

Chemical Analysis Report

SE-DIST-2023-05-11-02

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

Event Description: **SMP - Melbourne**
Request ID: **RQ-2023-05-08-63**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 07-JUN-2023 08:44

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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: Sawgrass Lake East of Center

Collection Date/Time: 05/10/2023 11:25

Field ID: G3SE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2409060	DEP SOP: NU-094-1	Color (true)	100		PCU	P429779	
	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P429781	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P430145	
		Sulfate	30		mg SO4/L	P430022	
	SM 2320 B-2011	Total Alkalinity	110		mg CaCO3/L	P430118	
	SM 2540 C-2015	TDS	479		mg/L	P430193	
	SM 2540 D-2015	TSS	3	I	mg/L	P429882	
	SM 4500-F- C-2011	Fluoride	0.32		mg F/L	P430529	
2409061	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P430077	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P430086	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P430056	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P429861	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P429897	

Ref. Method and Comment:

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

SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Kid Creek at Old Dixie Highway

Collection Date/Time: 05/10/2023 13:00

Field ID: G5SE0050

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2409067	EPA 8321B	2,4-D	0.0020	U	ug/L	P429889	
		Acesulfame K	0.10	U	ug/L	P429733	
		2,4,5-T	0.0040	U	ug/L	P429889	
		AMPA	0.22	I	ug/L	P429733	
		Acetaminophen	0.0080	U	ug/L	P429889	
		Acetamiprid	0.0020	U	ug/L	P429889	
		Endothall	0.25	U	ug/L	P429733	
		Glufosinate	0.10	U	ug/L	P429733	
		Glyphosate	0.15	I	ug/L	P429733	
		Afidopyropen	0.0020	U	ug/L	P429889	
		Bentazon	0.024		ug/L	P429889	
		Sucralose	0.30		ug/L	P429733	
		Benzovindiflupyr	0.0020	U	ug/L	P429889	
		Carbamazepine	8.0E-04	U	ug/L	P429889	
		Clothianidin	0.0020	U	ug/L	P429889	
		Dinotefuran	0.0020	U	ug/L	P429889	
		Diuron	0.0020	U	ug/L	P429889	
		Fenuron	0.032	U	ug/L	P429889	
		Fluridone	8.0E-04	U	ug/L	P429889	
		Imazapyr	0.15		ug/L	P429889	
		Hydrocodone	0.0020	U	ug/L	P429889	
		Ibuprofen	0.080	U	ug/L	P429889	
		Imidacloprid	0.0020	U	ug/L	P429889	
		Linuron	0.0040	U	ug/L	P429889	
		Mandestrobin	0.0020	U	ug/L	P429889	
		MCPP	0.0020	U	ug/L	P429889	
		Naproxen	0.0080	U	ug/L	P429889	
		Primidone	0.0040	U	ug/L	P429889	
		Pyraclostrobin	0.0020	U	ug/L	P429889	
		Silvex	0.0040	U	ug/L	P429889	
		Thiamethoxam	0.0020	U	ug/L	P429889	
		Tolfenpyrad	0.0020	U	ug/L	P429889	
		Triclopyr	0.0040	U	ug/L	P429889	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Crane Creek East of RR Bridge

Collection Date/Time: 05/10/2023 12:30

Field ID: G3SE0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2409066	EPA 8270E	Aldrin	0.66	U	ng/L	P429787	
		Alpha-BHC	0.10	U	ng/L	P429787	
		Alpha-Chlordane	0.20	U	ng/L	P429787	
		PCB-1016	2.0	U	ng/L	P429787	
		Beta-BHC	0.10	U	ng/L	P429787	
		PCB-1221	2.0	U	ng/L	P429787	
		Beta-Cyfluthrin	1.3	U	ng/L	P429787	
		PCB-1232	2.0	U	ng/L	P429787	
		Bifenthrin	0.51	U	ng/L	P429787	
		PCB-1242	2.0	U	ng/L	P429787	
		PCB-1248	2.0	U	ng/L	P429787	
		Chlorothalonil	3.7	U	ng/L	P429787	RPD
		PCB-1254	2.0	U	ng/L	P429787	
		Cis-Nonachlor	0.20	U	ng/L	P429787	
		PCB-1260	2.0	U	ng/L	P429787	
		Cypermethrin	1.5	U	ng/L	P429787	
		Dacthal	0.15	U	ng/L	P429787	MS
		DDD-p,p'	0.25	U	ng/L	P429787	
		DDE-p,p'	0.22	I	ng/L	P429787	
		DDT-p,p'	4.7	V	ng/L	P429787	
		Delta-BHC	0.59	I	ng/L	P429787	
		Deltamethrin	1.3	U	ng/L	P429787	
		Dichlobenil	0.25	U	ng/L	P429787	
		Dicofol	1.3	U	ng/L	P429787	RPD
		Dieldrin	0.41	U	ng/L	P429787	
		Endosulfan I	0.41	U	ng/L	P429787	
		Endosulfan II	0.41	U	ng/L	P429787	
		Endosulfan Sulfate	0.30	U	ng/L	P429787	
		Endrin	0.41	U	ng/L	P429787	
		Endrin Aldehyde	0.76	U	ng/L	P429787	
		Endrin Ketone	0.41	U	ng/L	P429787	
		Esfenvalerate	0.76	U	ng/L	P429787	
		Ethalfuralin	0.15	U	ng/L	P429787	
		Fenpropathrin	0.25	U	ng/L	P429787	
		Gamma-BHC	0.13	U	ng/L	P429787	RPD
		Gamma-Chlordane	0.20	U	ng/L	P429787	
		Heptachlor	0.20	U	ng/L	P429787	
		Heptachlor Epoxide	0.25	U	ng/L	P429787	
		Hexachlorobenzene**	1.0	U	ng/L	P429787	
		Kepone	5.1	U	ng/L	P429787	
		Lambda-Cyhalothrin	0.76	U	ng/L	P429787	
		Methoprene	0.76	U	ng/L	P429787	
		Methoxychlor	0.30	U	ng/L	P429787	
		MGK-264	0.20	U	ng/L	P429787	

Field ID: G3SE0071

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2409066	EPA 8270E	Mirex	0.36	U	ng/L	P429787	
		Oxychlordane	0.30	U	ng/L	P429787	
		Permethrin	1.6	U	ng/L	P429787	
		Phenothrin	0.91	U	ng/L	P429787	
		Piperonyl Butoxide	0.19	I	ng/L	P429787	
		Prallethrin	2.0	U	ng/L	P429787	
		Tau-Fluvalinate	0.25	U	ng/L	P429787	
		Tetramethrin	0.76	U	ng/L	P429787	
		Trans-Nonachlor	0.20	U	ng/L	P429787	
		Triclosan Methyl	0.15	U	ng/L	P429787	
		Trifluralin	0.21	I	ng/L	P429787	
	EPA 8276	Chlordane	2.0	UJ	ng/L	P429787	SUR
		Toxaphene	15	UJ	ng/L	P429787	SUR

Ref. Method and Comment:
 EPA 8270E: V - Due to the presence of ddt-p,p' in both the Method Blank and the sample.
 EPA 8276: Reported results are J qualified due to surrogate recovery exceeding control limits; the sample was re-extracted and re-analyzed beyond expiration with acceptable surrogate recovery and the same analytical results were obtained. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P429779

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429781

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430022

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430077

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

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

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430056

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429861

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

Reference Method: EPA 8270E
Batch ID: P429787

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P429787

Component	Result	Code	Units
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'	0.50	I	ng/L
DDT-p,p'	0.84	I	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P429787

Component	Result	Code	Units
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	3.4	I	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	3.7	I	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P429787

Component	Result	Code	Units
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P429787

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

Reference Method: EPA 8321B
Batch ID: P429733

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: P429889

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
MCPP	0.0020	U	ug/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P429889

Component	Result	Code	Units
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P430118

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

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

Component	Result	Code	Units
TDS	15	U	mg/L

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

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P430529

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P429897

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: P429779

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: P429781

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430022

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430077

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

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

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430056

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429861

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

Reference Method: EPA 8270E
Batch ID: P429787

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.1		P	10 - 92.0
Alpha-BHC	95.4		P	75 - 107
Alpha-Chlordane	65.2		P	50 - 108
Beta-BHC	93.2		P	36 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P429787

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

Reference Method: EPA 8276
Batch ID: P429787

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P429787

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

Reference Method: EPA 8321B
Batch ID: P429733

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	99.3		P	40 - 150
AMPA	104		P	40 - 150
Endothall	80.0		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	122		P	40 - 150
Sucralose	96.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P429889

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	84.3		P	40 - 150
2,4,5-T	89.3		P	40 - 150
Acetaminophen	82.7		P	30 - 150
Acetamiprid	70.0		P	40 - 150
Afidopyropen	62.5		P	30 - 150
Bentazon	120		P	30 - 150
Benzovindiflupyr	76.4		P	40 - 150
Carbamazepine	76.1		P	40 - 150
Clothianidin	80.8		P	40 - 150
Dinotefuran	88.8		P	40 - 150
Diuron	75.8		P	40 - 150
Fenuron	81.6		P	40 - 150
Fluridone	77.1		P	40 - 150
Hydrocodone	86.6		P	40 - 150
Ibuprofen	75.7		P	40 - 150
Imazapyr	83.8		P	40 - 150
Imidacloprid	80.5		P	40 - 150
Linuron	75.8		P	40 - 150
Mandestrobin	75.4		P	40 - 150
MCPP	96.5		P	40 - 150
Naproxen	74.1		P	40 - 150
Primidone	83.1		P	40 - 150
Pyraclostrobin	76.6		P	40 - 150
Silvex	100		P	40 - 150
Thiamethoxam	82.9		P	40 - 150
Tolfenpyrad	53.6		P	30 - 150
Triclopyr	82.2		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P430118

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	92 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

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

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

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

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

Reference Method: SM 4500-F- C-2011
Batch ID: P430529

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

Reference Method: SM 5310 B-2011
Batch ID: P429897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408931	Sulfate	103		P	90 - 110
2409193	Sulfate	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409971	Chloride	103		P	90 - 110
2410135	Chloride	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408966	Ammonia-N	97.2	96.8	P/P	90 - 110

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

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408968	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429861

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409029	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P429787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409146	Aldrin	46.5	37.1	P/P	20 - 82.0
2409146	Alpha-BHC	93.3	91.0	P/P	71 - 109
2409146	Alpha-Chlordane	55.2	53.6	P/P	42 - 106
2409146	Beta-BHC	138	111	P/P	69 - 180
2409146	Beta-Cyfluthrin	57.3	56.3	P/P	18 - 175
2409146	Bifenthrin	42.4	56.7	P/P	21 - 128
2409146	Chlorothalonil	144	60.0	P/P	10 - 300
2409146	Cis-Nonachlor	53.9	49.5	P/P	34 - 106
2409146	Cypermethrin	54.7	55.0	P/P	22 - 158
2409146	Dacthal	139	108	F/P	54 - 116
2409146	DDD-p,p'	64.3	60.9	P/P	34 - 107
2409146	DDE-p,p'	58.2	56.6	P/P	33 - 110
2409146	DDT-p,p'	68.7	67.7	P/P	50 - 122
2409146	Delta-BHC	141	99.5	P/P	77 - 193

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P429787

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

Reference Method: EPA 8276

Batch ID: P429787

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

Reference Method: EPA 8321B

Batch ID: P429733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408587	Acesulfame K	76.9	77.8	P/P	40 - 150
2408587	AMPA	71.7	72.7	P/P	40 - 150
2408587	Endothall	73.2	75.2	P/P	40 - 150
2408587	Glufosinate	68.2	72.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P429733

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408587	Glyphosate	79.6	67.2	P/P	40 - 150
2408587	Sucralose	81.1	89.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P429889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2409223	2,4-D	89.6	105	P/P	40 - 150
2409223	2,4,5-T	108	106	P/P	40 - 150
2409223	Acetaminophen	92.6	101	P/P	30 - 150
2409223	Acetamiprid	65.4	65.7	P/P	40 - 150
2409223	Afidopyropen	80.0	79.9	P/P	30 - 150
2409223	Benzovindiflupyr	73.1	84.9	P/P	40 - 150
2409223	Carbamazepine	68.2	75.8	P/P	40 - 150
2409223	Clothianidin	89.1	99.6	P/P	40 - 150
2409223	Dinotefuran	62.8	68.7	P/P	40 - 150
2409223	Diuron	63.0	77.6	P/P	40 - 150
2409223	Fenuron	52.6	61.5	P/P	40 - 150
2409223	Hydrocodone	52.1	59.1	P/P	40 - 150
2409223	Ibuprofen	62.2	54.0	P/P	40 - 150
2409223	Imidacloprid	109	119	P/P	40 - 150
2409223	Linuron	65.4	69.8	P/P	40 - 150
2409223	Mandestrobin	72.6	83.7	P/P	40 - 150
2409223	MCPP	103	120	P/P	40 - 150
2409223	Naproxen	64.6	84.8	P/P	40 - 150
2409223	Primidone	83.4	90.5	P/P	40 - 150
2409223	Pyraclostrobin	77.6	80.8	P/P	40 - 150
2409223	Silvex	109	115	P/P	40 - 150
2409223	Thiamethoxam	75.5	88.2	P/P	40 - 150
2409223	Tolfenpyrad	49.5	55.9	P/P	30 - 150
2409223	Triclopyr	114	98.9	P/P	40 - 150

Reference Method: SM 5310 B-2011
Batch ID: P429897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2408905	Organic Carbon	94.1	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P429779

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408994	Color (true)	3.71	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P429781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408994	Turbidity	2.80	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408931	Sulfate	2.12	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P430145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409971	Chloride	3.09	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P430077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408966	Ammonia-N	0.345	Spike	P	0 - 20

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

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P430056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408968	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P429861

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409029	Total-P	1.69	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P429787

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

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P429787

Replicated

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

Reference Method: EPA 8321B

Batch ID: P429733

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408587	Acesulfame K	1.13	Spike	P	0 - 30
2408587	AMPA	1.43	Spike	P	0 - 30
2408587	Endothall	2.76	Spike	P	0 - 30
2408587	Glufosinate	5.74	Spike	P	0 - 30
2408587	Glyphosate	16.8	Spike	P	0 - 30
2408587	Sucralose	8.35	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P429889

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409223	2,4-D	10.8	Spike	P	0 - 30
2409223	2,4,5-T	1.89	Spike	P	0 - 30
2409223	Acetaminophen	9.13	Spike	P	0 - 30
2409223	Acetamiprid	0.421	Spike	P	0 - 30
2409223	Afidopyropen	0.122	Spike	P	0 - 30
2409223	Bentazon	7.23	Spike	P	0 - 30
2409223	Benzovindiflupyr	14.9	Spike	P	0 - 30
2409223	Carbamazepine	9.16	Spike	P	0 - 30
2409223	Clothianidin	11.2	Spike	P	0 - 30
2409223	Dinotefuran	8.29	Spike	P	0 - 30
2409223	Diuron	19.3	Spike	P	0 - 30
2409223	Fenuron	15.6	Spike	P	0 - 30
2409223	Fluridone	4.86	Spike	P	0 - 30
2409223	Hydrocodone	12.7	Spike	P	0 - 30
2409223	Ibuprofen	14.3	Spike	P	0 - 30
2409223	Imazapyr	10.6	Spike	P	0 - 30
2409223	Imidacloprid	7.49	Spike	P	0 - 30
2409223	Linuron	6.55	Spike	P	0 - 30
2409223	Mandestrobin	14.2	Spike	P	0 - 30
2409223	MCPP	14.4	Spike	P	0 - 30
2409223	Naproxen	27.1	Spike	P	0 - 30
2409223	Primidone	8.15	Spike	P	0 - 30
2409223	Pyraclostrobin	4.03	Spike	P	0 - 30
2409223	Silvex	5.04	Spike	P	0 - 30
2409223	Thiamethoxam	15.5	Spike	P	0 - 30
2409223	Tolfenpyrad	12.3	Spike	P	0 - 30
2409223	Triclopyr	14.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P430118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408994	Total Alkalinity	2.41	Sample	P	0 - 3.9

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

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

Reference Method: SM 4500-F- C-2011
Batch ID: P430529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2409948	Fluoride	0.945	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P429897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2408905	Organic Carbon	1.06	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2409066
Field Sample ID: G3SE0071

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	49.0	P	29 - 130
EPA 8270E	Decachlorobiphenyl	66.2	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	30.3	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	45.5	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	60.1	P	30 - 101
EPA 8276	Decachlorobiphenyl	36.4	P	30 - 101
EPA 8276	PCNB	94.5	P	48 - 121
EPA 8276	PCNB	44.1	F	48 - 121

Lab Sample ID: 2409067
Field Sample ID: G5SE0050

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	93.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.6	P	30 - 160
EPA 8321B	Diuron-d6	64.7	P	30 - 160
EPA 8321B	Endothall-d6	88.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	53.7	P	30 - 160
EPA 8321B	Primidone-d5	78.8	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A119113

Included Lab Sample IDs: 2409060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A119114

Included Lab Sample IDs: 2409060

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

Reference Method: SM 5310 B-2011

Run ID: A119185

Included Lab Sample IDs: 2409061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	97.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A119190

Included Lab Sample IDs: 2409067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	115	114	P/P	60 - 160
Endothall	85.0	83.6	P/P	60 - 160
Glufosinate	106	102	P/P	60 - 160
Glyphosate	121	115	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A119191

Included Lab Sample IDs: 2409067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.6	96.4	P/P	60 - 160
Sucralose	92.7	116	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A119193

Included Lab Sample IDs: 2409061

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A119211

Included Lab Sample IDs: 2409060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	98.7	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A119252

Included Lab Sample IDs: 2409061

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A119259

Included Lab Sample IDs: 2409061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	99.8	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A119276

Included Lab Sample IDs: 2409060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	96.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A119279

Included Lab Sample IDs: 2409067

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	96.4	P/P	50 - 150
2,4,5-T	94.9	87.0	P/P	50 - 150
Acetaminophen	102	98.8	P/P	60 - 160
Acetamiprid	104	105	P/P	50 - 150
Afidopyropen	101	98.0	P/P	50 - 150
Bentazon	129	128	P/P	50 - 160
Benzovindiflupyr	92.6	98.3	P/P	50 - 150
Carbamazepine	105	99.1	P/P	60 - 150
Clothianidin	98.8	106	P/P	60 - 150
Dinotefuran	110	110	P/P	50 - 150
Diuron	114	117	P/P	60 - 160
Fenuron	104	102	P/P	60 - 150
Fluridone	113	113	P/P	60 - 160
Hydrocodone	117	111	P/P	60 - 150
Ibuprofen	101	62.4	P/P	50 - 160
Imazapyr	108	100	P/P	50 - 150
Imidacloprid	99.0	97.6	P/P	60 - 150
Linuron	95.3	99.5	P/P	60 - 150
Mandestrobin	107	99.0	P/P	50 - 150
MCPP	93.1	91.7	P/P	50 - 150
Naproxen	69.0	62.9	P/P	50 - 160
Primidone	97.7	102	P/P	60 - 150
Pyraclostrobin	107	107	P/P	60 - 150
Silvex	98.3	87.5	P/P	50 - 150
Thiamethoxam	109	106	P/P	50 - 150
Tolfenpyrad	96.6	98.8	P/P	60 - 150
Triclopyr	84.5	86.1	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276
Run ID: A119282
Included Lab Sample IDs: 2409066

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

Reference Method: EPA 8270E
Run ID: A119306
Included Lab Sample IDs: 2409066

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A119322
Included Lab Sample IDs: 2409061

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

Reference Method: EPA 8270E
Run ID: A119325
Included Lab Sample IDs: 2409066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.7		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	98.0		P	80 - 120
Beta-BHC	104		P	80 - 120
Beta-Cyfluthrin	99.6		P	80 - 120
Bifenthrin	105		P	80 - 120
Chlorothalonil	92.0		P	80 - 120
Cis-Nonachlor	94.4		P	80 - 120
Cypermethrin	102		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	99.9		P	80 - 120
Delta-BHC	94.7		P	80 - 120
Deltamethrin	97.8		P	80 - 120
Dichlobenil	106		P	80 - 120
Dicofol	87.0		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	97.6		P	80 - 120
Endosulfan Sulfate	90.1		P	80 - 120
Endrin	97.8		P	80 - 120
Endrin Aldehyde	92.7		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	98.0		P	80 - 120
Ethalfuralin	95.2		P	80 - 120
Fenpropathrin	104		P	80 - 120
Gamma-BHC	95.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A119325
Included Lab Sample IDs: 2409066

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-Chlordane	102		P	80 - 120
Heptachlor	91.6		P	80 - 120
Heptachlor Epoxide	99.3		P	80 - 120
Hexachlorobenzene	88.3		P	80 - 120
Kepone	84.6		P	80 - 120
Lambda-Cyhalothrin	106		P	80 - 120
Methoprene	98.6		P	80 - 120
Methoxychlor	102		P	80 - 120
MGK-264	100		P	80 - 120
Mirex	97.8		P	80 - 120
Oxychlordane	97.7		P	80 - 120
Permethrin	107		P	80 - 120
Phenothrin	107		P	80 - 120
Piperonyl Butoxide	99.0		P	80 - 120
Prallethrin	102		P	80 - 120
Tau-Fluvalinate	103		P	80 - 120
Tetramethrin	103		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	107		P	80 - 120
Trifluralin	99.9		P	80 - 120

Reference Method: SM 4500-F- C-2011
Run ID: A119457
Included Lab Sample IDs: 2409060

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

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	100				3.71	
EPA 180.1 Rev. 2.0	Turbidity	98.9				2.80	
EPA 300.0 Rev. 2.1	Chloride	99.6	103	106		3.09	
	Sulfate	103	103	97.8		2.12	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	97.2	96.8			0.345
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.5	101	102			0.844
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102	100	102			0.990
EPA 365.1 Rev. 2.0	Total-P	102	104	101			1.69
EPA 8270E	Aldrin	54.1	46.5	37.1			22.4
	Alpha-BHC	95.4	93.3	91.0			2.48
	Alpha-Chlordane	65.2	55.2	53.6			2.93
	Beta-BHC	93.2	138	111			21.1
	Beta-Cyfluthrin	63.6	57.3	56.3			1.64
	Bifenthrin	41.5	42.4	56.7			28.9
	Chlorothalonil	114	144	60.0			82.4
	Cis-Nonachlor	69.3	53.9	49.5			8.65
	Cypermethrin	60.9	54.7	55.0			0.479
	Dacthal	96.7	139	108			25.1
	DDD-p,p'	73.0	64.3	60.9			5.37
	DDE-p,p'	66.9	58.2	56.6			2.76
	DDT-p,p'	80.1	68.7	67.7			1.05
	Delta-BHC	111	141	99.5			34.8
	Deltamethrin	58.9	59.3	48.3			20.6
	Dichlobenil	69.6	81.6	76.6			6.29
	Dicofol	109	98.8	70.0			34.1
	Dieldrin	72.1	61.0	60.7			0.411
	Endosulfan I	78.5	63.6	57.4			10.2
	Endosulfan II	75.4	63.8	62.6			1.79
	Endosulfan Sulfate	96.3	73.7	58.8			22.6
	Endrin	72.4	64.2	61.5			4.28
	Endrin Aldehyde	34.1	82.3	63.4			26.0
	Endrin Ketone	90.2	107	124			14.9
	Esfenvalerate	66.3	58.3	53.5			8.55
	Ethalfuralin	74.7	59.8	62.5			4.39
	Fenpropathrin	56.0	55.1	63.3			13.8
	Gamma-BHC	113	121	90.9			28.6
	Gamma-Chlordane	68.9	59.0	56.6			4.10
	Heptachlor	79.0	66.0	52.7			22.5
	Heptachlor Epoxide	86.4	112	93.0			19.0
	Hexachlorobenzene	52.8	44.0	46.6			5.88
	Kepone	144	128	73.0			54.3
	Lambda-Cyhalothrin	47.3	70.0	82.7			16.7
	Methoprene	48.7	57.1	62.5			9.11
	Methoxychlor	76.6	73.7	69.1			6.39
	MGK-264	73.4	115	89.8			24.8
	Mirex	51.2	44.4	40.6			8.92
	Oxychlordane	72.3	67.9	70.8			4.28
	PCB-1016	73.7	75.1	74.4			0.972
	PCB-1260	78.2	70.6	75.2			6.41
	Permethrin	53.5	52.8	63.1			17.7
	Phenothrin	30.3	38.4	47.0			20.0
	Piperonyl Butoxide	82.6	97.6	87.5			10.9
	Prallethrin	62.0	59.7	50.4			16.8
	Tau-Fluvalinate	54.2	50.7	52.8			4.03

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	Tetramethrin	51.2	59.5	60.9		2.35
	Trans-Nonachlor	66.5	52.7	55.0		4.28
	Triclosan Methyl	77.3	63.0	59.4		5.78
	Trifluralin	76.2	70.2	64.8		8.03
EPA 8276	Chlordane	90.9	74.5	78.3		4.96
	Toxaphene	95.5	81.3	93.4		13.9
EPA 8321B	2,4-D	84.3	89.6	105		10.8
	2,4,5-T	89.3	108	106		1.89
	Acesulfame K	99.3	76.9	77.8		1.13
	Acetaminophen	82.7	92.6	101		9.13
	Acetamiprid	70.0	65.4	65.7		0.421
	Afidopyropen	62.5	80.0	79.9		0.122
	AMPA	104	71.7	72.7		1.43
	Bentazon	120				7.23
	Benzovindiflupyr	76.4	73.1	84.9		14.9
	Carbamazepine	76.1	68.2	75.8		9.16
	Clothianidin	80.8	89.1	99.6		11.2
	Dinotefuran	88.8	62.8	68.7		8.29
	Diuron	75.8	63.0	77.6		19.3
	Endothall	80.0	73.2	75.2		2.76
	Fenuron	81.6	52.6	61.5		15.6
	Fluridone	77.1				4.86
	Glufosinate	105	68.2	72.2		5.74
	Glyphosate	122	79.6	67.2		16.8
	Hydrocodone	86.6	52.1	59.1		12.7
	Ibuprofen	75.7	62.2	54.0		14.3
	Imazapyr	83.8				10.6
	Imidacloprid	80.5	109	119		7.49
	Linuron	75.8	65.4	69.8		6.55
	Mandestrobin	75.4	72.6	83.7		14.2
	MCPP	96.5	103	120		14.4
	Naproxen	74.1	64.6	84.8		27.1
	Primidone	83.1	83.4	90.5		8.15
	Pyraclostrobin	76.6	77.6	80.8		4.03
	Silvex	100	109	115		5.04
	Sucralose	96.1	81.1	89.4		8.35
	Thiamethoxam	82.9	75.5	88.2		15.5
	Tolfenpyrad	53.6	49.5	55.9		12.3
	Triclopyr	82.2	114	98.9		14.0
SM 2320 B-2011	Total Alkalinity	99.3			2.41	
SM 2540 C-2015	TDS	97.1			0.560	
SM 2540 D-2015	TSS	94.3				
SM 4500-F- C-2011	Fluoride	99.0				0.945
SM 5310 B-2011	Organic Carbon	94.6	94.1	95.6		1.06

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2409060
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2409060
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2409060
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2409060
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2409061

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2409061
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2409061
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2409061
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2409066
EPA 8270E	PCBs in water matrices by GC/MS/MS	2409066
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2409066
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2409067
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2409060
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2409060
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2409060
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2409060
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2409061

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	05/11/2023			05/11/2023 14:36	Samantha L Bates	2409060
EPA 180.1 Rev. 2.0	05/11/2023			05/11/2023 14:24	Anna M. Plaviak	2409060
EPA 300.0 Rev. 2.1	05/11/2023			05/17/2023 22:15	James L Waggeberby	2409060
	05/11/2023			05/19/2023 00:19	James L Waggeberby	2409060
EPA 350.1 Rev. 2.0	05/11/2023			05/18/2023 15:27	Ping Hua	2409061
EPA 351.2 Rev. 2.0	05/11/2023	05/19/2023 08:44	Samantha L Bates	05/22/2023 16:47	Samantha L Bates	2409061
EPA 353.2 Rev. 2.0	05/11/2023			05/18/2023 11:30	Anna M. Plaviak	2409061
EPA 365.1 Rev. 2.0	05/11/2023	05/15/2023 14:57	Adam P Silver	05/16/2023 13:26	James L Waggeberby	2409061
EPA 8270E	05/11/2023	05/15/2023 08:00	Fe-Val Siddell	05/18/2023 21:32	Vandana T. Nagar	2409066
	05/11/2023	05/15/2023 08:00	Fe-Val Siddell	05/18/2023 22:54	Michael Poppell	2409066
EPA 8276	05/11/2023	05/15/2023 08:00	Fe-Val Siddell	05/19/2023 12:05	Arthur Maknenko	2409066
EPA 8321B	05/11/2023	05/12/2023 12:00	Manjita Shrestha	05/12/2023 20:09	Manjita Shrestha	2409067
	05/11/2023	05/12/2023 12:00	Manjita Shrestha	05/14/2023 00:18	Manjita Shrestha	2409067
	05/11/2023	05/17/2023 08:30	Hoor Shaik	05/17/2023 17:26	Juyoung Kim	2409067
SM 2320 B-2011	05/11/2023			05/19/2023 07:38	Dale L. Simmons	2409060
SM 2540 C-2015	05/11/2023			05/12/2023 13:06	Dana G. Hughes	2409060
SM 2540 D-2015	05/11/2023			05/12/2023 13:06	Dana G. Hughes	2409060
SM 4500-F- C-2011	05/11/2023			05/27/2023 04:42	Dale L. Simmons	2409060
SM 5310 B-2011	05/11/2023			05/16/2023 03:44	Elise M. Gillis	2409061