

Chemical Analysis Report

CEN-DIST-2023-08-17-02

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

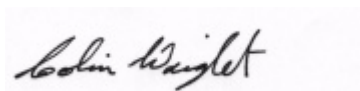
Event Description: **Run 1**
Request ID: **RQ-2023-08-14-16**
Customer: **CEN-DIST**
Project ID: **SMP**

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: 14-SEP-2023 08:30



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: UNNAMED DITCH AT 100M US OF MADELINE AVE

Collection Date/Time: 08/16/2023 12:35

Field ID: G5CE0092

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2431928	EPA 8270E	Aldrin	0.70	UQ	ng/L	P434403	
		Alpha-BHC	0.11	UQ	ng/L	P434403	
		Alpha-Chlordane	0.22	UQ	ng/L	P434403	
		PCB-1016	2.2	U	ng/L	P433861	
		Beta-BHC	0.11	UQ	ng/L	P434403	
		PCB-1221	2.2	U	ng/L	P433861	
		Beta-Cyfluthrin	1.4	UQ	ng/L	P434403	
		PCB-1232	2.2	U	ng/L	P433861	
		Bifenthrin	0.54	UQ	ng/L	P434403	
		PCB-1242	2.2	U	ng/L	P433861	
		PCB-1248	2.2	U	ng/L	P433861	
		Chlorothalonil	3.9	UQ	ng/L	P434403	
		PCB-1254	2.2	U	ng/L	P433861	
		Cis-Nonachlor	0.22	UQ	ng/L	P434403	
		PCB-1260	2.2	U	ng/L	P433861	
		Cypermethrin	1.6	UQ	ng/L	P434403	
		Dacthal	0.16	UQ	ng/L	P434403	
		DDD-p,p'	0.27	UQ	ng/L	P434403	
		DDE-p,p'	0.22	UQ	ng/L	P434403	
		DDT-p,p'	0.87	UQ	ng/L	P434403	
		Delta-BHC	0.43	UQ	ng/L	P434403	
		Deltamethrin	1.4	UQ	ng/L	P434403	
		Dichlobenil	0.27	UQ	ng/L	P434403	
		Dicofol	1.4	UQ	ng/L	P434403	
		Dieldrin	0.46	IQ	ng/L	P434403	
		Endosulfan I	0.43	UQ	ng/L	P434403	
		Endosulfan II	0.97	UQ	ng/L	P434403	
		Endosulfan Sulfate	0.32	UQ	ng/L	P434403	
		Endrin	0.97	UQ	ng/L	P434403	
		Endrin Aldehyde	0.81	UQJ	ng/L	P434403	LCS
		Endrin Ketone	0.43	UQ	ng/L	P434403	
		Esfenvalerate	0.81	UQ	ng/L	P434403	
		Ethalfuralin	0.16	UQ	ng/L	P434403	
		Fenpropathrin	0.27	UQ	ng/L	P434403	
		Gamma-BHC	0.14	UQJ	ng/L	P434403	CCV
		Gamma-Chlordane	0.22	UQ	ng/L	P434403	
		Heptachlor	0.22	UQ	ng/L	P434403	
		Heptachlor Epoxide	0.27	UQ	ng/L	P434403	
		Hexachlorobenzene**	1.1	UQ	ng/L	P434403	
		Kepone	15	UQJ	ng/L	P434403	CCV
		Lambda-Cyhalothrin	0.81	UQ	ng/L	P434403	
		Methoprene	0.81	UQ	ng/L	P434403	
		Methoxychlor	0.32	UQ	ng/L	P434403	

Field ID: G5CE0092

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2431928	EPA 8270E	MGK-264	0.22	UQ	ng/L	P434403	RPD
		Mirex	0.38	UQ	ng/L	P434403	
		Oxychlordane	0.32	UQ	ng/L	P434403	
		Permethrin	1.7	UQ	ng/L	P434403	
		Phenothrin	0.97	UQ	ng/L	P434403	
		Piperonyl Butoxide	0.16	UQ	ng/L	P434403	
		Prallethrin	2.2	UQ	ng/L	P434403	
		Tau-Fluvalinate	0.27	UQ	ng/L	P434403	
		Tetramethrin	0.81	UQ	ng/L	P434403	
		Trans-Nonachlor	0.22	UQ	ng/L	P434403	
		Triclosan Methyl	0.16	UQ	ng/L	P434403	
		Trifluralin	0.22	UQ	ng/L	P434403	
		Chlordane	2.2	U	ng/L	P433861	
	EPA 8276	Toxaphene	16	U	ng/L	P433861	

Ref. Method and Comment:
EPA 8270E: Sample expired for preparation due to need for re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: REED CANAL AT REED CANAL PARK

Collection Date/Time: 08/16/2023 12:13

Field ID: G5CE0156

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2431922	DEP SOP: NU-094-1	Color (true)	27		PCU	P433993	
	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P434000	
	EPA 300.0 Rev. 2.1	Chloride	64		mg Cl/L	P434299	
		Sulfate	14		mg SO4/L	P434304	
	SM 2320 B-2011	Total Alkalinity	209		mg CaCO3/L	P434400	
	SM 2540 C-2015	TDS	370	A	mg/L	P434365	
	SM 2540 D-2015	TSS	5	I	mg/L	P434121	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P434144	
2431923	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P434434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P434646	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.053		mg N/L	P434640	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P434111	
	SM 5310 B-2011	Organic Carbon	7.8		mg C/L	P434203	
2431929	EPA 8321B	2,4-D	0.11		ug/L	P434161	
		Acesulfame K	0.17	I	ug/L	P434027	
		2,4,5-T	0.0040	U	ug/L	P434161	
		AMPA	0.16	I	ug/L	P434027	MS
		Acetaminophen	0.0080	U	ug/L	P434161	
		Endothall	0.25	U	ug/L	P434027	
		Acetamiprid	0.0020	U	ug/L	P434161	MS, RPD
		Glufosinate	0.10	U	ug/L	P434027	
		Glyphosate	0.66		ug/L	P434027	
		Afidopyropen	0.0020	U	ug/L	P434161	
		Bentazon	0.80		ug/L	P434161	
		Sucralose	0.51		ug/L	P434027	
		Benzovindiflupyr	0.0020	U	ug/L	P434161	
		Carbamazepine	0.0095		ug/L	P434161	
		Clothianidin	0.0076	I	ug/L	P434161	
		Dinotefuran	0.0020	U	ug/L	P434161	MS
		Diuron	0.0024	I	ug/L	P434161	
		Fenuron	0.032	U	ug/L	P434161	MS
		Fluridone	0.0090		ug/L	P434161	
		Imazapyr	0.14		ug/L	P434161	
		Hydrocodone	0.0020	U	ug/L	P434161	
		Ibuprofen	0.080	U	ug/L	P434161	
		Imidacloprid	0.012		ug/L	P434161	
		Linuron	0.0040	U	ug/L	P434161	
		Mandestrobin	0.0020	U	ug/L	P434161	
		MCPP	0.0040	I	ug/L	P434161	
		Naproxen	0.0080	U	ug/L	P434161	
		Primidone	0.0040	U	ug/L	P434161	
		Pyraclostrobin	0.0020	U	ug/L	P434161	
		Silvex	0.0040	U	ug/L	P434161	
		Thiamethoxam	0.0020	U	ug/L	P434161	

Field ID: G5CE0156

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2431929	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P434161	
		Triclopyr	0.0040	U	ug/L	P434161	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P433993

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434000

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434299

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434304

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434434

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434646

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434640

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434111

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

Reference Method: EPA 8270E
Batch ID: P433861

Component	Result	Code	Units
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P433861

Component	Result	Code	Units
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

Reference Method: EPA 8270E

Batch ID: P434403

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P434403

Component	Result	Code	Units
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
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
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P434403

Component	Result	Code	Units
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: P433861

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: EPA 8321B

Batch ID: P434027

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B

Batch ID: P434161

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCP	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P434161

Component	Result	Code	Units
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P434400

Component	Result	Code	Units
Total Alkalinity	1.1	I	mg CaCO3/L

Reference Method: SM 2540 C-2015

Batch ID: P434365

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P434121

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P434144

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P434203

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: P433993

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434000

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434299

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434304

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434434

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434646

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	107		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434111

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

Reference Method: EPA 8270E
Batch ID: P433861

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1016	64.9		P	45 - 107
PCB-1260	62.8		P	40 - 118

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P434403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	42.0		P	30 - 96.0
Alpha-BHC	78.9		P	70 - 109
Alpha-Chlordane	63.3		P	45 - 107
Beta-BHC	67.7		P	64 - 138
Beta-Cyfluthrin	61.5		P	17 - 141
Bifenthrin	52.6		P	10 - 113
Chlorothalonil	59.1		P	26 - 180
Cis-Nonachlor	61.2		P	37 - 102
Cypermethrin	81.8		P	20 - 133
Dacthal	77.4		P	69 - 114
DDD-p,p'	61.4		P	42 - 105
DDE-p,p'	58.9		P	42 - 106
DDT-p,p'	50.5		P	42 - 107
Delta-BHC	78.4		P	67 - 144
Deltamethrin	81.1		P	15 - 149
Dichlobenil	55.7		P	46 - 117
Dicofol	52.5		P	34 - 114
Dieldrin	60.2		P	50 - 108
Endosulfan I	62.1		P	55 - 104
Endosulfan II	65.3		P	51 - 111
Endosulfan Sulfate	76.3		P	56 - 121
Endrin	65.1		P	10 - 106
Endrin Aldehyde	7.56		F	34 - 114
Endrin Ketone	104		P	63 - 177
Esfenvalerate	72.2		P	29 - 143
Ethalfuralin	57.2		P	46 - 96.0
Fenpropathrin	69.7		P	28 - 115
Gamma-BHC	114		P	65 - 121
Gamma-Chlordane	64.1		P	39 - 103
Heptachlor	65.1		P	39 - 94.0
Heptachlor Epoxide	62.2		P	54 - 104
Hexachlorobenzene	39.4		P	36 - 100
Kepone	67.2		P	10 - 225
Lambda-Cyhalothrin	63.0		P	10 - 135
Methoprene	52.6		P	10 - 109
Methoxychlor	62.7		P	52 - 112
MGK-264	81.5		P	44 - 117
Mirex	52.0		P	20 - 90.0
Oxychlordane	60.8		P	44 - 102
Permethrin	65.5		P	18 - 135
Phenothrin	50.9		P	10 - 102
Piperonyl Butoxide	95.2		P	28 - 156
Prallethrin	67.7		P	28 - 113
Tau-Fluvalinate	69.5		P	10 - 123
Tetramethrin	76.5		P	18 - 158
Trans-Nonachlor	66.1		P	39 - 104
Triclosan Methyl	59.3		P	54 - 108
Trifluralin	53.2		P	46 - 97.0

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276

Batch ID: P433861

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	83.7		P	52 - 117
Toxaphene	85.4		P	44 - 125

Reference Method: EPA 8321B

Batch ID: P434027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	139		P	40 - 150
Endothall	85.5		P	40 - 150
Glufosinate	82.2		P	40 - 150
Glyphosate	85.3		P	40 - 150
Sucralose	111		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P434161

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	87.1		P	40 - 150
2,4,5-T	92.5		P	40 - 150
Acetaminophen	104		P	30 - 150
Acetamiprid	106		P	40 - 150
Afidopyropen	82.8		P	30 - 150
Bentazon	135		P	30 - 150
Benzovindiflupyr	119		P	40 - 150
Carbamazepine	92.6		P	40 - 150
Clothianidin	104		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	104		P	40 - 150
Fenuron	113		P	40 - 150
Fluridone	95.0		P	40 - 150
Hydrocodone	110		P	40 - 150
Ibuprofen	79.7		P	40 - 150
Imazapyr	87.9		P	40 - 150
Imidacloprid	93.9		P	40 - 150
Linuron	86.4		P	40 - 150
Mandestrobin	125		P	40 - 150
MCPP	98.8		P	40 - 150
Naproxen	75.9		P	40 - 150
Primidone	98.0		P	40 - 150
Pyraclostrobin	96.8		P	40 - 150
Silvex	92.4		P	40 - 150
Thiamethoxam	107		P	40 - 150
Tolfenpyrad	64.6		P	30 - 150
Triclopyr	110		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P434400

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.9		P	92 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P434365

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	92.7		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P434121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.9		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P434144

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.1		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P434203

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431932	Chloride	103		P	90 - 110
2432064	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431932	Sulfate	98.8		P	90 - 110
2432064	Sulfate	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431882	Ammonia-N	96.6	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434646

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2432027	Kjeldahl Nitrogen	97.2	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434640

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431908	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431908	Total-P	108	99.8	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P433861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431296	PCB-1016	75.7	81.2	P/P	45 - 107
2431296	PCB-1260	63.4	65.8	P/P	40 - 112

Reference Method: EPA 8270E
Batch ID: P434403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433693	Aldrin	40.0	40.4	P/P	24 - 81.0
2433693	Alpha-BHC	72.9	80.7	P/P	65 - 110
2433693	Alpha-Chlordane	69.6	69.8	P/P	43 - 119
2433693	Beta-BHC	90.0	89.9	P/P	54 - 165
2433693	Beta-Cyfluthrin	37.3	53.4	P/P	27 - 165
2433693	Bifenthrin	30.4	47.2	P/P	17 - 117
2433693	Chlorothalonil	77.8	87.3	P/P	10 - 255

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P434403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433693	Cis-Nonachlor	60.2	61.8	P/P	34 - 98.0
2433693	Cypermethrin	37.9	55.9	P/P	25 - 143
2433693	Dacthal	70.3	58.8	P/P	55 - 139
2433693	DDD-p,p'	52.3	53.2	P/P	30 - 109
2433693	DDE-p,p'	52.6	52.6	P/P	35 - 106
2433693	DDT-p,p'	45.5	53.9	P/P	41 - 101
2433693	Delta-BHC	87.6	109	P/P	58 - 165
2433693	Deltamethrin	32.5	55.5	P/P	10 - 194
2433693	Dichlobenil	63.1	66.3	P/P	22 - 114
2433693	Dicofol	54.2	55.7	P/P	17 - 133
2433693	Dieldrin	52.9	54.4	P/P	45 - 129
2433693	Endosulfan I	69.7	56.9	P/P	49 - 104
2433693	Endosulfan II	70.8	76.3	P/P	37 - 117
2433693	Endosulfan Sulfate	60.9	59.8	P/P	38 - 128
2433693	Endrin	50.3	47.4	P/P	35 - 116
2433693	Endrin Aldehyde	54.8	30.4	P/P	19 - 108
2433693	Endrin Ketone	65.3	58.3	P/P	44 - 134
2433693	Esfenvalerate	81.5	101	P/P	27 - 176
2433693	Ethalfuralin	57.0	59.5	P/P	49 - 100
2433693	Fenpropathrin	40.0	64.8	P/P	34 - 117
2433693	Gamma-BHC	89.8	87.8	P/P	59 - 129
2433693	Gamma-Chlordane	64.6	54.1	P/P	33 - 107
2433693	Heptachlor	46.7	42.0	P/P	37 - 94.0
2433693	Heptachlor Epoxide	78.3	79.7	P/P	38 - 118
2433693	Hexachlorobenzene	52.1	52.0	P/P	35 - 97.0
2433693	Kepone	76.9	62.4	P/P	10 - 221
2433693	Lambda-Cyhalothrin	37.4	51.6	P/P	23 - 190
2433693	Methoprene	66.0	66.0	P/P	21 - 109
2433693	Methoxychlor	58.1	65.0	P/P	46 - 118
2433693	MGK-264	96.2	102	P/P	39 - 122
2433693	Mirex	34.7	42.8	P/P	25 - 90.0
2433693	Oxychlordane	64.6	55.1	P/P	42 - 100
2433693	Permethrin	49.3	51.6	P/P	33 - 181
2433693	Phenothrin	32.9	40.1	P/P	12 - 125
2433693	Piperonyl Butoxide	60.4	85.9	P/P	10 - 178
2433693	Prallethrin	76.8	69.1	P/P	24 - 122
2433693	Tau-Fluvalinate	33.9	50.4	P/P	13 - 151
2433693	Tetramethrin	70.6	76.3	P/P	16 - 172
2433693	Trans-Nonachlor	66.0	64.4	P/P	39 - 100
2433693	Triclosan Methyl	58.8	53.8	P/P	43 - 110
2433693	Trifluralin	51.3	64.5	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P433861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431296	Chlordane	62.2	68.9	P/P	43 - 123
2431296	Toxaphene	73.3	76.2	P/P	27 - 156

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P434027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431835	Acesulfame K	105	90.9	P/P	40 - 150
2431835	AMPA	159	158	F/F	40 - 150
2431835	Endothall	100	91.4	P/P	40 - 150
2431835	Glufosinate	84.8	79.7	P/P	40 - 150
2431835	Glyphosate	55.7	66.7	P/P	40 - 150
2431835	Sucralose	113	107	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P434161

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431707	2,4-D	84.7	87.4	P/P	40 - 150
2431707	2,4,5-T	115	128	P/P	40 - 150
2431707	Acetaminophen	68.5	72.9	P/P	30 - 150
2431707	Acetamiprid	43.8	25.6	P/F	40 - 150
2431707	Afidopyropen	76.8	59.9	P/P	30 - 150
2431707	Benzovindiflupyr	102	99.8	P/P	40 - 150
2431707	Carbamazepine	48.6	51.0	P/P	40 - 150
2431707	Clothianidin	54.3	54.3	P/P	40 - 150
2431707	Dinotefuran	31.9	33.4	F/F	40 - 150
2431707	Diuron	44.5	43.5	P/P	40 - 150
2431707	Fenuron	25.7	25.6	F/F	40 - 150
2431707	Fluridone	55.9	53.1	P/P	40 - 150
2431707	Hydrocodone	40.9	41.3	P/P	40 - 150
2431707	Ibuprofen	63.1	67.4	P/P	40 - 150
2431707	Imidacloprid	74.8	75.5	P/P	40 - 150
2431707	Linuron	59.3	50.9	P/P	40 - 150
2431707	Mandestrobin	98.6	95.0	P/P	40 - 150
2431707	MCCP	116	117	P/P	40 - 150
2431707	Naproxen	108	96.8	P/P	40 - 150
2431707	Primidone	49.1	45.8	P/P	40 - 150
2431707	Pyraclostrobin	87.5	87.4	P/P	40 - 150
2431707	Silvex	135	136	P/P	40 - 150
2431707	Thiamethoxam	45.5	46.5	P/P	40 - 150
2431707	Tolfenpyrad	55.7	62.1	P/P	30 - 150
2431707	Triclopyr	134	125	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P434144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2432063	Fluoride	97.4	98.6	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P434203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2431923	Organic Carbon	95.0	96.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431907	Color (true)	0.912	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434000

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431801	Turbidity	1.26	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431932	Chloride	1.49	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431932	Sulfate	1.27	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431882	Ammonia-N	1.19	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434646

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2432027	Kjeldahl Nitrogen	5.05	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431908	NO2NO3-N	0.952	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431908	Total-P	8.03	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P433861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431296	PCB-1016	6.98	Spike	P	0 - 25
2431296	PCB-1260	3.60	Spike	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P434403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433693	Aldrin	1.13	Spike	P	0 - 41
2433693	Alpha-BHC	10.2	Spike	P	0 - 25
2433693	Alpha-Chlordane	0.321	Spike	P	0 - 32
2433693	Beta-BHC	0.111	Spike	P	0 - 33
2433693	Beta-Cyfluthrin	35.5	Spike	P	0 - 43
2433693	Bifenthrin	43.3	Spike	P	0 - 52
2433693	Chlorothalonil	11.5	Spike	P	0 - 82
2433693	Cis-Nonachlor	2.55	Spike	P	0 - 33
2433693	Cypermethrin	38.4	Spike	P	0 - 51
2433693	Dacthal	17.9	Spike	P	0 - 27
2433693	DDD-p,p'	1.58	Spike	P	0 - 39
2433693	DDE-p,p'	0.0594	Spike	P	0 - 31
2433693	DDT-p,p'	17.0	Spike	P	0 - 29
2433693	Delta-BHC	21.9	Spike	P	0 - 35
2433693	Deltamethrin	52.2	Spike	P	0 - 100
2433693	Dichlobenil	4.92	Spike	P	0 - 40
2433693	Dicofol	2.69	Spike	P	0 - 37
2433693	Dieldrin	1.95	Spike	P	0 - 27
2433693	Endosulfan I	20.2	Spike	P	0 - 23
2433693	Endosulfan II	7.55	Spike	P	0 - 34
2433693	Endosulfan Sulfate	1.78	Spike	P	0 - 36
2433693	Endrin	6.06	Spike	P	0 - 45
2433693	Endrin Aldehyde	57.4	Spike	P	0 - 76
2433693	Endrin Ketone	11.3	Spike	P	0 - 43
2433693	Esfenvalerate	21.2	Spike	P	0 - 51
2433693	Ethalfuralin	4.36	Spike	P	0 - 22
2433693	Fenpropathrin	47.3	Spike	P	0 - 49
2433693	Gamma-BHC	2.22	Spike	P	0 - 28
2433693	Gamma-Chlordane	17.7	Spike	P	0 - 40
2433693	Heptachlor	10.5	Spike	P	0 - 29
2433693	Heptachlor Epoxide	1.72	Spike	P	0 - 33
2433693	Hexachlorobenzene	0.145	Spike	P	0 - 36
2433693	Kepone	20.8	Spike	P	0 - 85
2433693	Lambda-Cyhalothrin	31.9	Spike	P	0 - 55
2433693	Methoprene	0.0864	Spike	P	0 - 53
2433693	Methoxychlor	11.2	Spike	P	0 - 50
2433693	MGK-264	6.30	Spike	P	0 - 43
2433693	Mirex	20.8	Spike	P	0 - 40
2433693	Oxychlordane	15.9	Spike	P	0 - 31
2433693	Permethrin	4.39	Spike	P	0 - 50
2433693	Phenothrin	19.5	Spike	P	0 - 58
2433693	Piperonyl Butoxide	34.9	Spike	P	0 - 100
2433693	Prallethrin	10.5	Spike	P	0 - 39

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P434403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433693	Tau-Fluvalinate	39.1	Spike	P	0 - 54
2433693	Tetramethrin	7.75	Spike	P	0 - 51
2433693	Trans-Nonachlor	2.45	Spike	P	0 - 39
2433693	Triclosan Methyl	8.80	Spike	P	0 - 31
2433693	Trifluralin	22.8	Spike	F	0 - 22

Reference Method: EPA 8276
Batch ID: P433861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431296	Chlordane	10.2	Spike	P	0 - 28
2431296	Toxaphene	3.84	Spike	P	0 - 27

Reference Method: EPA 8321B
Batch ID: P434027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431835	Acesulfame K	14.1	Spike	P	0 - 30
2431835	AMPA	0.213	Spike	P	0 - 30
2431835	Endothall	9.39	Spike	P	0 - 30
2431835	Glufosinate	6.29	Spike	P	0 - 30
2431835	Glyphosate	17.9	Spike	P	0 - 30
2431835	Sucralose	6.09	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P434161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431707	2,4-D	2.90	Spike	P	0 - 30
2431707	2,4,5-T	10.7	Spike	P	0 - 30
2431707	Acetaminophen	6.23	Spike	P	0 - 30
2431707	Acetamiprid	52.3	Spike	F	0 - 30
2431707	Afidopyropen	24.7	Spike	P	0 - 30
2431707	Bentazon	4.63	Spike	P	0 - 30
2431707	Benzovindiflupyr	2.55	Spike	P	0 - 30
2431707	Carbamazepine	4.99	Spike	P	0 - 30
2431707	Clothianidin	0.0186	Spike	P	0 - 30
2431707	Dinotefuran	4.63	Spike	P	0 - 30
2431707	Diuron	2.30	Spike	P	0 - 30
2431707	Fenuron	0.216	Spike	P	0 - 30
2431707	Fluridone	5.00	Spike	P	0 - 30
2431707	Hydrocodone	0.866	Spike	P	0 - 30
2431707	Ibuprofen	6.53	Spike	P	0 - 30
2431707	Imazapyr	0.0360	Spike	P	0 - 30
2431707	Imidacloprid	0.853	Spike	P	0 - 30
2431707	Linuron	15.3	Spike	P	0 - 30
2431707	Mandestrobin	3.69	Spike	P	0 - 30
2431707	MCP	0.802	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P434161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431707	Naproxen	10.6	Spike	P	0 - 30
2431707	Primidone	7.02	Spike	P	0 - 30
2431707	Pyraclostrobin	0.173	Spike	P	0 - 30
2431707	Silvex	0.931	Spike	P	0 - 30
2431707	Thiamethoxam	2.07	Spike	P	0 - 30
2431707	Tolfenpyrad	10.9	Spike	P	0 - 30
2431707	Triclopyr	7.27	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P434400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431629	Total Alkalinity	0.603	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P434365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431922	TDS	2.43	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P434144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2432063	Fluoride	1.01	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P434203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2431923	Organic Carbon	1.11	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2431928
Field Sample ID: G5CE0092

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	106	P	37 - 129
EPA 8270E	Decachlorobiphenyl	82.9	P	26 - 115
EPA 8270E	Decachlorobiphenyl	86.7	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	86.5	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	50.1	P	29 - 95.0
EPA 8270E	Tetrachloro-m-xylene	67.8	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	73.9	P	28 - 102
EPA 8276	PCNB	84.2	P	49 - 115

Lab Sample ID: 2431929
Field Sample ID: G5CE0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	101	P	30 - 160
EPA 8321B	Acetaminophen-d4	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.0	P	30 - 160
EPA 8321B	Diuron-d6	47.2	P	30 - 160
EPA 8321B	Endothall-d6	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	56.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.3	P	30 - 160
EPA 8321B	Primidone-d5	77.6	P	30 - 160
EPA 8321B	Sucralose-d6	115	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A121099
Included Lab Sample IDs: 2431922

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A121101
Included Lab Sample IDs: 2431922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	97.5	P/P	95 - 105

Reference Method: SM 4500-F- C-2011
Run ID: A121155
Included Lab Sample IDs: 2431922

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A121162
Included Lab Sample IDs: 2431923

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

Reference Method: EPA 8270E
Run ID: A121163
Included Lab Sample IDs: 2431928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	105		P	80 - 120
PCB-1260	102		P	80 - 120

Reference Method: EPA 8276
Run ID: A121168
Included Lab Sample IDs: 2431928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.6		P	80 - 120
Toxaphene	88.4		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A121182
Included Lab Sample IDs: 2431922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.9	99.9	P/P	90 - 110
Sulfate	99.0	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A121186

Included Lab Sample IDs: 2431923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.5	95.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121187

Included Lab Sample IDs: 2431929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	100	115	P/P	60 - 160
Sucralose	119	120	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121190

Included Lab Sample IDs: 2431929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	79.0	88.6	P/P	60 - 160
Endothall	84.0	89.6	P/P	60 - 160
Glufosinate	105	91.4	P/P	60 - 160
Glyphosate	77.8	83.1	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A121265

Included Lab Sample IDs: 2431922

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.7	96.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121289

Included Lab Sample IDs: 2431923

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

Reference Method: EPA 8321B

Run ID: A121350

Included Lab Sample IDs: 2431929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	84.8	82.7	P/P	50 - 150
2,4,5-T	90.2	91.5	P/P	50 - 150
Acetaminophen	109	105	P/P	60 - 160
Acetamiprid	120	119	P/P	50 - 150
Afidopyropen	120	120	P/P	50 - 150
Bentazon	128	131	P/P	50 - 160
Benzovindiflupyr	115	117	P/P	50 - 150
Carbamazepine	110	112	P/P	60 - 150
Clothianidin	106	114	P/P	60 - 150
Dinotefuran	107	112	P/P	50 - 150
Diuron	105	108	P/P	60 - 160
Fenuron	113	113	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A121350
Included Lab Sample IDs: 2431929

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	108	106	P/P	60 - 160
Hydrocodone	126	128	P/P	60 - 150
Ibuprofen	102	91.0	P/P	50 - 160
Imazapyr	98.9	99.0	P/P	50 - 150
Imidacloprid	99.7	99.0	P/P	60 - 150
Linuron	100	109	P/P	60 - 150
Mandestrobin	116	124	P/P	50 - 150
MCPP	84.3	88.5	P/P	50 - 150
Naproxen	67.6	121	P/P	50 - 160
Primidone	99.3	105	P/P	60 - 150
Pyraclostrobin	118	120	P/P	60 - 150
Silvex	90.7	94.4	P/P	50 - 150
Thiamethoxam	118	121	P/P	50 - 150
Tolfenpyrad	105	106	P/P	60 - 150
Triclopyr	86.6	79.8	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A121372
Included Lab Sample IDs: 2431928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	112		P	80 - 120
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	101		P	80 - 120
Bifenthrin	109		P	80 - 120
Chlorothalonil	110		P	80 - 120
Cis-Nonachlor	107		P	80 - 120
Cypermethrin	111		P	80 - 120
Dacthal	104		P	80 - 120
DDD-p,p'	109		P	80 - 120
DDE-p,p'	107		P	80 - 120
DDT-p,p'	98.3		P	80 - 120
Delta-BHC	106		P	80 - 120
Deltamethrin	105		P	80 - 120
Dichlobenil	110		P	80 - 120
Dicofol	98.9		P	80 - 120
Dieldrin	107		P	80 - 120
Endosulfan I	109		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	99.3		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	108		P	80 - 120
Endrin Ketone	99.0		P	80 - 120
Esfenvalerate	109		P	80 - 120
Ethalfuralin	104		P	80 - 120
Fenpropathrin	107		P	80 - 120
Gamma-BHC	121*		F	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	95.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A121372
Included Lab Sample IDs: 2431928

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Heptachlor Epoxide	105		P	80 - 120
Hexachlorobenzene	106		P	80 - 120
Kepone	62.9*		F	80 - 120
Lambda-Cyhalothrin	115		P	80 - 120
Methoprene	109		P	80 - 120
Methoxychlor	98.8		P	80 - 120
MGK-264	109		P	80 - 120
Mirex	109		P	80 - 120
Oxychlordane	109		P	80 - 120
Permethrin	109		P	80 - 120
Phenothrin	110		P	80 - 120
Piperonyl Butoxide	114		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	109		P	80 - 120
Tetramethrin	110		P	80 - 120
Trans-Nonachlor	109		P	80 - 120
Triclosan Methyl	105		P	80 - 120
Trifluralin	102		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A121386
Included Lab Sample IDs: 2431923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A121418
Included Lab Sample IDs: 2431923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	106	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		Precision	
					LCS	SMP
DEP SOP: NU-094-1	Color (true)	100				0.912
EPA 180.1 Rev. 2.0	Turbidity	98.1				1.26
EPA 300.0 Rev. 2.1	Chloride	102	103	102		1.49
	Sulfate	99.1	98.8	99.0		1.27
EPA 350.1 Rev. 2.0	Ammonia-N	101	96.6	98.2		
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	97.2	103		1.19
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	107	102	103		5.05
EPA 365.1 Rev. 2.0	Total-P	103	108	99.8		0.952
EPA 8270E	Aldrin	42.0	40.0	40.4		8.03
	Alpha-BHC	78.9	72.9	80.7		1.13
	Alpha-Chlordane	63.3	69.6	69.8		10.2
	Beta-BHC	67.7	90.0	89.9		0.321
	Beta-Cyfluthrin	61.5	37.3	53.4		0.111
	Bifenthrin	52.6	30.4	47.2		35.5
	Chlorothalonil	59.1	77.8	87.3		43.3
	Cis-Nonachlor	61.2	60.2	61.8		11.5
	Cypermethrin	81.8	37.9	55.9		2.55
	Dacthal	77.4	70.3	58.8		38.4
	DDD-p,p'	61.4	52.3	53.2		17.9
	DDE-p,p'	58.9	52.6	52.6		1.58
	DDT-p,p'	50.5	45.5	53.9		0.0594
	Delta-BHC	78.4	87.6	109		17.0
	Deltamethrin	81.1	32.5	55.5		21.9
	Dichlobenil	55.7	63.1	66.3		52.2
	Dicofol	52.5	54.2	55.7		4.92
	Dieldrin	60.2	52.9	54.4		2.69
	Endosulfan I	62.1	69.7	56.9		1.95
	Endosulfan II	65.3	70.8	76.3		20.2
	Endosulfan Sulfate	76.3	60.9	59.8		7.55
	Endrin	65.1	50.3	47.4		1.78
	Endrin Aldehyde	7.56	54.8	30.4		6.06
	Endrin Ketone	104	65.3	58.3		57.4
	Esfenvalerate	72.2	81.5	101		11.3
	Ethalfuralin	57.2	57.0	59.5		21.2
	Fenpropathrin	69.7	40.0	64.8		4.36
	Gamma-BHC	114	89.8	87.8		47.3
	Gamma-Chlordane	64.1	64.6	54.1		2.22
	Heptachlor	65.1	46.7	42.0		17.7
	Heptachlor Epoxide	62.2	78.3	79.7		10.5
	Hexachlorobenzene	39.4	52.1	52.0		1.72
	Kepone	67.2	76.9	62.4		0.145
	Lambda-Cyhalothrin	63.0	37.4	51.6		20.8
	Methoprene	52.6	66.0	66.0		31.9
	Methoxychlor	62.7	58.1	65.0		0.0864
	MGK-264	81.5	96.2	102		11.2
	Mirex	52.0	34.7	42.8		6.30
	Oxychlordane	60.8	64.6	55.1		20.8
	PCB-1016	64.9	75.7	81.2		15.9
	PCB-1260	62.8	63.4	65.8		6.98
	Permethrin	65.5	49.3	51.6		3.60
	Phenothrin	50.9	32.9	40.1		4.39
	Piperonyl Butoxide	95.2	60.4	85.9		19.5
	Prallethrin	67.7	76.8	69.1		34.9
	Tau-Fluvalinate	69.5	33.9	50.4		10.5
						39.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Tetramethrin	76.5	70.6	76.3		7.75
	Trans-Nonachlor	66.1	66.0	64.4		2.45
	Triclosan Methyl	59.3	58.8	53.8		8.80
	Trifluralin	53.2	51.3	64.5		22.8
EPA 8276	Chlordane	83.7	62.2	68.9		10.2
	Toxaphene	85.4	73.3	76.2		3.84
EPA 8321B	2,4-D	87.1	84.7	87.4		2.90
	2,4,5-T	92.5	115	128		10.7
	Acesulfame K	103	105	90.9		14.1
	Acetaminophen	104	68.5	72.9		6.23
	Acetamiprid	106	43.8	25.6		52.3
	Afidopyropen	82.8	76.8	59.9		24.7
	AMPA	139	159	158		0.213
	Bentazon	135				4.63
	Benzovindiflupyr	119	102	99.8		2.55
	Carbamazepine	92.6	48.6	51.0		4.99
	Clothianidin	104	54.3	54.3		0.0186
	Dinotefuran	102	31.9	33.4		4.63
	Diuron	104	44.5	43.5		2.30
	Endothall	85.5	100	91.4		9.39
	Fenuron	113	25.7	25.6		0.216
	Fluridone	95.0	55.9	53.1		5.00
	Glufosinate	82.2	84.8	79.7		6.29
	Glyphosate	85.3	55.7	66.7		17.9
	Hydrocodone	110	40.9	41.3		0.866
	Ibuprofen	79.7	63.1	67.4		6.53
	Imazapyr	87.9				0.0360
	Imidacloprid	93.9	74.8	75.5		0.853
	Linuron	86.4	59.3	50.9		15.3
	Mandestrobin	125	98.6	95.0		3.69
	MCPP	98.8	116	117		0.802
	Naproxen	75.9	108	96.8		10.6
	Primidone	98.0	49.1	45.8		7.02
	Pyraclostrobin	96.8	87.5	87.4		0.173
	Silvex	92.4	135	136		0.931
	Sucralose	111	113	107		6.09
	Thiamethoxam	107	45.5	46.5		2.07
	Tolfenpyrad	64.6	55.7	62.1		10.9
	Triclopyr	110	134	125		7.27
SM 2320 B-2011	Total Alkalinity	96.9			0.603	
SM 2540 C-2015	TDS	92.7			2.43	
SM 2540 D-2015	TSS	93.9				
SM 4500-F- C-2011	Fluoride	97.1	97.4	98.6		1.01
SM 5310 B-2011	Organic Carbon	92.8	95.0	96.5		1.11

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2431922
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2431922
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2431922
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2431922
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2431923

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2431923
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2431923
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2431923
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2431928
EPA 8270E	PCBs in water matrices by GC/MS/MS	2431928
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2431928
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2431929
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2431922
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2431922
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2431922
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2431922
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2431923

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	08/17/2023			08/17/2023 15:24	Alexis Price	2431922
EPA 180.1 Rev. 2.0	08/17/2023			08/17/2023 14:14	Khloe J Berg	2431922
EPA 300.0 Rev. 2.1	08/17/2023			08/24/2023 07:06	James L Waggeberby	2431922
EPA 350.1 Rev. 2.0	08/17/2023			08/28/2023 13:31	Khloe J Berg	2431923
EPA 351.2 Rev. 2.0	08/17/2023	09/07/2023 13:14	Simonne.V. Calhoun	09/08/2023 11:12	Samantha L Bates	2431923
EPA 353.2 Rev. 2.0	08/17/2023			09/06/2023 16:00	Anna M. Plaviak	2431923
EPA 365.1 Rev. 2.0	08/17/2023	08/21/2023 16:54	Adam P Silver	08/22/2023 10:04	James L Waggeberby	2431923
EPA 8270E	08/17/2023	08/17/2023 14:00	Rasheda Ghaffari	08/22/2023 02:13	Julie Wi	2431928
	08/17/2023	08/29/2023 08:00	Fe-Val Siddell	09/06/2023 01:08	Vandana T. Nagar	2431928
EPA 8276	08/17/2023	08/17/2023 14:00	Rasheda Ghaffari	08/22/2023 12:12	Arthur Maknenko	2431928
EPA 8321B	08/17/2023	08/22/2023 08:00	Hana Lee	08/22/2023 09:49	Tae K Lee	2431929
	08/17/2023	08/22/2023 08:00	Hana Lee	08/22/2023 19:29	Tae K Lee	2431929
	08/17/2023	08/23/2023 09:00	Hoor Shaik	09/01/2023 23:10	Juyoung Kim	2431929
	08/17/2023	08/23/2023 09:00	Hoor Shaik	09/02/2023 05:24	Juyoung Kim	2431929
SM 2320 B-2011	08/17/2023			08/25/2023 20:50	Sarah A Nixon	2431922
SM 2540 C-2015	08/17/2023			08/21/2023 11:15	Dana G. Hughes	2431922
SM 2540 D-2015	08/17/2023			08/18/2023 12:51	Dana G. Hughes	2431922
SM 4500-F- C-2011	08/17/2023			08/21/2023 23:42	Dale L. Simmons	2431922
SM 5310 B-2011	08/17/2023			08/22/2023 12:47	Elise M. Gillis	2431923