0			16.9
	Permethrin	59.6	69.1	59.0			15.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Phenothrin	46.1	60.1	52.2		14.1
	Piperonyl Butoxide	76.1	80.3	69.4		14.6
	Prallethrin	70.0	71.5	71.4		0.146
	Tau-Fluvalinate	58.4	67.8	65.3		3.75
	Tetramethrin	77.3	83.9	75.8		10.1
	Trans-Nonachlor	72.6	74.5	77.9		4.53
	Triclosan Methyl	73.1	78.4	79.1		0.922
	Trifluralin	64.7	74.8	68.9		8.11
EPA 8276	Chlordane	95.2	84.9	80.0		5.87
	Toxaphene	99.6	100	95.8		4.32
SM 2320 B-2011	Total Alkalinity	97.3			2.68	
SM 2540 C-2015	TDS	106			4.65	
SM 2540 D-2015	TSS	90.7				
SM 4500-F- C-2011	Fluoride	103	100	98.5		0.959
SM 5310 B-2011	Organic Carbon	92.0	96.0			
	Organic Carbon	96.7	91.4	95.2		2.39

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2411828, 2411830, 2411831, 2411832
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2411828, 2411830, 2411831, 2411832
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2411828, 2411830, 2411831, 2411832
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2411828, 2411830, 2411831, 2411832
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2411829, 2411833, 2411834, 2411835
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2411829, 2411833, 2411834, 2411835
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2411829, 2411833, 2411834, 2411835
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2411829, 2411833, 2411834, 2411835
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2411850
EPA 8270E	PCBs in water matrices by GC/MS/MS	2411850
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2411850
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2411828, 2411830, 2411831, 2411832
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2411828, 2411830, 2411831, 2411832
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2411828, 2411830, 2411831, 2411832
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2411828, 2411830, 2411831, 2411832
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2411829, 2411833, 2411834, 2411835

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	05/23/2023			05/23/2023 15:26	Anna M. Plaviak	2411828
	05/23/2023			05/23/2023 15:27	Anna M. Plaviak	2411831, 2411832
	05/23/2023			05/23/2023 15:41	Anna M. Plaviak	2411830
EPA 180.1 Rev. 2.0	05/23/2023			05/23/2023 13:33	Alexis Price	2411828
	05/23/2023			05/23/2023 13:34	Alexis Price	2411830
	05/23/2023			05/23/2023 13:39	Alexis Price	2411831, 2411832
EPA 300.0 Rev. 2.1	05/23/2023			05/25/2023 23:45	James L Waggeberby	2411828
	05/23/2023			05/26/2023 00:00	James L Waggeberby	2411830
	05/23/2023			05/26/2023 00:15	James L Waggeberby	2411831
EPA 350.1 Rev. 2.0	05/23/2023			05/26/2023 11:09	James L Waggeberby	2411832
	05/23/2023			05/31/2023 13:27	Khloe J Berg	2411829
	05/23/2023			05/31/2023 13:29	Khloe J Berg	2411833
EPA 351.2 Rev. 2.0	05/23/2023			05/31/2023 13:30	Khloe J Berg	2411834
	05/23/2023			05/31/2023 13:31	Khloe J Berg	2411835
	05/23/2023	05/25/2023 11:53	Dana G. Hughes	05/26/2023 09:03	Samantha L Bates	2411829
EPA 353.2 Rev. 2.0	05/23/2023	05/25/2023 11:53	Dana G. Hughes	05/26/2023 09:08	Samantha L Bates	2411833
	05/23/2023	05/25/2023 11:53	Dana G. Hughes	05/26/2023 09:10	Samantha L Bates	2411834
	05/23/2023	05/25/2023 11:53	Dana G. Hughes	05/26/2023 09:47	Samantha L Bates	2411835
EPA 365.1 Rev. 2.0	05/23/2023			06/02/2023 10:23	Beverly Y. Sanders	2411833
	05/23/2023			06/02/2023 10:31	Beverly Y. Sanders	2411829
	05/23/2023			06/02/2023 11:30	Beverly Y. Sanders	2411834
EPA 8270E	05/23/2023			06/02/2023 11:31	Beverly Y. Sanders	2411835
	05/23/2023	05/24/2023 14:00	Alexis Price	05/25/2023 10:55	Simonne.V. Calhoun	2411829
	05/23/2023	05/24/2023 14:00	Alexis Price	05/25/2023 11:03	Simonne.V. Calhoun	2411833
EPA 8276	05/23/2023	05/24/2023 14:00	Alexis Price	05/25/2023 11:04	Simonne.V. Calhoun	2411834
	05/23/2023	05/24/2023 14:00	Alexis Price	05/25/2023 11:05	Simonne.V. Calhoun	2411835
	05/23/2023	05/26/2023 08:00	Fe-Val Siddell	06/01/2023 01:30	Michael Poppell	2411850
SM 2320 B-2011	05/23/2023	05/26/2023 08:00	Fe-Val Siddell	06/02/2023 21:59	Michael Poppell	2411850
	05/23/2023			06/02/2023 08:03	Arthur Maknenko	2411850
	05/23/2023			05/26/2023 20:23	Dale L. Simmons	2411831
SM 2540 C-2015	05/23/2023			05/26/2023 21:53	Dale L. Simmons	2411828
	05/23/2023			05/26/2023 22:07	Dale L. Simmons	2411830
	05/23/2023			05/26/2023 22:21	Dale L. Simmons	2411832
SM 2540 D-2015	05/23/2023			05/26/2023 16:01	Yijie Li	2411828, 2411830, 2411831, 2411832
	05/23/2023			05/26/2023 16:01	Yijie Li	2411828, 2411830, 2411831, 2411832
	05/23/2023			05/26/2023 20:12	Dale L. Simmons	2411831
SM 4500-F- C-2011	05/23/2023			05/26/2023 21:53	Dale L. Simmons	2411828
	05/23/2023			05/26/2023 22:07	Dale L. Simmons	2411830
	05/23/2023			05/26/2023 22:21	Dale L. Simmons	2411832
SM 5310 B-2011	05/23/2023			05/25/2023 01:19	Elise M. Gillis	2411829

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	05/23/2023			05/25/2023 01:44	Elise M. Gillis	2411833
	05/23/2023			05/25/2023 01:59	Elise M. Gillis	2411834
	05/23/2023			05/25/2023 14:25	Elise M. Gillis	2411835