

Chemical Analysis Report

CEN-DIST-2023-05-11-02

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

Event Description: **Run 21 plus Spruce deployment**
Request ID: **RQ-2023-05-01-23**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Matthew Bearden

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Certified by: Colin Wright, Program Administrator

Date Certified: 30-MAY-2023 12:11



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: VOLUSIA BLUE SPRING NEAR VENT

Collection Date/Time: 05/10/2023 11:07

Field ID: G2CE0242

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2408886	DEP SOP: NU-094-1	Color (true)	2.9	I	PCU	P429777	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P429780	
	EPA 300.0 Rev. 2.1	Chloride	180		mg Cl/L	P430017	
		Sulfate	32		mg SO4/L	P430020	
	SM 2320 B-2011	Total Alkalinity	145		mg CaCO3/L	P430117	
	SM 2540 C-2015	TDS	488		mg/L	P430193	
	SM 2540 D-2015	TSS	2	U	mg/L	P429882	
2408887	SM 4500-F- C-2011	Fluoride	0.070	I	mg F/L	P430285	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P430076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P430086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.94		mg N/L	P430055	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P429858	
2408892	EPA 8270E	SM 5310 B-2011	Organic Carbon	1.5	mg C/L	P429896	
		Aldrin	0.73	U	ng/L	P429787	
		Alpha-BHC	0.11	U	ng/L	P429787	
		Alpha-Chlordane	0.22	U	ng/L	P429787	
		PCB-1016	2.2	U	ng/L	P429787	
		Beta-BHC	0.11	U	ng/L	P429787	
		PCB-1221	2.2	U	ng/L	P429787	
		Beta-Cyfluthrin	1.4	U	ng/L	P429787	
		PCB-1232	2.2	U	ng/L	P429787	
		Bifenthrin	0.56	U	ng/L	P429787	
		PCB-1242	2.2	U	ng/L	P429787	
		Carbophenothion	1.0	U	ng/L	P429787	
		PCB-1248	2.2	U	ng/L	P429787	
		Chlorothalonil	4.0	U	ng/L	P429787	RPD
		PCB-1254	2.2	U	ng/L	P429787	
		Cis-Nonachlor	0.22	U	ng/L	P429787	
		PCB-1260	2.2	U	ng/L	P429787	
		Cypermethrin	1.7	U	ng/L	P429787	
		Dacthal	0.17	U	ng/L	P429787	MS
		DDD-p,p'	0.28	U	ng/L	P429787	
		DDE-p,p'	0.22	U	ng/L	P429787	
		DDT-p,p'	2.6	V	ng/L	P429787	
		Delta-BHC	0.45	U	ng/L	P429787	
		Deltamethrin	1.4	U	ng/L	P429787	
		Dichlobenil	0.28	U	ng/L	P429787	
		Dicofol	1.4	U	ng/L	P429787	RPD
		Diieldrin	1.3	I	ng/L	P429787	
		Endosulfan I	0.45	U	ng/L	P429787	
		Endosulfan II	0.45	U	ng/L	P429787	
		Endosulfan Sulfate	0.34	U	ng/L	P429787	
		Endrin	0.45	U	ng/L	P429787	
		Endrin Aldehyde	0.84	U	ng/L	P429787	

Field ID: G2CE0242

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2408892	EPA 8270E	Endrin Ketone	0.45	U	ng/L	P429787	RPD
		Esfenvalerate	0.84	U	ng/L	P429787	
		Ethalfuralin	0.17	U	ng/L	P429787	
		Fenpropathrin	0.28	U	ng/L	P429787	
		Gamma-BHC	0.14	U	ng/L	P429787	
		Gamma-Chlordane	0.22	U	ng/L	P429787	
		Heptachlor	0.22	U	ng/L	P429787	
		Heptachlor Epoxide	0.28	U	ng/L	P429787	
		Hexachlorobenzene**	1.1	U	ng/L	P429787	
		Kepone	39		ng/L	P429787	
		Lambda-Cyhalothrin	0.84	U	ng/L	P429787	
		Methoprene	0.84	U	ng/L	P429787	
		Methoxychlor	0.34	U	ng/L	P429787	
		MGK-264	0.22	U	ng/L	P429787	
		Mirex	0.39	U	ng/L	P429787	
		Oxychlordane	0.34	U	ng/L	P429787	
		Permethrin	1.8	U	ng/L	P429787	
		Phenothrin	1.0	U	ng/L	P429787	
		Piperonyl Butoxide	0.17	U	ng/L	P429787	
		Prallethrin	2.2	U	ng/L	P429787	
		Tau-Fluvalinate	0.28	U	ng/L	P429787	
		Tetramethrin	0.84	U	ng/L	P429787	
		Trans-Nonachlor	0.22	U	ng/L	P429787	
		Triclosan Methyl	0.17	U	ng/L	P429787	
		Trifluralin	0.22	U	ng/L	P429787	
	EPA 8276	Chlordane	2.2	U	ng/L	P429787	
		Toxaphene	17	U	ng/L	P429787	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 8270E: V - Due to the presence of ddt-p,p' in both the Method Blank and the sample.

Sample Location: EAST CRYSTAL LAKE AT CENTER

Collection Date/Time: 05/10/2023 09:50

Field ID: G2CE0110

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2408888	DEP SOP: NU-094-1	Color (true)	45		PCU	P429777	
	EPA 180.1 Rev. 2.0	Turbidity	0.85	I	NTU	P429780	
	EPA 300.0 Rev. 2.1	Chloride	30		mg Cl/L	P430017	
		Sulfate	4.1		mg SO4/L	P430020	
	SM 2320 B-2011	Total Alkalinity	24		mg CaCO3/L	P430117	
	SM 2540 C-2015	TDS	110		mg/L	P430193	
	SM 2540 D-2015	TSS	2	U	mg/L	P429882	
	SM 4500-F- C-2011	Fluoride	0.058	I	mg F/L	P430285	
2408889	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P430076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P430086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430055	
	EPA 365.1 Rev. 2.0	Total-P	0.013		mg P/L	P429859	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P429896	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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: P429777

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429780

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430020

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430086

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430055

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429858

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429859

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P429787

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.50	I	ng/L
DDT-p,p'	0.84	I	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	0.40	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P429787

Component	Result	Code	Units
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	3.4	I	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	3.7	I	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P429787

Component	Result	Code	Units
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: P429787

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: P430117

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

Reference Method: SM 2540 C-2015
Batch ID: P430193

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P429882

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P430285

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P429896

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: P429777

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.9		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429780

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430020

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430086

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430055

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429858

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429859

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P429787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.1		P	10 - 92.0
Alpha-BHC	95.4		P	75 - 107
Alpha-Chlordane	65.2		P	50 - 108
Beta-BHC	93.2		P	36 - 138
Beta-Cyfluthrin	63.6		P	20 - 161
Bifenthrin	41.5		P	10 - 119
Carbophenothion	50.7		P	19 - 94.0
Chlorothalonil	114		P	26 - 186
Cis-Nonachlor	69.3		P	42 - 119
Cypermethrin	60.9		P	22 - 150
Dacthal	96.7		P	72 - 119
DDD-p,p'	73.0		P	45 - 107
DDE-p,p'	66.9		P	48 - 106
DDT-p,p'	80.1		P	48 - 110
Delta-BHC	111		P	54 - 140
Deltamethrin	58.9		P	22 - 189
Dichlobenil	69.6		P	36 - 117
Dicofol	109		P	46 - 155
Dieldrin	72.1		P	54 - 110
Endosulfan I	78.5		P	59 - 105
Endosulfan II	75.4		P	51 - 118
Endosulfan Sulfate	96.3		P	57 - 121
Endrin	72.4		P	10 - 120
Endrin Aldehyde	34.1		P	34 - 118
Endrin Ketone	90.2		P	69 - 177
Esfenvalerate	66.3		P	23 - 168
Ethalfuralin	74.7		P	49 - 99.0
Fenpropathrin	56.0		P	34 - 117
Gamma-BHC	113		P	72 - 117
Gamma-Chlordane	68.9		P	43 - 106
Heptachlor	79.0		P	41 - 98.0
Heptachlor Epoxide	86.4		P	57 - 106
Hexachlorobenzene	52.8		P	36 - 99.0
Kepone	144		P	16 - 215
Lambda-Cyhalothrin	47.3		P	21 - 177
Methoprene	48.7		P	10 - 119
Methoxychlor	76.6		P	60 - 112
MGK-264	73.4		P	26 - 122
Mirex	51.2		P	10 - 169
Oxychlordane	72.3		P	43 - 105
PCB-1016	73.7		P	48 - 112
PCB-1260	78.2		P	44 - 118
Permethrin	53.5		P	24 - 148
Phenothrin	30.3		P	10 - 106
Piperonyl Butoxide	82.6		P	10 - 139
Prallethrin	62.0		P	17 - 109
Tau-Fluvalinate	54.2		P	13 - 131
Tetramethrin	51.2		P	10 - 132
Trans-Nonachlor	66.5		P	44 - 106
Triclosan Methyl	77.3		P	59 - 109
Trifluralin	76.2		P	44 - 101

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P429787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	90.9		P	61 - 116
Toxaphene	95.5		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P430117

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P430193

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

Reference Method: SM 2540 D-2015
Batch ID: P429882

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P430285

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

Reference Method: SM 5310 B-2011
Batch ID: P429896

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: P430017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408605	Chloride	102		P	90 - 110
2408888	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408605	Sulfate	100		P	90 - 110
2408888	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408843	Ammonia-N	96.2	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430086

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408814	Kjeldahl Nitrogen	101	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408905	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408804	Total-P	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408905	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P429787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409146	Aldrin	46.5	37.1	P/P	20 - 82.0
2409146	Alpha-BHC	93.3	91.0	P/P	71 - 109
2409146	Alpha-Chlordane	55.2	53.6	P/P	42 - 106
2409146	Beta-BHC	138	111	P/P	69 - 180
2409146	Beta-Cyfluthrin	57.3	56.3	P/P	18 - 175
2409146	Bifenthrin	42.4	56.7	P/P	21 - 128
2409146	Carbophenothion	51.7	40.9	P/P	10 - 126
2409146	Chlorothalonil	144	60.0	P/P	10 - 300

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P429787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409146	Cis-Nonachlor	53.9	49.5	P/P	34 - 106
2409146	Cypermethrin	54.7	55.0	P/P	22 - 158
2409146	Dacthal	139	108	F/P	54 - 116
2409146	DDD-p,p'	64.3	60.9	P/P	34 - 107
2409146	DDE-p,p'	58.2	56.6	P/P	33 - 110
2409146	DDT-p,p'	68.7	67.7	P/P	50 - 122
2409146	Delta-BHC	141	99.5	P/P	77 - 193
2409146	Deltamethrin	59.3	48.3	P/P	10 - 195
2409146	Dichlobenil	81.6	76.6	P/P	25 - 113
2409146	Dicofol	98.8	70.0	P/P	38 - 247
2409146	Dieldrin	61.0	60.7	P/P	45 - 118
2409146	Endosulfan I	63.6	57.4	P/P	51 - 106
2409146	Endosulfan II	63.8	62.6	P/P	37 - 122
2409146	Endosulfan Sulfate	73.7	58.8	P/P	43 - 132
2409146	Endrin	64.2	61.5	P/P	29 - 101
2409146	Endrin Aldehyde	82.3	63.4	P/P	19 - 110
2409146	Endrin Ketone	107	124	P/P	60 - 140
2409146	Esfenvalerate	58.3	53.5	P/P	26 - 199
2409146	Ethalfuralin	59.8	62.5	P/P	45 - 99.0
2409146	Fenpropathrin	55.1	63.3	P/P	35 - 120
2409146	Gamma-BHC	121	90.9	P/P	63 - 128
2409146	Gamma-Chlordane	59.0	56.6	P/P	40 - 104
2409146	Heptachlor	66.0	52.7	P/P	36 - 97.0
2409146	Heptachlor Epoxide	112	93.0	P/P	49 - 184
2409146	Hexachlorobenzene	44.0	46.6	P/P	39 - 96.0
2409146	Kepone	128	73.0	P/P	10 - 217
2409146	Lambda-Cyhalothrin	70.0	82.7	P/P	21 - 193
2409146	Methoprene	57.1	62.5	P/P	20 - 106
2409146	Methoxychlor	73.7	69.1	P/P	53 - 118
2409146	MGK-264	115	89.8	P/P	40 - 118
2409146	Mirex	44.4	40.6	P/P	26 - 92.0
2409146	Oxychlordane	67.9	70.8	P/P	44 - 99.0
2409146	Permethrin	52.8	63.1	P/P	33 - 182
2409146	Phenothrin	38.4	47.0	P/P	10 - 129
2409146	Piperonyl Butoxide	97.6	87.5	P/P	10 - 211
2409146	Prallethrin	59.7	50.4	P/P	24 - 113
2409146	Tau-Fluvalinate	50.7	52.8	P/P	14 - 149
2409146	Tetramethrin	59.5	60.9	P/P	17 - 151
2409146	Trans-Nonachlor	52.7	55.0	P/P	42 - 102
2409146	Triclosan Methyl	63.0	59.4	P/P	48 - 108
2409146	Trifluralin	70.2	64.8	P/P	47 - 96.0
2409385	PCB-1016	75.1	74.4	P/P	46 - 111
2409385	PCB-1260	70.6	75.2	P/P	45 - 114

Reference Method: EPA 8276

Batch ID: P429787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409385	Chlordane	74.5	78.3	P/P	53 - 126
2409385	Toxaphene	81.3	93.4	P/P	56 - 211

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P430285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408903	Fluoride	102	103	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P429896

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408608	Organic Carbon	97.6	97.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P429777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408837	Color (true)	1.40	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429780

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408796	Turbidity	0.494	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408605	Chloride	0.662	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408843	Ammonia-N	1.68	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P430086

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408814	Kjeldahl Nitrogen	0.844	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408905	NO2NO3-N	0.484	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408804	Total-P	0.342	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429859

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408905	Total-P	0.915	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P429787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409146	Aldrin	22.4	Spike	P	0 - 41
2409146	Alpha-BHC	2.48	Spike	P	0 - 25
2409146	Alpha-Chlordane	2.93	Spike	P	0 - 33
2409146	Beta-BHC	21.1	Spike	P	0 - 36
2409146	Beta-Cyfluthrin	1.64	Spike	P	0 - 42
2409146	Bifenthrin	28.9	Spike	P	0 - 53
2409146	Carbophenothion	23.4	Spike	P	0 - 49
2409146	Chlorothalonil	82.4	Spike	F	0 - 71
2409146	Cis-Nonachlor	8.65	Spike	P	0 - 29
2409146	Cypermethrin	0.479	Spike	P	0 - 40
2409146	Dacthal	25.1	Spike	P	0 - 26
2409146	DDD-p,p'	5.37	Spike	P	0 - 39
2409146	DDE-p,p'	2.76	Spike	P	0 - 33
2409146	DDT-p,p'	1.05	Spike	P	0 - 40
2409146	Delta-BHC	34.8	Spike	P	0 - 37
2409146	Deltamethrin	20.6	Spike	P	0 - 100
2409146	Dichlobenil	6.29	Spike	P	0 - 40
2409146	Dicofol	34.1	Spike	F	0 - 31
2409146	Dieldrin	0.411	Spike	P	0 - 27
2409146	Endosulfan I	10.2	Spike	P	0 - 23
2409146	Endosulfan II	1.79	Spike	P	0 - 28
2409146	Endosulfan Sulfate	22.6	Spike	P	0 - 38
2409146	Endrin	4.28	Spike	P	0 - 63
2409146	Endrin Aldehyde	26.0	Spike	P	0 - 60
2409146	Endrin Ketone	14.9	Spike	P	0 - 37
2409146	Esfenvalerate	8.55	Spike	P	0 - 52
2409146	Ethalfuralin	4.39	Spike	P	0 - 23
2409146	Fenpropathrin	13.8	Spike	P	0 - 32
2409146	Gamma-BHC	28.6	Spike	F	0 - 17
2409146	Gamma-Chlordane	4.10	Spike	P	0 - 40
2409146	Heptachlor	22.5	Spike	P	0 - 29
2409146	Heptachlor Epoxide	19.0	Spike	P	0 - 25
2409146	Hexachlorobenzene	5.88	Spike	P	0 - 36
2409146	Kepone	54.3	Spike	P	0 - 93
2409146	Lambda-Cyhalothrin	16.7	Spike	P	0 - 55
2409146	Methoprene	9.11	Spike	P	0 - 53
2409146	Methoxychlor	6.39	Spike	P	0 - 29
2409146	MGK-264	24.8	Spike	P	0 - 35
2409146	Mirex	8.92	Spike	P	0 - 46
2409146	Oxychlordane	4.28	Spike	P	0 - 29
2409146	Permethrin	17.7	Spike	P	0 - 44
2409146	Phenothrin	20.0	Spike	P	0 - 56
2409146	Piperonyl Butoxide	10.9	Spike	P	0 - 100
2409146	Prallethrin	16.8	Spike	P	0 - 42
2409146	Tau-Fluvalinate	4.03	Spike	P	0 - 54
2409146	Tetramethrin	2.35	Spike	P	0 - 51
2409146	Trans-Nonachlor	4.28	Spike	P	0 - 37
2409146	Triclosan Methyl	5.78	Spike	P	0 - 31
2409146	Trifluralin	8.03	Spike	P	0 - 30
2409385	PCB-1016	0.972	Spike	P	0 - 32
2409385	PCB-1260	6.41	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P429787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409385	Chlordane	4.96	Spike	P	0 - 25
2409385	Toxaphene	13.9	Spike	P	0 - 26

Reference Method: SM 2320 B-2011
Batch ID: P430117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408651	Total Alkalinity	1.29	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P430193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409028	TDS	0.560	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P430285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408903	Fluoride	1.04	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P429896

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408608	Organic Carbon	0.412	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2408892
Field Sample ID: G2CE0242

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	75.9	P	29 - 130
EPA 8270E	Decachlorobiphenyl	55.0	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	61.9	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	47.6	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	62.7	P	30 - 101
EPA 8276	PCNB	92.1	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A119113

Included Lab Sample IDs: 2408886, 2408888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.1	99.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119114

Included Lab Sample IDs: 2408886, 2408888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A119185

Included Lab Sample IDs: 2408887, 2408889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	96.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119188

Included Lab Sample IDs: 2408887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119193

Included Lab Sample IDs: 2408889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119211

Included Lab Sample IDs: 2408886, 2408888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.2	99.9	P/P	90 - 110
Chloride	99.9	99.7	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110
Sulfate	99.2	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119252

Included Lab Sample IDs: 2408887, 2408889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119259

Included Lab Sample IDs: 2408887, 2408889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.4	97.9	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A119276

Included Lab Sample IDs: 2408886, 2408888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.7	99.0	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A119282

Included Lab Sample IDs: 2408892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	104		P	80 - 120
Toxaphene	96.9		P	80 - 120

Reference Method: EPA 8270E

Run ID: A119306

Included Lab Sample IDs: 2408892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.8		P	80 - 120
PCB-1260	93.9		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A119322

Included Lab Sample IDs: 2408887, 2408889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	93.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A119325

Included Lab Sample IDs: 2408892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.7		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	98.0		P	80 - 120
Beta-BHC	104		P	80 - 120
Beta-Cyfluthrin	99.6		P	80 - 120
Bifenthrin	105		P	80 - 120
Carbophenothion	99.9		P	80 - 120
Chlorothalonil	92.0		P	80 - 120
Cis-Nonachlor	94.4		P	80 - 120
Cypermethrin	102		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	99.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A119325
Included Lab Sample IDs: 2408892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Delta-BHC	94.7		P	80 - 120
Deltamethrin	97.8		P	80 - 120
Dichlobenil	106		P	80 - 120
Dicofol	87.0		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	97.6		P	80 - 120
Endosulfan Sulfate	90.1		P	80 - 120
Endrin	97.8		P	80 - 120
Endrin Aldehyde	92.7		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	98.0		P	80 - 120
Ethalfuralin	95.2		P	80 - 120
Fenpropathrin	104		P	80 - 120
Gamma-BHC	95.1		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	91.6		P	80 - 120
Heptachlor Epoxide	99.3		P	80 - 120
Hexachlorobenzene	88.3		P	80 - 120
Kepone	84.6		P	80 - 120
Lambda-Cyhalothrin	106		P	80 - 120
Methoprene	98.6		P	80 - 120
Methoxychlor	102		P	80 - 120
MGK-264	100		P	80 - 120
Mirex	97.8		P	80 - 120
Oxychlordane	97.7		P	80 - 120
Permethrin	107		P	80 - 120
Phenothrin	107		P	80 - 120
Piperonyl Butoxide	99.0		P	80 - 120
Prallethrin	102		P	80 - 120
Tau-Fluvalinate	103		P	80 - 120
Tetramethrin	103		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	107		P	80 - 120
Trifluralin	99.9		P	80 - 120

Reference Method: SM 4500-F- C-2011
Run ID: A119359
Included Lab Sample IDs: 2408886, 2408888

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	102	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)	97.9				1.40	
EPA 180.1 Rev. 2.0	Turbidity	99.7				0.494	
EPA 300.0 Rev. 2.1	Chloride	101	102	102		0.662	
	Sulfate	100	100	101			
EPA 350.1 Rev. 2.0	Ammonia-N	96.2	96.2	98.4			1.68
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.5	101	102			0.844
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	104	103			0.484
EPA 365.1 Rev. 2.0	Total-P	101	100	101			0.342
	Total-P	102	102	103			0.915
EPA 8270E	Aldrin	54.1	46.5	37.1			22.4
	Alpha-BHC	95.4	93.3	91.0			2.48
	Alpha-Chlordane	65.2	55.2	53.6			2.93
	Beta-BHC	93.2	138	111			21.1
	Beta-Cyfluthrin	63.6	57.3	56.3			1.64
	Bifenthrin	41.5	42.4	56.7			28.9
	Carbophenothion	50.7	51.7	40.9			23.4
	Chlorothalonil	114	144	60.0			82.4
	Cis-Nonachlor	69.3	53.9	49.5			8.65
	Cypermethrin	60.9	54.7	55.0			0.479
	Dacthal	96.7	139	108			25.1
	DDD-p,p'	73.0	64.3	60.9			5.37
	DDE-p,p'	66.9	58.2	56.6			2.76
	DDT-p,p'	80.1	68.7	67.7			1.05
	Delta-BHC	111	141	99.5			34.8
	Deltamethrin	58.9	59.3	48.3			20.6
	Dichlobenil	69.6	81.6	76.6			6.29
	Dicofol	109	98.8	70.0			34.1
	Dieldrin	72.1	61.0	60.7			0.411
	Endosulfan I	78.5	63.6	57.4			10.2
	Endosulfan II	75.4	63.8	62.6			1.79
	Endosulfan Sulfate	96.3	73.7	58.8			22.6
	Endrin	72.4	64.2	61.5			4.28
	Endrin Aldehyde	34.1	82.3	63.4			26.0
	Endrin Ketone	90.2	107	124			14.9
	Esfenvalerate	66.3	58.3	53.5			8.55
	Ethalfuralin	74.7	59.8	62.5			4.39
	Fenpropathrin	56.0	55.1	63.3			13.8
	Gamma-BHC	113	121	90.9			28.6
	Gamma-Chlordane	68.9	59.0	56.6			4.10
	Heptachlor	79.0	66.0	52.7			22.5
	Heptachlor Epoxide	86.4	112	93.0			19.0
	Hexachlorobenzene	52.8	44.0	46.6			5.88
	Kepone	144	128	73.0			54.3
	Lambda-Cyhalothrin	47.3	70.0	82.7			16.7
	Methoprene	48.7	57.1	62.5			9.11
	Methoxychlor	76.6	73.7	69.1			6.39
	MGK-264	73.4	115	89.8			24.8
	Mirex	51.2	44.4	40.6			8.92
	Oxychlordane	72.3	67.9	70.8			4.28
	PCB-1016	73.7	75.1	74.4			0.972
	PCB-1260	78.2	70.6	75.2			6.41
	Permethrin	53.5	52.8	63.1			17.7
	Phenothrin	30.3	38.4	47.0			20.0
	Piperonyl Butoxide	82.6	97.6	87.5			10.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Prallethrin	62.0	59.7	50.4		16.8
	Tau-Fluvalinate	54.2	50.7	52.8		4.03
	Tetramethrin	51.2	59.5	60.9		2.35
	Trans-Nonachlor	66.5	52.7	55.0		4.28
	Triclosan Methyl	77.3	63.0	59.4		5.78
	Trifluralin	76.2	70.2	64.8		8.03
EPA 8276	Chlordane	90.9	74.5	78.3		4.96
	Toxaphene	95.5	81.3	93.4		13.9
SM 2320 B-2011	Total Alkalinity	100			1.29	
SM 2540 C-2015	TDS	97.1			0.560	
SM 2540 D-2015	TSS	94.3				
SM 4500-F- C-2011	Fluoride	102	102	103		1.04
SM 5310 B-2011	Organic Carbon	96.7	97.6	97.0		0.412

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2408886, 2408888
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2408886, 2408888
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2408886, 2408888
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2408886, 2408888
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2408887, 2408889
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2408887, 2408889
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2408887, 2408889
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2408887, 2408889
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2408892
EPA 8270E	PCBs in water matrices by GC/MS/MS	2408892
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2408892
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2408886, 2408888
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2408886, 2408888
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2408886, 2408888
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2408886, 2408888
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2408887, 2408889

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	05/11/2023			05/11/2023 14:19	Samantha L Bates	2408886, 2408888
EPA 180.1 Rev. 2.0	05/11/2023			05/11/2023 14:05	Anna M. Plaviak	2408886
	05/11/2023			05/11/2023 14:08	Anna M. Plaviak	2408888
EPA 300.0 Rev. 2.1	05/11/2023			05/17/2023 12:42	James L Waggeberby	2408888
	05/11/2023			05/17/2023 16:58	James L Waggeberby	2408886
EPA 350.1 Rev. 2.0	05/11/2023			05/18/2023 14:54	Ping Hua	2408887
	05/11/2023			05/18/2023 14:55	Ping Hua	2408889
EPA 351.2 Rev. 2.0	05/11/2023	05/19/2023 08:44	Samantha L Bates	05/22/2023 16:38	Samantha L Bates	2408887
	05/11/2023	05/19/2023 08:44	Samantha L Bates	05/22/2023 16:39	Samantha L Bates	2408889
EPA 353.2 Rev. 2.0	05/11/2023			05/18/2023 11:01	Anna M. Plaviak	2408889
	05/11/2023			05/18/2023 12:03	Anna M. Plaviak	2408887
EPA 365.1 Rev. 2.0	05/11/2023	05/15/2023 14:57	Adam P Silver	05/16/2023 09:53	James L Waggeberby	2408887
	05/11/2023	05/15/2023 14:57	Adam P Silver	05/16/2023 13:19	James L Waggeberby	2408889
EPA 8270E	05/11/2023	05/15/2023 08:00	Fe-Val Siddell	05/18/2023 21:02	Vandana T. Nagar	2408892
	05/11/2023	05/15/2023 08:00	Fe-Val Siddell	05/18/2023 22:24	Michael Poppell	2408892
EPA 8276	05/11/2023	05/15/2023 08:00	Fe-Val Siddell	05/19/2023 13:03	Arthur Maknenko	2408892
SM 2320 B-2011	05/11/2023			05/19/2023 03:54	Dale L. Simmons	2408886
	05/11/2023			05/19/2023 04:04	Dale L. Simmons	2408888
SM 2540 C-2015	05/11/2023			05/12/2023 13:06	Dana G. Hughes	2408886, 2408888
SM 2540 D-2015	05/11/2023			05/12/2023 13:06	Dana G. Hughes	2408886, 2408888
SM 4500-F- C-2011	05/11/2023			05/24/2023 02:09	Dale L. Simmons	2408886
	05/11/2023			05/24/2023 02:15	Dale L. Simmons	2408888
SM 5310 B-2011	05/11/2023			05/15/2023 22:05	Elise M. Gillis	2408887
	05/11/2023			05/15/2023 22:21	Elise M. Gillis	2408889