

Chemical Analysis Report

CEN-DIST-2023-07-27-03

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

Event Description: **Run 21**
Request ID: **RQ-2023-07-24-13**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 15-AUG-2023 11:56



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: 07/26/2023 09:20

Field ID: G2CE0242

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427315	DEP SOP: NU-094-1	Color (true)	3.4	I	PCU	P433137	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	I	NTU	P433138	
	EPA 300.0 Rev. 2.1	Chloride	330		mg Cl/L	P433276	
		Sulfate	56		mg SO4/L	P433279	
	SM 2320 B-2011	Total Alkalinity	144		mg CaCO3/L	P433354	
	SM 2540 C-2015	TDS	712		mg/L	P433608	
	SM 2540 D-2015	TSS	2	U	mg/L	P433521	
2427316	SM 4500-F- C-2011	Fluoride	0.078	I	mg F/L	P433357	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P433445	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P433221	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.63		mg N/L	P433169	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P433152	
2427323	SM 5310 B-2011	Organic Carbon	1.6		mg C/L	P433375	
	EPA 8270E	Aldrin	0.67	U	ng/L	P433162	
		Alpha-BHC	0.10	U	ng/L	P433162	
		Alpha-Chlordane	0.21	U	ng/L	P433162	
		PCB-1016	2.1	U	ng/L	P433162	
		Beta-BHC	0.10	U	ng/L	P433162	
		PCB-1221	2.1	U	ng/L	P433162	
		Beta-Cyfluthrin	1.3	U	ng/L	P433162	
		PCB-1232	2.1	U	ng/L	P433162	
		Bifenthrin	0.52	U	ng/L	P433162	
		PCB-1242	2.1	U	ng/L	P433162	
		PCB-1248	2.1	U	ng/L	P433162	
		Chlorothalonil	3.7	U	ng/L	P433162	
		PCB-1254	2.1	U	ng/L	P433162	
		Cis-Nonachlor	0.21	U	ng/L	P433162	
		PCB-1260	2.1	U	ng/L	P433162	
		Cypermethrin	1.5	U	ng/L	P433162	
		Dacthal	0.15	U	ng/L	P433162	
		DDD-p,p'	0.26	U	ng/L	P433162	
		DDE-p,p'	0.21	U	ng/L	P433162	
		DDT-p,p'	0.82	U	ng/L	P433162	
		Delta-BHC	0.41	U	ng/L	P433162	
		Deltamethrin	1.3	U	ng/L	P433162	
		Dichlobenil	0.26	U	ng/L	P433162	
		Dicofol	1.3	U	ng/L	P433162	
		Diieldrin	1.2	I	ng/L	P433162	
		Endosulfan I	0.41	U	ng/L	P433162	
		Endosulfan II	0.93	U	ng/L	P433162	
		Endosulfan Sulfate	0.31	U	ng/L	P433162	
		Endrin	0.93	U	ng/L	P433162	
		Endrin Aldehyde	0.77	U	ng/L	P433162	
		Endrin Ketone	0.41	U	ng/L	P433162	

Field ID: G2CE0242

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427323	EPA 8270E	Esfenvalerate	0.77	U	ng/L	P433162	CCV
		Ethalfuralin	0.15	U	ng/L	P433162	
		Fenpropathrin	0.26	U	ng/L	P433162	
		Gamma-BHC	0.13	U	ng/L	P433162	
		Gamma-Chlordane	0.21	U	ng/L	P433162	
		Heptachlor	0.21	U	ng/L	P433162	
		Heptachlor Epoxide	0.26	U	ng/L	P433162	
		Hexachlorobenzene**	1.0	U	ng/L	P433162	
		Kepone	17	I J	ng/L	P433162	
		Lambda-Cyhalothrin	0.77	U	ng/L	P433162	
		Methoprene	0.77	U	ng/L	P433162	
		Methoxychlor	0.31	U	ng/L	P433162	
		MGK-264	0.21	U	ng/L	P433162	
		Mirex	0.36	U	ng/L	P433162	
		Oxychlordane	0.31	U	ng/L	P433162	
		Permethrin	1.6	U	ng/L	P433162	
		Phenothrin	0.93	U	ng/L	P433162	
		Piperonyl Butoxide	0.15	U	ng/L	P433162	
		Prallethrin	2.1	U	ng/L	P433162	
		Tau-Fluvalinate	0.26	U	ng/L	P433162	
		Tetramethrin	0.77	U	ng/L	P433162	
		Trans-Nonachlor	0.21	U	ng/L	P433162	
		Triclosan Methyl	0.15	U	ng/L	P433162	
		Trifluralin	0.21	U	ng/L	P433162	
	EPA 8276	Chlordane	2.1	U	ng/L	P433162	
		Toxaphene	15	U	ng/L	P433162	

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: EAST CRYSTAL LAKE AT CENTER

Collection Date/Time: 07/26/2023 10:30

Field ID: G2CE0110

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427317	DEP SOP: NU-094-1	Color (true)	42		PCU	P433137	
	EPA 180.1 Rev. 2.0	Turbidity	1.1		NTU	P433138	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P433276	
		Sulfate	3.7		mg SO4/L	P433279	
	SM 2320 B-2011	Total Alkalinity	21		mg CaCO3/L	P433355	
	SM 2540 C-2015	TDS	112		mg/L	P433608	
	SM 2540 D-2015	TSS	3	I	mg/L	P433521	
	SM 4500-F- C-2011	Fluoride	0.061	I	mg F/L	P433358	
2427318	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P433445	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P433221	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433169	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P433363	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P433375	

Ref. Method and Comment:

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

Sample Location: FB

Collection Date/Time: 07/26/2023 10:40

Field ID: FB_07262023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2427319	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P433137	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P433138	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P433276	
		Sulfate	0.20	U	mg SO4/L	P433279	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P433355	
	SM 2540 C-2015	TDS	15	U	mg/L	P433607	
	SM 2540 D-2015	TSS	2	U	mg/L	P433520	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P433358	
2427320	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P433445	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P433221	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P433169	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P433718	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P433375	

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: P433137

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433138

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433276

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433279

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433221

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433169

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Component	Result	Code	Units
Total-P	0.010	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433718

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

Reference Method: EPA 8270E

Batch ID: P433162

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P433162

Component	Result	Code	Units
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P433162

Component	Result	Code	Units
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: P433162

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: P433354

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

Reference Method: SM 2320 B-2011
Batch ID: P433355

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

Reference Method: SM 2540 C-2015
Batch ID: P433607

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P433608

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P433520

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P433521

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Component	Result	Code	Units
Fluoride	0.025	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P433375

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: P433137

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433138

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433276

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433279

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433221

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433169

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	92.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	107		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433718

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

Reference Method: EPA 8270E

Batch ID: P433162

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	41.0		P	30 - 96.0
Alpha-BHC	89.4		P	70 - 109
Alpha-Chlordane	84.1		P	45 - 107
Beta-BHC	77.7		P	64 - 138
Beta-Cyfluthrin	82.1		P	17 - 141
Bifenthrin	50.2		P	10 - 113
Chlorothalonil	47.8		P	26 - 180
Cis-Nonachlor	79.5		P	37 - 102
Cypermethrin	75.1		P	20 - 133
Dacthal	91.2		P	69 - 114
DDD-p,p'	79.0		P	42 - 105
DDE-p,p'	77.5		P	42 - 106
DDT-p,p'	63.2		P	42 - 107
Delta-BHC	72.6		P	67 - 144
Deltamethrin	99.9		P	15 - 149
Dichlobenil	74.8		P	46 - 117
Dicofol	76.5		P	34 - 114
Dieldrin	62.3		P	50 - 108
Endosulfan I	65.4		P	55 - 104
Endosulfan II	95.7		P	51 - 111
Endosulfan Sulfate	79.8		P	56 - 121
Endrin	84.6		P	10 - 106
Endrin Aldehyde	86.0		P	34 - 114
Endrin Ketone	111		P	63 - 177
Esfenvalerate	64.2		P	29 - 143
Ethalfuralin	68.5		P	46 - 96.0
Fenpropathrin	61.7		P	28 - 115
Gamma-BHC	104		P	65 - 121
Gamma-Chlordane	72.8		P	39 - 103
Heptachlor	68.3		P	39 - 94.0
Heptachlor Epoxide	62.8		P	54 - 104
Hexachlorobenzene	43.3		P	36 - 100
Kepone	37.6		P	10 - 225
Lambda-Cyhalothrin	57.6		P	10 - 135
Methoprene	59.1		P	10 - 109
Methoxychlor	86.8		P	52 - 112
MGK-264	70.8		P	44 - 117
Mirex	65.4		P	20 - 90.0
Oxychlordane	74.1		P	44 - 102
PCB-1016	74.6		P	45 - 107
PCB-1260	73.5		P	40 - 112
Permethrin	63.7		P	18 - 135
Phenothrin	38.2		P	10 - 102
Piperonyl Butoxide	95.4		P	28 - 156
Prallethrin	68.1		P	28 - 113
Tau-Fluvalinate	55.4		P	10 - 123

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P433162

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tetramethrin	62.8		P	18 - 158
Trans-Nonachlor	79.0		P	39 - 104
Triclosan Methyl	59.6		P	54 - 108
Trifluralin	73.5		P	46 - 97.0

Reference Method: EPA 8276

Batch ID: P433162

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	84.0		P	52 - 117
Toxaphene	99.4		P	44 - 125

Reference Method: SM 2320 B-2011

Batch ID: P433354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.7		P	92 - 105

Reference Method: SM 2320 B-2011

Batch ID: P433355

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.9		P	92 - 105

Reference Method: SM 2540 C-2015

Batch ID: P433607

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

Reference Method: SM 2540 C-2015

Batch ID: P433608

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

Reference Method: SM 2540 D-2015

Batch ID: P433520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.8		P	85 - 106

Reference Method: SM 2540 D-2015

Batch ID: P433521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.9		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P433357

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

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433375

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427255	Chloride	102		P	90 - 110
2427400	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427255	Sulfate	101		P	90 - 110
2427400	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427257	Ammonia-N	99.0	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427348	Kjeldahl Nitrogen	99.1	99.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433169

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427348	NO2NO3-N	91.5	91.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427258	Total-P	109	109	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433363

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427240	Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429368	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P433162

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427281	Aldrin	44.0	51.4	P/P	24 - 81.0
2427281	Alpha-BHC	85.8	90.1	P/P	65 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P433162

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427281	Alpha-Chlordane	66.5	79.6	P/P	43 - 119
2427281	Beta-BHC	83.4	79.0	P/P	54 - 165
2427281	Beta-Cyfluthrin	87.6	94.0	P/P	27 - 165
2427281	Bifenthrin	62.1	64.8	P/P	17 - 117
2427281	Chlorothalonil	82.0	65.8	P/P	10 - 255
2427281	Cis-Nonachlor	68.0	77.9	P/P	34 - 98.0
2427281	Cypermethrin	89.9	84.6	P/P	25 - 143
2427281	Dacthal	81.6	90.0	P/P	55 - 139
2427281	DDD-p,p'	66.4	74.5	P/P	30 - 109
2427281	DDE-p,p'	70.1	78.0	P/P	35 - 106
2427281	DDT-p,p'	66.5	68.0	P/P	41 - 101
2427281	Delta-BHC	93.5	79.4	P/P	58 - 165
2427281	Deltamethrin	96.8	111	P/P	10 - 194
2427281	Dichlobenil	66.6	66.1	P/P	22 - 114
2427281	Dicofol	70.3	81.6	P/P	17 - 133
2427281	Dieldrin	67.6	64.4	P/P	45 - 129
2427281	Endosulfan I	74.7	69.1	P/P	49 - 104
2427281	Endosulfan II	88.8	101	P/P	37 - 117
2427281	Endosulfan Sulfate	72.4	73.6	P/P	38 - 128
2427281	Endrin	71.0	81.7	P/P	35 - 116
2427281	Endrin Aldehyde	72.1	76.3	P/P	19 - 108
2427281	Endrin Ketone	109	118	P/P	44 - 134
2427281	Esfenvalerate	82.6	86.0	P/P	27 - 176
2427281	Ethalfuralin	68.1	71.1	P/P	49 - 100
2427281	Fenpropathrin	72.5	78.9	P/P	34 - 117
2427281	Gamma-BHC	109	111	P/P	59 - 129
2427281	Gamma-Chlordane	68.0	75.3	P/P	33 - 107
2427281	Heptachlor	72.7	81.2	P/P	37 - 94.0
2427281	Heptachlor Epoxide	66.7	59.7	P/P	38 - 118
2427281	Hexachlorobenzene	48.7	44.7	P/P	35 - 97.0
2427281	Kepone	34.2	32.1	P/P	10 - 221
2427281	Lambda-Cyhalothrin	75.1	70.9	P/P	23 - 190
2427281	Methoprene	63.5	63.6	P/P	21 - 109
2427281	Methoxychlor	75.9	90.5	P/P	46 - 118
2427281	MGK-264	81.9	82.7	P/P	39 - 122
2427281	Mirex	63.5	70.4	P/P	25 - 90.0
2427281	Oxychlordane	67.3	73.6	P/P	42 - 100
2427281	Permethrin	75.6	84.2	P/P	33 - 181
2427281	Phenothrin	64.2	61.8	P/P	12 - 125
2427281	Piperonyl Butoxide	109	102	P/P	10 - 178
2427281	Prallethrin	61.0	67.7	P/P	24 - 122
2427281	Tau-Fluvalinate	80.6	76.4	P/P	13 - 151
2427281	Tetramethrin	80.6	77.2	P/P	16 - 172
2427281	Trans-Nonachlor	71.0	78.5	P/P	39 - 100
2427281	Triclosan Methyl	69.8	61.2	P/P	43 - 110
2427281	Trifluralin	68.1	66.3	P/P	45 - 94.0
2427568	PCB-1016	66.7	65.8	P/P	45 - 107
2427568	PCB-1260	69.2	82.0	P/P	40 - 112

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P433162

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427568	Chlordane	72.1	76.6	P/P	43 - 123
2427568	Toxaphene	87.0	91.6	P/P	27 - 156

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427094	Fluoride	98.1	97.5	P/P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427387	Fluoride	101	102	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433375

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2427096	Organic Carbon	91.8	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433137

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427255	Color (true)	1.61	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433138

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427188	Turbidity	3.23	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427255	Chloride	0.445	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P433279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427255	Sulfate	0.271	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P433445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427257	Ammonia-N	1.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427348	Kjeldahl Nitrogen	0.438	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P433169

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427348	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427258	Total-P	0.172	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433363

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427240	Total-P	1.63	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P433718

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429368	Total-P	0.913	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P433162

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427281	Aldrin	15.5	Spike	P	0 - 41
2427281	Alpha-BHC	4.98	Spike	P	0 - 25
2427281	Alpha-Chlordane	17.8	Spike	P	0 - 32
2427281	Beta-BHC	5.43	Spike	P	0 - 33
2427281	Beta-Cyfluthrin	7.07	Spike	P	0 - 43
2427281	Bifenthrin	4.28	Spike	P	0 - 52
2427281	Chlorothalonil	22.0	Spike	P	0 - 82
2427281	Cis-Nonachlor	13.5	Spike	P	0 - 33
2427281	Cypermethrin	6.02	Spike	P	0 - 51
2427281	Dacthal	9.78	Spike	P	0 - 27
2427281	DDD-p,p'	11.5	Spike	P	0 - 39
2427281	DDE-p,p'	10.7	Spike	P	0 - 31
2427281	DDT-p,p'	2.10	Spike	P	0 - 29
2427281	Delta-BHC	16.3	Spike	P	0 - 35
2427281	Deltamethrin	13.5	Spike	P	0 - 100
2427281	Dichlobenil	0.716	Spike	P	0 - 40
2427281	Dicofol	14.9	Spike	P	0 - 37
2427281	Dieldrin	4.77	Spike	P	0 - 27
2427281	Endosulfan I	7.90	Spike	P	0 - 23
2427281	Endosulfan II	12.6	Spike	P	0 - 34
2427281	Endosulfan Sulfate	1.65	Spike	P	0 - 36
2427281	Endrin	13.9	Spike	P	0 - 45
2427281	Endrin Aldehyde	5.73	Spike	P	0 - 76
2427281	Endrin Ketone	8.39	Spike	P	0 - 43
2427281	Esfenvalerate	4.09	Spike	P	0 - 51
2427281	Ethalfuralin	4.20	Spike	P	0 - 22
2427281	Fenpropathrin	8.46	Spike	P	0 - 49
2427281	Gamma-BHC	1.74	Spike	P	0 - 28
2427281	Gamma-Chlordane	10.3	Spike	P	0 - 40
2427281	Heptachlor	11.0	Spike	P	0 - 29
2427281	Heptachlor Epoxide	11.1	Spike	P	0 - 33
2427281	Hexachlorobenzene	8.46	Spike	P	0 - 36
2427281	Kepone	6.23	Spike	P	0 - 85
2427281	Lambda-Cyhalothrin	5.74	Spike	P	0 - 55
2427281	Methoprene	0.247	Spike	P	0 - 53
2427281	Methoxychlor	17.5	Spike	P	0 - 50
2427281	MGK-264	0.942	Spike	P	0 - 43

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P433162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427281	Mirex	10.2	Spike	P	0 - 40
2427281	Oxychlordane	8.89	Spike	P	0 - 31
2427281	Permethrin	10.7	Spike	P	0 - 50
2427281	Phenothrin	3.86	Spike	P	0 - 58
2427281	Piperonyl Butoxide	6.29	Spike	P	0 - 100
2427281	Prallethrin	10.4	Spike	P	0 - 39
2427281	Tau-Fluvalinate	5.39	Spike	P	0 - 54
2427281	Tetramethrin	4.27	Spike	P	0 - 51
2427281	Trans-Nonachlor	10.0	Spike	P	0 - 39
2427281	Triclosan Methyl	13.1	Spike	P	0 - 31
2427281	Trifluralin	2.66	Spike	P	0 - 22
2427568	PCB-1016	1.40	Spike	P	0 - 24
2427568	PCB-1260	16.9	Spike	P	0 - 30

Reference Method: EPA 8276
Batch ID: P433162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427568	Chlordane	6.12	Spike	P	0 - 28
2427568	Toxaphene	5.10	Spike	P	0 - 27

Reference Method: SM 2320 B-2011
Batch ID: P433354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427094	Total Alkalinity	0.634	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P433355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427387	Total Alkalinity	0.00734	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P433607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2426991	TDS	0.565	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P433608

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427236	TDS	3.92	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P433357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427094	Fluoride	0.500	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P433358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427387	Fluoride	0.542	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P433375

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2427096	Organic Carbon	3.16	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2427323
Field Sample ID: G2CE0242

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	78.8	P	37 - 129
EPA 8270E	Decachlorobiphenyl	70.2	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	50.6	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	42.6	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	55.0	P	28 - 102
EPA 8276	PCNB	94.2	P	49 - 115

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A120689

Included Lab Sample IDs: 2427315, 2427317, 2427319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	99.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A120690

Included Lab Sample IDs: 2427315, 2427317, 2427319

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A120701

Included Lab Sample IDs: 2427316, 2427318, 2427320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	93.0	93.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120732

Included Lab Sample IDs: 2427316

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A120763

Included Lab Sample IDs: 2427315, 2427317, 2427319

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

Reference Method: SM 2320 B-2011

Run ID: A120803

Included Lab Sample IDs: 2427315, 2427317, 2427319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.9	96.8	P/P	90 - 110
Total Alkalinity	95.4	93.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A120803

Included Lab Sample IDs: 2427315, 2427317, 2427319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	102	P/P	90 - 110
Fluoride	102	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A120813

Included Lab Sample IDs: 2427316, 2427318, 2427320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	94.3	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A120819

Included Lab Sample IDs: 2427323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	99.5		P	80 - 120
Alpha-Chlordane	109		P	80 - 120
Beta-BHC	107		P	80 - 120
Beta-Cyfluthrin	113		P	80 - 120
Bifenthrin	108		P	80 - 120
Chlorothalonil	97.9		P	80 - 120
Cis-Nonachlor	108		P	80 - 120
Cypermethrin	111		P	80 - 120
Dacthal	99.4		P	80 - 120
DDD-p,p'	106		P	80 - 120
DDE-p,p'	108		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	112		P	80 - 120
Dichlobenil	112		P	80 - 120
Dicofol	96.8		P	80 - 120
Dieldrin	105		P	80 - 120
Endosulfan I	104		P	80 - 120
Endosulfan II	96.9		P	80 - 120
Endosulfan Sulfate	91.5		P	80 - 120
Endrin	107		P	80 - 120
Endrin Aldehyde	99.6		P	80 - 120
Endrin Ketone	94.4		P	80 - 120
Esfenvalerate	107		P	80 - 120
Ethalfuralin	100		P	80 - 120
Fenpropathrin	112		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	81.0		P	80 - 120
Heptachlor Epoxide	107		P	80 - 120
Hexachlorobenzene	107		P	80 - 120
Lambda-Cyhalothrin	111		P	80 - 120
Methoprene	108		P	80 - 120
Methoxychlor	109		P	80 - 120
MGK-264	106		P	80 - 120
Mirex	105		P	80 - 120
Oxychlordane	108		P	80 - 120
Permethrin	109		P	80 - 120
Phenothrin	109		P	80 - 120
Piperonyl Butoxide	109		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	105		P	80 - 120
Tetramethrin	107		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A120819
Included Lab Sample IDs: 2427323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Trans-Nonachlor	106		P	80 - 120
Triclosan Methyl	105		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A120822
Included Lab Sample IDs: 2427316, 2427318, 2427320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.4	98.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A120846
Included Lab Sample IDs: 2427316, 2427318, 2427320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.0	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A120855
Included Lab Sample IDs: 2427318

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

Reference Method: EPA 8276
Run ID: A120861
Included Lab Sample IDs: 2427323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.2		P	80 - 120
Toxaphene	93.2		P	80 - 120

Reference Method: EPA 8270E
Run ID: A120864
Included Lab Sample IDs: 2427323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kepone	38.5*		F	80 - 120

Reference Method: EPA 8270E
Run ID: A120871
Included Lab Sample IDs: 2427323

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	96.5		P	80 - 120
PCB-1260	110		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A120996

Included Lab Sample IDs: 2427320

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	97.5	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	98.8				1.61	
EPA 180.1 Rev. 2.0	Turbidity	99.3				3.23	
EPA 300.0 Rev. 2.1	Chloride	102	102	102		0.445	
	Sulfate	103	101	103		0.271	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	99.0	100			1.08
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.5	99.1	99.7			0.438
EPA 353.2 Rev. 2.0	NO2NO3-N	92.5	91.5	91.5			0.0
EPA 365.1 Rev. 2.0	Total-P	107	109	109			0.172
	Total-P	104	104	102			1.63
	Total-P	102	103	104			0.913
EPA 8270E	Aldrin	41.0	44.0	51.4			15.5
	Alpha-BHC	89.4	85.8	90.1			4.98
	Alpha-Chlordane	84.1	66.5	79.6			17.8
	Beta-BHC	77.7	83.4	79.0			5.43
	Beta-Cyfluthrin	82.1	87.6	94.0			7.07
	Bifenthrin	50.2	62.1	64.8			4.28
	Chlorothalonil	47.8	82.0	65.8			22.0
	Cis-Nonachlor	79.5	68.0	77.9			13.5
	Cypermethrin	75.1	89.9	84.6			6.02
	Dacthal	91.2	81.6	90.0			9.78
	DDD-p,p'	79.0	66.4	74.5			11.5
	DDE-p,p'	77.5	70.1	78.0			10.7
	DDT-p,p'	63.2	66.5	68.0			2.10
	Delta-BHC	72.6	93.5	79.4			16.3
	Deltamethrin	99.9	96.8	111			13.5
	Dichlobenil	74.8	66.6	66.1			0.716
	Dicofol	76.5	70.3	81.6			14.9
	Dieldrin	62.3	67.6	64.4			4.77
	Endosulfan I	65.4	74.7	69.1			7.90
	Endosulfan II	95.7	88.8	101			12.6
	Endosulfan Sulfate	79.8	72.4	73.6			1.65
	Endrin	84.6	71.0	81.7			13.9
	Endrin Aldehyde	86.0	72.1	76.3			5.73
	Endrin Ketone	111	109	118			8.39
	Esfenvalerate	64.2	82.6	86.0			4.09
	Ethalfuralin	68.5	68.1	71.1			4.20
	Fenpropathrin	61.7	72.5	78.9			8.46
	Gamma-BHC	104	109	111			1.74
	Gamma-Chlordane	72.8	68.0	75.3			10.3
	Heptachlor	68.3	72.7	81.2			11.0
	Heptachlor Epoxide	62.8	66.7	59.7			11.1
	Hexachlorobenzene	43.3	48.7	44.7			8.46
	Kepone	37.6	34.2	32.1			6.23
	Lambda-Cyhalothrin	57.6	75.1	70.9			5.74
	Methoprene	59.1	63.5	63.6			0.247
	Methoxychlor	86.8	75.9	90.5			17.5
	MGK-264	70.8	81.9	82.7			0.942
	Mirex	65.4	63.5	70.4			10.2
	Oxychlordane	74.1	67.3	73.6			8.89
	PCB-1016	74.6	66.7	65.8			1.40
	PCB-1260	73.5	69.2	82.0			16.9
	Permethrin	63.7	75.6	84.2			10.7
	Phenothrin	38.2	64.2	61.8			3.86
	Piperonyl Butoxide	95.4	109	102			6.29

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Prallethrin	68.1	61.0	67.7		10.4
	Tau-Fluvalinate	55.4	80.6	76.4		5.39
	Tetramethrin	62.8	80.6	77.2		4.27
	Trans-Nonachlor	79.0	71.0	78.5		10.0
	Triclosan Methyl	59.6	69.8	61.2		13.1
	Trifluralin	73.5	68.1	66.3		2.66
EPA 8276	Chlordane	84.0	72.1	76.6		6.12
	Toxaphene	99.4	87.0	91.6		5.10
SM 2320 B-2011	Total Alkalinity	95.7			0.634	
	Total Alkalinity	94.9			0.0073	
SM 2540 C-2015	TDS	100			0.565	
	TDS	94.3			3.92	
SM 2540 D-2015	TSS	95.8				
	TSS	94.9				
SM 4500-F- C-2011	Fluoride	95.4	98.1	97.5		0.500
	Fluoride	96.9	101	102		0.542
SM 5310 B-2011	Organic Carbon	93.2	91.8	95.5		3.16

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2427315, 2427317, 2427319
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2427315, 2427317, 2427319
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2427315, 2427317, 2427319
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2427315, 2427317, 2427319
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2427316, 2427318, 2427320
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2427316, 2427318, 2427320
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2427316, 2427318, 2427320
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2427316, 2427318, 2427320
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2427323
EPA 8270E	PCBs in water matrices by GC/MS/MS	2427323
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2427323
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2427315, 2427317, 2427319
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2427315, 2427317, 2427319
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2427315, 2427317, 2427319
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2427315, 2427317, 2427319
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2427316, 2427318, 2427320

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	07/27/2023			07/27/2023 16:16	Alexis Price	2427315, 2427317
	07/27/2023			07/27/2023 16:17	Alexis Price	2427319
EPA 180.1 Rev. 2.0	07/27/2023			07/27/2023 14:48	Alexis Price	2427315, 2427317
	07/27/2023			07/27/2023 14:49	Alexis Price	2427319
EPA 300.0 Rev. 2.1	07/27/2023			08/01/2023 03:45	James L Waggeberby	2427315
	07/27/2023			08/01/2023 04:00	James L Waggeberby	2427317
	07/27/2023			08/01/2023 04:15	James L Waggeberby	2427319
EPA 350.1 Rev. 2.0	07/27/2023			08/04/2023 11:02	Ping Hua	2427316
	07/27/2023			08/04/2023 11:03	Ping Hua	2427318
	07/27/2023			08/04/2023 11:04	Ping Hua	2427320
EPA 351.2 Rev. 2.0	07/27/2023	07/31/2023 11:02	Dana G. Hughes	08/03/2023 10:33	Samantha L Bates	2427316
	07/27/2023	07/31/2023 11:02	Dana G. Hughes	08/03/2023 10:35	Samantha L Bates	2427318
	07/27/2023	07/31/2023 11:02	Dana G. Hughes	08/03/2023 10:37	Samantha L Bates	2427320
EPA 353.2 Rev. 2.0	07/27/2023			07/28/2023 10:58	Beverly Y. Sanders	2427316
	07/27/2023			07/28/2023 11:06	Beverly Y. Sanders	2427318
	07/27/2023			07/28/2023 11:08	Beverly Y. Sanders	2427320
EPA 365.1 Rev. 2.0	07/27/2023	07/28/2023 14:20	Simonne.V. Calhoun	07/31/2023 12:11	Chandler E Cox	2427316
	07/27/2023	08/03/2023 13:11	Simonne.V. Calhoun	08/04/2023 15:15	Chandler E Cox	2427318
	07/27/2023	08/10/2023 17:20	Adam P Silver	08/11/2023 13:34	James L Waggeberby	2427320
EPA 8270E	07/27/2023	08/01/2023 08:00	Fe-Val Siddell	08/02/2023 22:00	Michael Poppell	2427323
	07/27/2023	08/01/2023 08:00	Fe-Val Siddell	08/05/2023 02:23	Julie Wi	2427323
	07/27/2023	08/01/2023 08:00	Fe-Val Siddell	08/06/2023 22:18	Julie Wi	2427323
EPA 8276	07/27/2023	08/01/2023 08:00	Fe-Val Siddell	08/05/2023 16:51	Arthur Maknenko	2427323
SM 2320 B-2011	07/27/2023			08/02/2023 06:22	Dale L. Simmons	2427315
	07/27/2023			08/02/2023 08:55	Dale L. Simmons	2427317
	07/27/2023			08/02/2023 09:04	Dale L. Simmons	2427319
SM 2540 C-2015	07/27/2023			07/31/2023 14:17	Yijie Li	2427315, 2427317, 2427319
SM 2540 D-2015	07/27/2023			07/31/2023 14:17	Yijie Li	2427315, 2427317, 2427319
SM 4500-F- C-2011	07/27/2023			08/02/2023 06:22	Dale L. Simmons	2427315
	07/27/2023			08/02/2023 08:55	Dale L. Simmons	2427317
	07/27/2023			08/02/2023 09:04	Dale L. Simmons	2427319
SM 5310 B-2011	07/27/2023			08/02/2023 19:22	Elise M. Gillis	2427316
	07/27/2023			08/02/2023 19:35	Elise M. Gillis	2427318
	07/27/2023			08/02/2023 19:49	Elise M. Gillis	2427320