

Chemical Analysis Report

SW-DIST-2023-10-12-01

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

Event Description: **Run 10**
Request ID: **RQ-2023-09-18-36**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 02-NOV-2023 11:42



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: LITTLE LAKE WILSON CENTER

Collection Date/Time: 10/11/2023 09:20

Field ID: G1SW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2444512	DEP SOP: NU-094-1	Color (true)	34		PCU	P436441	
	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P436437	
	EPA 300.0 Rev. 2.1	Chloride	77		mg Cl/L	P436819	
		Sulfate	2.3		mg SO4/L	P436822	
	SM 2320 B-2011	Total Alkalinity	66		mg CaCO3/L	P436517	
	SM 2540 C-2015	TDS	224		mg/L	P436961	
	SM 2540 D-2015	TSS	3	I	mg/L	P436854	
2444513	SM 4500-F- C-2011	Fluoride	0.069	I	mg F/L	P436576	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P436761	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P436504	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P436645	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P436508	
2444518	EPA 8270E	SM 5310 B-2011	Organic Carbon	12	mg C/L	P436658	
		Aldrin	0.67	U	ng/L	P436506	
		Alpha-BHC	0.10	U	ng/L	P436506	
		Alpha-Chlordane	0.21	U	ng/L	P436506	
		PCB-1016	2.1	UJ	ng/L	P436506	LCS
		Beta-BHC	0.10	U	ng/L	P436506	
		PCB-1221	2.1	U	ng/L	P436506	
		Beta-Cyfluthrin	1.3	U	ng/L	P436506	
		PCB-1232	2.1	U	ng/L	P436506	
		Bifenthrin	0.51	U	ng/L	P436506	
		PCB-1242	2.1	U	ng/L	P436506	
		Carbophenothion	0.92	U	ng/L	P436506	
		PCB-1248	2.1	U	ng/L	P436506	
		Chlorothalonil	3.7	U	ng/L	P436506	
		PCB-1254	2.1	U	ng/L	P436506	
		Cis-Nonachlor	0.21	U	ng/L	P436506	
		PCB-1260	2.1	UJ	ng/L	P436506	LCS
		Cypermethrin	1.5	U	ng/L	P436506	
		Dacthal	0.15	U	ng/L	P436506	
		DDD-p,p'	0.26	U	ng/L	P436506	
		DDE-p,p'	0.21	U	ng/L	P436506	
		DDT-p,p'	0.82	U	ng/L	P436506	MS
		Delta-BHC	0.41	U	ng/L	P436506	
		Deltamethrin	1.3	U	ng/L	P436506	MS
		Dichlobenil	0.26	U	ng/L	P436506	
		Dicofol	1.3	U	ng/L	P436506	
		Dieldrin	0.41	U	ng/L	P436506	
		Endosulfan I	0.41	U	ng/L	P436506	
		Endosulfan II	0.92	U	ng/L	P436506	
		Endosulfan Sulfate	0.31	U	ng/L	P436506	
		Endrin	0.92	U	ng/L	P436506	
		Endrin Aldehyde	0.77	U	ng/L	P436506	

Field ID: G1SW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2444518	EPA 8270E	Endrin Ketone	0.41	U	ng/L	P436506	
		Esfenvalerate	0.77	U	ng/L	P436506	
		Ethalfuralin	0.15	U	ng/L	P436506	
		Fenpropathrin	0.26	U	ng/L	P436506	
		Gamma-BHC	0.13	U	ng/L	P436506	
		Gamma-Chlordane	0.21	U	ng/L	P436506	
		Heptachlor	0.21	U	ng/L	P436506	MS
		Heptachlor Epoxide	0.26	U	ng/L	P436506	
		Hexachlorobenzene**	1.0	U	ng/L	P436506	
		Kepone	14	UJ	ng/L	P436506	CCV
		Lambda-Cyhalothrin	0.77	U	ng/L	P436506	
		Methoprene	0.77	U	ng/L	P436506	
		Methoxychlor	0.31	U	ng/L	P436506	
		MGK-264	0.21	U	ng/L	P436506	
		Mirex	0.36	U	ng/L	P436506	
		Oxychlordane	0.31	U	ng/L	P436506	
		Permethrin	1.6	U	ng/L	P436506	
		Phenothrin	0.92	U	ng/L	P436506	
		Piperonyl Butoxide	1.3		ng/L	P436506	
		Prallethrin	2.1	U	ng/L	P436506	
		Tau-Fluvalinate	0.26	U	ng/L	P436506	MS
		Tetramethrin	0.77	U	ng/L	P436506	
		Trans-Nonachlor	0.21	U	ng/L	P436506	
		Triclosan Methyl	0.15	U	ng/L	P436506	
		Trifluralin	0.21	U	ng/L	P436506	
	EPA 8276	Chlordane	2.1	U	ng/L	P436506	
		Toxaphene	15	U	ng/L	P436506	

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 JACKSON AT CENTER

Collection Date/Time: 10/11/2023 10:45

Field ID: G1SW0124

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2444506	DEP SOP: NU-094-1	Color (true)	66	A	PCU	P436441	
	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P436437	
	EPA 300.0 Rev. 2.1	Chloride	38	A	mg Cl/L	P436819	
		Sulfate	3.5	A	mg SO4/L	P436822	
	SM 2320 B-2011	Total Alkalinity	11	A	mg CaCO3/L	P436517	
	SM 2540 C-2015	TDS	102		mg/L	P436961	
	SM 2540 D-2015	TSS	2	I	mg/L	P436854	
	SM 4500-F- C-2011	Fluoride	0.068	I	mg F/L	P436576	
2444509	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P436761	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P436500	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P436644	
	EPA 365.1 Rev. 2.0	Total-P	0.023		mg P/L	P436508	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P436658	

Ref. Method and Comment:

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

Sample Location: LAKE DAN AT CENTER

Collection Date/Time: 10/11/2023 11:35

Field ID: G5SW0161

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2444507	DEP SOP: NU-094-1	Color (true)	36		PCU	P436441	
	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P436437	
	EPA 300.0 Rev. 2.1	Chloride	8.4		mg Cl/L	P436819	
		Sulfate	4.1		mg SO4/L	P436822	
	SM 2320 B-2011	Total Alkalinity	58		mg CaCO3/L	P436517	
	SM 2540 C-2015	TDS	102		mg/L	P436961	
	SM 2540 D-2015	TSS	23		mg/L	P436854	
	SM 4500-F- C-2011	Fluoride	0.080	I	mg F/L	P436576	
2444510	EPA 350.1 Rev. 2.0	Ammonia-N	0.014		mg N/L	P436761	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P436500	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P436645	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P436508	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P436658	

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: WHITE TROUT LAKE AT CENTER

Collection Date/Time: 10/11/2023 12:50

Field ID: G1SW0104

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2444508	DEP SOP: NU-094-1	Color (true)	11		PCU	P436441	
	EPA 180.1 Rev. 2.0	Turbidity	0.95	I	NTU	P436437	
	EPA 300.0 Rev. 2.1	Chloride	36		mg Cl/L	P436819	
		Sulfate	21		mg SO4/L	P436822	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P436517	
	SM 2540 C-2015	TDS	134		mg/L	P436961	
	SM 2540 D-2015	TSS	3	I	mg/L	P436854	
	SM 4500-F- C-2011	Fluoride	0.095	I	mg F/L	P436576	
2444511	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P436761	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45		mg N/L	P436500	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P436645	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P436508	
	SM 5310 B-2011	Organic Carbon	6.4		mg C/L	P436658	

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: P436441

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436437

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436819

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436822

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436761

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436500

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436504

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436644

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436645

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436508

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

Reference Method: EPA 8270E
Batch ID: P436506

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P436506

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

Reference Method: EPA 8276

Batch ID: P436506

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

Reference Method: SM 2320 B-2011

Batch ID: P436517

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

Reference Method: SM 2540 C-2015

Batch ID: P436961

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P436854

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P436576

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P436658

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: P436441

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: P436437

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436819

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436822

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436500

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436504

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436644

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: P436645

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436508

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

Reference Method: EPA 8270E
Batch ID: P436506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	86.2		P	30 - 96.0
Alpha-BHC	94.6		P	70 - 109
Alpha-Chlordane	96.3		P	45 - 107
Beta-BHC	95.7		P	64 - 138
Beta-Cyfluthrin	100		P	17 - 141
Bifenthrin	96.8		P	10 - 113
Carbophenothion	86.0		P	24 - 91.0
Chlorothalonil	71.5		P	26 - 180
Cis-Nonachlor	97.2		P	37 - 102
Cypermethrin	93.0		P	20 - 133
Dacthal	94.2		P	69 - 114
DDD-p,p'	89.7		P	42 - 105
DDE-p,p'	98.5		P	42 - 106
DDT-p,p'	99.9		P	42 - 107
Delta-BHC	80.6		P	67 - 144
Deltamethrin	92.3		P	15 - 149
Dichlobenil	85.7		P	46 - 117
Dicofol	96.6		P	34 - 114
Dieldrin	97.9		P	50 - 108
Endosulfan I	90.1		P	55 - 104
Endosulfan II	82.8		P	51 - 111
Endosulfan Sulfate	83.7		P	56 - 121
Endrin	103		P	10 - 106
Endrin Aldehyde	87.9		P	34 - 114
Endrin Ketone	104		P	63 - 177
Esfenvalerate	99.7		P	29 - 143
Ethalfuralin	92.6		P	46 - 96.0
Fenpropathrin	98.4		P	28 - 115
Gamma-BHC	108		P	65 - 121
Gamma-Chlordane	101		P	39 - 103
Heptachlor	85.5		P	39 - 94.0
Heptachlor Epoxide	97.6		P	54 - 104
Hexachlorobenzene	84.1		P	36 - 100
Kepone	28.8		P	10 - 225
Lambda-Cyhalothrin	97.4		P	10 - 135
Methoprene	97.9		P	10 - 109
Methoxychlor	92.9		P	52 - 112
MGK-264	103		P	44 - 117
Mirex	89.1		P	20 - 90.0
Oxychlordane	95.2		P	44 - 102
PCB-1016	109		F	45 - 107
PCB-1260	130		F	40 - 118
Permethrin	92.1		P	18 - 135
Phenothrin	94.9		P	10 - 102
Piperonyl Butoxide	108		P	28 - 156
Prallethrin	96.6		P	28 - 113

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P436506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tau-Fluvalinate	92.9		P	10 - 123
Tetramethrin	99.0		P	18 - 158
Trans-Nonachlor	102		P	39 - 104
Triclosan Methyl	92.2		P	54 - 108
Trifluralin	95.4		P	46 - 97.0

Reference Method: EPA 8276

Batch ID: P436506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	101		P	52 - 117
Toxaphene	106		P	44 - 125

Reference Method: SM 2320 B-2011

Batch ID: P436517

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

Reference Method: SM 2540 C-2015

Batch ID: P436961

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	91.6		P	85 - 115

Reference Method: SM 2540 D-2015

Batch ID: P436854

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	107		P	85 - 115

Reference Method: SM 4500-F- C-2011

Batch ID: P436576

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	94 - 106

Reference Method: SM 5310 B-2011

Batch ID: P436658

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436819

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444506	Chloride	100		P	90 - 110
2444639	Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436822

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444506	Sulfate	99.6		P	90 - 110
2444639	Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444509	Ammonia-N	98.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444509	Kjeldahl Nitrogen	108	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436504

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444197	Kjeldahl Nitrogen	95.7	95.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2443272	NO2NO3-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436645

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444510	NO2NO3-N	98.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P436508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444604	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P436506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444350	Aldrin	72.2	66.7	P/P	24 - 81.0
2444350	Alpha-BHC	85.6	88.6	P/P	65 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P436506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444350	Alpha-Chlordane	63.4	68.5	P/P	43 - 119
2444350	Beta-BHC	86.8	96.6	P/P	54 - 165
2444350	Beta-Cyfluthrin	126	164	P/P	27 - 165
2444350	Bifenthrin	109	108	P/P	17 - 117
2444350	Carbophenothion	74.0	73.7	P/P	21 - 108
2444350	Chlorothalonil	113	133	P/P	10 - 255
2444350	Cis-Nonachlor	64.1	63.4	P/P	34 - 98.0
2444350	Cypermethrin	119	131	P/P	25 - 143
2444350	Dacthal	79.5	69.8	P/P	55 - 139
2444350	DDD-p,p'	75.6	66.5	P/P	30 - 109
2444350	DDE-p,p'	73.9	65.4	P/P	35 - 106
2444350	DDT-p,p'	130	116	F/F	41 - 101
2444350	Delta-BHC	101	114	P/P	58 - 165
2444350	Deltamethrin	182	197	P/F	10 - 194
2444350	Dichlobenil	46.2	58.5	P/P	22 - 114
2444350	Dicofol	92.3	85.1	P/P	17 - 133
2444350	Dieldrin	83.7	79.9	P/P	45 - 129
2444350	Endosulfan I	87.8	89.6	P/P	49 - 104
2444350	Endosulfan II	66.1	67.4	P/P	37 - 117
2444350	Endosulfan Sulfate	46.2	59.0	P/P	38 - 128
2444350	Endrin	73.5	58.3	P/P	35 - 116
2444350	Endrin Aldehyde	37.1	41.3	P/P	19 - 108
2444350	Endrin Ketone	76.9	82.0	P/P	44 - 134
2444350	Esfenvalerate	145	165	P/P	27 - 176
2444350	Ethalfuralin	83.8	80.3	P/P	49 - 100
2444350	Fenpropathrin	109	98.6	P/P	34 - 117
2444350	Gamma-BHC	113	107	P/P	59 - 129
2444350	Gamma-Chlordane	84.3	93.6	P/P	33 - 107
2444350	Heptachlor	102	84.1	F/P	37 - 94.0
2444350	Heptachlor Epoxide	95.4	86.6	P/P	38 - 118
2444350	Hexachlorobenzene	63.4	72.5	P/P	35 - 97.0
2444350	Kepone	22.0	26.0	P/P	10 - 221
2444350	Lambda-Cyhalothrin	130	133	P/P	23 - 190
2444350	Methoprene	85.6	73.6	P/P	21 - 109
2444350	Methoxychlor	97.6	101	P/P	46 - 118
2444350	MGK-264	84.9	80.5	P/P	39 - 122
2444350	Mirex	75.7	80.7	P/P	25 - 90.0
2444350	Oxychlordane	84.5	89.4	P/P	42 - 100
2444350	Permethrin	116	113	P/P	33 - 181
2444350	Phenothrin	116	119	P/P	12 - 125
2444350	Piperonyl Butoxide	120	120	P/P	10 - 178
2444350	Prallethrin	68.7	57.5	P/P	24 - 122
2444350	Tau-Fluvalinate	139	154	P/F	13 - 151
2444350	Tetramethrin	119	127	P/P	16 - 172
2444350	Trans-Nonachlor	78.9	68.9	P/P	39 - 100
2444350	Triclosan Methyl	69.6	71.9	P/P	43 - 110
2444350	Trifluralin	80.2	77.9	P/P	45 - 94.0
2444518	PCB-1016	84.6	79.7	P/P	45 - 107
2444518	PCB-1260	87.0	84.8	P/P	40 - 112

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P436506

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444518	Chlordane	86.3	71.9	P/P	43 - 123
2444518	Toxaphene	103	81.9	P/P	27 - 156

Reference Method: SM 4500-F- C-2011
Batch ID: P436576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444424	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P436658

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2444488	Organic Carbon	95.0	97.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P436441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444506	Color (true)	5.77	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P436437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444590	Turbidity	1.12	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436819

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444506	Chloride	0.0812	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P436822

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444506	Sulfate	0.462	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P436761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444509	Ammonia-N	1.66	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444509	Kjeldahl Nitrogen	3.65	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P436504

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444197	Kjeldahl Nitrogen	0.0768	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P436644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2443272	NO2NO3-N	0.592	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P436645

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444510	NO2NO3-N	1.01	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P436508

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444604	Total-P	1.25	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P436506

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444350	Aldrin	8.01	Spike	P	0 - 41
2444350	Alpha-BHC	3.54	Spike	P	0 - 25
2444350	Alpha-Chlordane	7.77	Spike	P	0 - 32
2444350	Beta-BHC	10.6	Spike	P	0 - 33
2444350	Beta-Cyfluthrin	25.8	Spike	P	0 - 43
2444350	Bifenthrin	1.14	Spike	P	0 - 52
2444350	Carbophenothion	0.388	Spike	P	0 - 49
2444350	Chlorothalonil	16.1	Spike	P	0 - 82
2444350	Cis-Nonachlor	1.14	Spike	P	0 - 33
2444350	Cypermethrin	9.85	Spike	P	0 - 51
2444350	Dacthal	13.0	Spike	P	0 - 27
2444350	DDD-p,p'	12.9	Spike	P	0 - 39
2444350	DDE-p,p'	12.2	Spike	P	0 - 31
2444350	DDT-p,p'	11.5	Spike	P	0 - 29
2444350	Delta-BHC	12.1	Spike	P	0 - 35
2444350	Deltamethrin	7.75	Spike	P	0 - 100
2444350	Dichlobenil	23.6	Spike	P	0 - 40
2444350	Dicofol	8.11	Spike	P	0 - 37
2444350	Dieldrin	4.72	Spike	P	0 - 27
2444350	Endosulfan I	2.06	Spike	P	0 - 23
2444350	Endosulfan II	1.90	Spike	P	0 - 34
2444350	Endosulfan Sulfate	24.4	Spike	P	0 - 36
2444350	Endrin	23.0	Spike	P	0 - 45
2444350	Endrin Aldehyde	10.8	Spike	P	0 - 76
2444350	Endrin Ketone	6.45	Spike	P	0 - 43
2444350	Esfenvalerate	12.5	Spike	P	0 - 51
2444350	Ethalfuralin	4.23	Spike	P	0 - 22
2444350	Fenpropathrin	10.0	Spike	P	0 - 49
2444350	Gamma-BHC	5.88	Spike	P	0 - 28
2444350	Gamma-Chlordane	10.5	Spike	P	0 - 40
2444350	Heptachlor	19.6	Spike	P	0 - 29
2444350	Heptachlor Epoxide	9.70	Spike	P	0 - 33
2444350	Hexachlorobenzene	13.4	Spike	P	0 - 36
2444350	Kepone	16.9	Spike	P	0 - 85
2444350	Lambda-Cyhalothrin	2.58	Spike	P	0 - 55
2444350	Methoprene	15.2	Spike	P	0 - 53
2444350	Methoxychlor	3.76	Spike	P	0 - 50

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P436506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444350	MGK-264	5.33	Spike	P	0 - 43
2444350	Mirex	6.29	Spike	P	0 - 40
2444350	Oxychlordane	5.67	Spike	P	0 - 31
2444350	Permethrin	3.25	Spike	P	0 - 50
2444350	Phenothrin	2.78	Spike	P	0 - 58
2444350	Piperonyl Butoxide	0.129	Spike	P	0 - 100
2444350	Prallethrin	17.8	Spike	P	0 - 39
2444350	Tau-Fluvalinate	9.66	Spike	P	0 - 54
2444350	Tetramethrin	6.64	Spike	P	0 - 51
2444350	Trans-Nonachlor	13.5	Spike	P	0 - 39
2444350	Triclosan Methyl	3.25	Spike	P	0 - 31
2444350	Trifluralin	2.97	Spike	P	0 - 22
2444518	PCB-1016	6.00	Spike	P	0 - 25
2444518	PCB-1260	2.53	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P436506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444518	Chlordane	18.2	Spike	P	0 - 28
2444518	Toxaphene	22.4	Spike	P	0 - 27

Reference Method: SM 2320 B-2011

Batch ID: P436517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444506	Total Alkalinity	2.36	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P436961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444291	TDS	5.00	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P436576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444424	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011

Batch ID: P436658

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2444488	Organic Carbon	1.30	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2444518
Field Sample ID: G1SW0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	107	P	37 - 129
EPA 8270E	Decachlorobiphenyl	68.9	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	69.6	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	60.2	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	85.8	P	28 - 102
EPA 8276	PCNB	70.3	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122123

Included Lab Sample IDs: 2444506, 2444507, 2444508, 2444512

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

Reference Method: DEP SOP: NU-094-1

Run ID: A122125

Included Lab Sample IDs: 2444506, 2444507, 2444508, 2444512

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

Reference Method: SM 2320 B-2011

Run ID: A122151

Included Lab Sample IDs: 2444506, 2444507, 2444508, 2444512

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.9	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122171

Included Lab Sample IDs: 2444509, 2444510, 2444511

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

Reference Method: SM 4500-F- C-2011

Run ID: A122184

Included Lab Sample IDs: 2444506, 2444507, 2444508, 2444512

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122193

Included Lab Sample IDs: 2444510

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122194

Included Lab Sample IDs: 2444509, 2444511, 2444513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122206

Included Lab Sample IDs: 2444509, 2444510, 2444511, 2444513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122206

Included Lab Sample IDs: 2444509, 2444510, 2444511, 2444513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122209

Included Lab Sample IDs: 2444506, 2444507, 2444508, 2444512

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

Reference Method: SM 5310 B-2011

Run ID: A122210

Included Lab Sample IDs: 2444509, 2444510, 2444511, 2444513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	97.3	P/P	90 - 110
Organic Carbon	96.8	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122221

Included Lab Sample IDs: 2444513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	95.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A122246

Included Lab Sample IDs: 2444509, 2444510, 2444511, 2444513

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A122303

Included Lab Sample IDs: 2444518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.5		P	80 - 120
Alpha-BHC	99.5		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	108		P	80 - 120
Beta-Cyfluthrin	95.8		P	80 - 120
Bifenthrin	89.6		P	80 - 120
Carbophenothion	91.8		P	80 - 120
Chlorothalonil	84.0		P	80 - 120
Cis-Nonachlor	101		P	80 - 120
Cypermethrin	90.9		P	80 - 120
Dacthal	93.3		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	92.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A122303
Included Lab Sample IDs: 2444518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Delta-BHC	91.5		P	80 - 120
Deltamethrin	89.5		P	80 - 120
Dichlobenil	101		P	80 - 120
Dicofol	100		P	80 - 120
Dieldrin	94.5		P	80 - 120
Endosulfan I	93.2		P	80 - 120
Endosulfan II	89.6		P	80 - 120
Endosulfan Sulfate	90.6		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	101		P	80 - 120
Endrin Ketone	84.8		P	80 - 120
Esfenvalerate	88.7		P	80 - 120
Ethalfuralin	100		P	80 - 120
Fenpropathrin	96.3		P	80 - 120
Gamma-BHC	97.2		P	80 - 120
Gamma-Chlordane	108		P	80 - 120
Heptachlor	91.5		P	80 - 120
Heptachlor Epoxide	94.3		P	80 - 120
Hexachlorobenzene	96.0		P	80 - 120
Kepone	57.6*		F	80 - 120
Lambda-Cyhalothrin	92.5		P	80 - 120
Methoprene	97.7		P	80 - 120
Methoxychlor	91.6		P	80 - 120
MGK-264	96.7		P	80 - 120
Mirex	95.5		P	80 - 120
Oxychlordane	99.9		P	80 - 120
Permethrin	86.0		P	80 - 120
Phenothrin	86.9		P	80 - 120
Piperonyl Butoxide	84.7		P	80 - 120
Prallethrin	96.3		P	80 - 120
Tau-Fluvalinate	86.4		P	80 - 120
Tetramethrin	86.6		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Triclosan Methyl	95.7		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8276
Run ID: A122315
Included Lab Sample IDs: 2444518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	113		P	80 - 120
Toxaphene	116		P	80 - 120

Reference Method: EPA 8270E
Run ID: A122376
Included Lab Sample IDs: 2444518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	100		P	80 - 120
PCB-1260	98.5		P	80 - 120

Quality Assurance Report

Calibration Verification

* 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)	99.9				5.77	
EPA 180.1 Rev. 2.0	Turbidity	105				1.12	
EPA 300.0 Rev. 2.1	Chloride	99.8	100	99.8		0.0812	
	Sulfate	98.8	99.6	97.8		0.462	
EPA 350.1 Rev. 2.0	Ammonia-N	99.8	98.8	101			1.66
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.4	108	103			3.65
	Kjeldahl Nitrogen	101	95.7	95.8			0.0768
EPA 353.2 Rev. 2.0	NO2NO3-N	102	98.0	99.0			0.592
	NO2NO3-N	102	98.5	99.5			1.01
EPA 365.1 Rev. 2.0	Total-P	103	102	103			1.25
EPA 8270E	Aldrin	86.2	72.2	66.7			8.01
	Alpha-BHC	94.6	85.6	88.6			3.54
	Alpha-Chlordane	96.3	63.4	68.5			7.77
	Beta-BHC	95.7	86.8	96.6			10.6
	Beta-Cyfluthrin	100	126	164			25.8
	Bifenthrin	96.8	109	108			1.14
	Carbophenothion	86.0	74.0	73.7			0.388
	Chlorothalonil	71.5	113	133			16.1
	Cis-Nonachlor	97.2	64.1	63.4			1.14
	Cypermethrin	93.0	119	131			9.85
	Dacthal	94.2	79.5	69.8			13.0
	DDD-p,p'	89.7	75.6	66.5			12.9
	DDE-p,p'	98.5	73.9	65.4			12.2
	DDT-p,p'	99.9	130	116			11.5
	Delta-BHC	80.6	101	114			12.1
	Deltamethrin	92.3	182	197			7.75
	Dichlobenil	85.7	46.2	58.5			23.6
	Dicofol	96.6	92.3	85.1			8.11
	Dieldrin	97.9	83.7	79.9			4.72
	Endosulfan I	90.1	87.8	89.6			2.06
	Endosulfan II	82.8	66.1	67.4			1.90
	Endosulfan Sulfate	83.7	46.2	59.0			24.4
	Endrin	103	73.5	58.3			23.0
	Endrin Aldehyde	87.9	37.1	41.3			10.8
	Endrin Ketone	104	76.9	82.0			6.45
	Esfenvalerate	99.7	145	165			12.5
	Ethalfuralin	92.6	83.8	80.3			4.23
	Fenpropathrin	98.4	109	98.6			10.0
	Gamma-BHC	108	113	107			5.88
	Gamma-Chlordane	101	84.3	93.6			10.5
	Heptachlor	85.5	102	84.1			19.6
	Heptachlor Epoxide	97.6	95.4	86.6			9.70
	Hexachlorobenzene	84.1	63.4	72.5			13.4
	Kepone	28.8	22.0	26.0			16.9
	Lambda-Cyhalothrin	97.4	130	133			2.58
	Methoprene	97.9	85.6	73.6			15.2
	Methoxychlor	92.9	97.6	101			3.76
	MGK-264	103	84.9	80.5			5.33
	Mirex	89.1	75.7	80.7			6.29
	Oxychlordane	95.2	84.5	89.4			5.67
	PCB-1016	109	84.6	79.7			6.00
	PCB-1260	130	87.0	84.8			2.53
	Permethrin	92.1	116	113			3.25
	Phenothrin	94.9	116	119			2.78

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Piperonyl Butoxide	108	120	120		0.129
	Prallethrin	96.6	68.7	57.5		17.8
	Tau-Fluvalinate	92.9	139	154		9.66
	Tetramethrin	99.0	119	127		6.64
	Trans-Nonachlor	102	78.9	68.9		13.5
	Triclosan Methyl	92.2	69.6	71.9		3.25
	Trifluralin	95.4	80.2	77.9		2.97
EPA 8276	Chlordane	101	86.3	71.9		18.2
	Toxaphene	106	103	81.9		22.4
SM 2320 B-2011	Total Alkalinity	97.3			2.36	
SM 2540 C-2015	TDS	91.6			5.00	
SM 2540 D-2015	TSS	107				
SM 4500-F- C-2011	Fluoride	99.0	103	103		0.0
SM 5310 B-2011	Organic Carbon	95.6	95.0	97.1		1.30

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2444506, 2444507, 2444508, 2444512
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2444506, 2444507, 2444508, 2444512
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2444506, 2444507, 2444508, 2444512
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2444506, 2444507, 2444508, 2444512
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2444509, 2444510, 2444511, 2444513
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2444509, 2444510, 2444511, 2444513
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2444509, 2444510, 2444511, 2444513
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2444509, 2444510, 2444511, 2444513
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2444518
EPA 8270E	PCBs in water matrices by GC/MS/MS	2444518
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2444518
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2444506, 2444507, 2444508, 2444512
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2444506, 2444507, 2444508, 2444512
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2444506, 2444507, 2444508, 2444512
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2444506, 2444507, 2444508, 2444512
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2444509, 2444510, 2444511, 2444513

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	10/12/2023			10/12/2023 16:17	Chandler E Cox	2444506
	10/12/2023			10/12/2023 16:18	Chandler E Cox	2444507
	10/12/2023			10/12/2023 16:19	Chandler E Cox	2444508
	10/12/2023			10/12/2023 16:20	Chandler E Cox	2444512
EPA 180.1 Rev. 2.0	10/12/2023			10/12/2023 14:54	Samantha L Bates	2444506
	10/12/2023			10/12/2023 14:55	Samantha L Bates	2444507
	10/12/2023			10/12/2023 14:56	Samantha L Bates	2444508
	10/12/2023			10/12/2023 14:57	Samantha L Bates	2444512
EPA 300.0 Rev. 2.1	10/12/2023			10/18/2023 13:01	James L Waggeberby	2444506
	10/12/2023			10/18/2023 14:47	James L Waggeberby	2444507
	10/12/2023			10/18/2023 15:02	James L Waggeberby	2444508
	10/12/2023			10/18/2023 15:17	James L Waggeberby	2444512
EPA 350.1 Rev. 2.0	10/12/2023			10/19/2023 13:05	Khloe J Berg	2444509
	10/12/2023			10/19/2023 13:10	Khloe J Berg	2444510
	10/12/2023			10/19/2023 13:11	Khloe J Berg	2444511
	10/12/2023			10/19/2023 13:13	Khloe J Berg	2444513
EPA 351.2 Rev. 2.0	10/12/2023	10/13/2023 15:51	Simonne.V. Calhoun	10/16/2023 14:35	Samantha L Bates	2444509
	10/12/2023	10/13/2023 15:51	Simonne.V. Calhoun	10/16/2023 14:40	Samantha L Bates	2444510
	10/12/2023	10/13/2023 15:51	Simonne.V. Calhoun	10/16/2023 14:44	Samantha L Bates	2444511
	10/12/2023	10/16/2023 16:38	Simonne.V. Calhoun	10/18/2023 11:19	Samantha L Bates	2444513
EPA 353.2 Rev. 2.0	10/12/2023			10/17/2023 12:13	Anna M. Plaviak	2444509
	10/12/2023			10/17/2023 12:20	Anna M. Plaviak	2444510
	10/12/2023			10/17/2023 12:26	Anna M. Plaviak	2444511
	10/12/2023			10/17/2023 12:27	Anna M. Plaviak	2444513
EPA 365.1 Rev. 2.0	10/12/2023	10/16/2023 12:31	Adam P Silver	10/17/2023 09:43	James L Waggeberby	2444510
	10/12/2023	10/16/2023 12:31	Adam P Silver	10/17/2023 12:14	James L Waggeberby	2444509
	10/12/2023	10/16/2023 12:31	Adam P Silver	10/17/2023 12:15	James L Waggeberby	2444511, 2444513
EPA 8270E	10/12/2023	10/16/2023 08:30	Rasheda Ghaffari	10/21/2023 00:42	Lipi Saha	2444518
	10/12/2023	10/16/2023 08:30	Rasheda Ghaffari	10/23/2023 02:42	Julie Wi	2444518
EPA 8276	10/12/2023	10/16/2023 08:30	Rasheda Ghaffari	10/23/2023 07:16	Arthur Maknenko	2444518
SM 2320 B-2011	10/12/2023			10/13/2023 20:18	Chandler E Cox	2444506
	10/12/2023			10/13/2023 20:28	Chandler E Cox	2444507
	10/12/2023			10/13/2023 20:37	Chandler E Cox	2444508
	10/12/2023			10/13/2023 20:47	Chandler E Cox	2444512
SM 2540 C-2015	10/12/2023			10/16/2023 15:32	Yijie Li	2444506, 2444507, 2444508, 2444512
SM 2540 D-2015	10/12/2023			10/16/2023 15:32	Yijie Li	2444506, 2444507, 2444508, 2444512
SM 4500-F- C-2011	10/12/2023			10/16/2023 18:59	Adam P Silver	2444506
	10/12/2023			10/16/2023 19:04	Adam P Silver	2444507
	10/12/2023			10/16/2023 19:10	Adam P Silver	2444508
	10/12/2023			10/16/2023 19:15	Adam P Silver	2444512

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	10/12/2023			10/16/2023 17:12	Khloe J Berg	2444509
	10/12/2023			10/16/2023 22:08	Khloe J Berg	2444510
	10/12/2023			10/16/2023 22:21	Khloe J Berg	2444511
	10/12/2023			10/16/2023 22:34	Khloe J Berg	2444513