Chemical Analysis Report

NE-DIST-2023-01-10-01

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

Event Description: **LSJR South West 2023**
Request ID: **RQ-2023-01-16-13**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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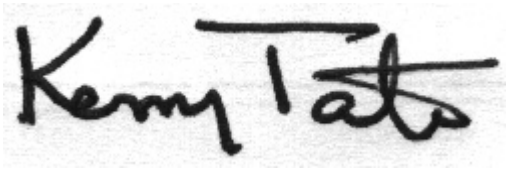
Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 30-JAN-2023 09:43



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: Swimming Pen Creek at Eagles Creek Dr. **Collection Date/Time: 01/09/2023 10:20**

Field ID: G2NE1188 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378952	EPA 8321B	2,4-D	0.011		ug/L	P424452	
		Acesulfame K	0.10	U	ug/L	P424336	
		2,4,5-T	0.0040	U	ug/L	P424452	
		AMPA	0.30	I	ug/L	P424336	
		Acetaminophen	0.0080	U	ug/L	P424452	
		Acetamiprid	0.0020	U	ug/L	P424452	
		Endothall	0.25	U	ug/L	P424336	
		Glufosinate	0.10	U	ug/L	P424336	
		Glyphosate	0.10	U	ug/L	P424336	
		Afidopyropen	0.0020	U	ug/L	P424452	
		Bentazon	0.092		ug/L	P424452	
		Sucralose	3.1		ug/L	P424336	
		Benzovindiflupyr	0.0020	U	ug/L	P424452	
		Carbamazepine	8.0E-04	U	ug/L	P424452	
		Clothianidin	0.0042	I	ug/L	P424452	
		Dinotefuran	0.0020	U	ug/L	P424452	
		Diuron	0.0022	I	ug/L	P424452	
		Fenuron	0.032	U	ug/L	P424452	
		Fluridone	0.0090		ug/L	P424452	
		Imazapyr	0.29		ug/L	P424452	
		Hydrocodone	0.0020	U	ug/L	P424452	
		Ibuprofen	0.080	U	ug/L	P424452	
		Imidacloprid	0.013	J	ug/L	P424452	MS
		Linuron	0.0040	U	ug/L	P424452	
		Mandestrobin	0.0020	U	ug/L	P424452	
		MCPP	0.0020	U	ug/L	P424452	
		Naproxen	0.0080	U	ug/L	P424452	
		Primidone	0.0087	I	ug/L	P424452	
		Pyraclostrobin	0.0020	U	ug/L	P424452	
		Silvex	0.0040	U	ug/L	P424452	
		Thiamethoxam	0.0073	I	ug/L	P424452	
		Tolfenpyrad	0.0020	U	ug/L	P424452	
		Triclopyr	0.0040	U	ug/L	P424452	

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. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: LITTLE BLACK CREEK AT SR 220 **Collection Date/Time: 01/09/2023 10:55**

Field ID: 20030667 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378945	EPA 8270E	Aldrin	0.67	U	ng/L	P424351	
		Alpha-BHC	0.10	U	ng/L	P424351	
		Alpha-Chlordane	0.20	U	ng/L	P424351	
		PCB-1016	2.0	U	ng/L	P424351	
		Beta-BHC	0.10	U	ng/L	P424351	
		PCB-1221	2.0	U	ng/L	P424351	
		Beta-Cyfluthrin	1.3	U	ng/L	P424351	
		PCB-1232	2.0	U	ng/L	P424351	
		Bifenthrin	0.51	U	ng/L	P424351	
		PCB-1242	2.0	U	ng/L	P424351	
		PCB-1248	2.0	U	ng/L	P424351	
		Chlorothalonil	3.7	U	ng/L	P424351	
		PCB-1254	2.0	U	ng/L	P424351	
		Cis-Nonachlor	0.20	U	ng/L	P424351	
		PCB-1260	2.0	U	ng/L	P424351	
		Cypermethrin	1.5	U	ng/L	P424351	
		Dacthal	0.15	U	ng/L	P424351	
		DDD-p,p'	0.26	U	ng/L	P424351	
		DDE-p,p'	0.20	U	ng/L	P424351	
		DDT-p,p'	0.26	U	ng/L	P424351	
		Delta-BHC	0.41	U	ng/L	P424351	
		Deltamethrin	1.3	U	ng/L	P424351	
		Dichlobenil	0.26	U	ng/L	P424351	
		Dicofol	1.3	U	ng/L	P424351	
		Dieldrin	0.41	U	ng/L	P424351	
		Endosulfan I	0.41	U	ng/L	P424351	
		Endosulfan II	0.41	U	ng/L	P424351	
		Endosulfan Sulfate	0.31	U	ng/L	P424351	
		Endrin	0.41	U	ng/L	P424351	
		Endrin Aldehyde	0.77	U	ng/L	P424351	
		Endrin Ketone	0.41	U	ng/L	P424351	
		Esfenvalerate	0.77	U	ng/L	P424351	
		Ethalfluralin	0.15	U	ng/L	P424351	
		Fenpropathrin	0.26	U	ng/L	P424351	
		Gamma-BHC	0.13	U	ng/L	P424351	
		Gamma-Chlordane	0.20	U	ng/L	P424351	
		Heptachlor	0.20	U	ng/L	P424351	
		Heptachlor Epoxide	0.26	U	ng/L	P424351	
		Hexachlorobenzene**	1.0	U	ng/L	P424351	
		Kepone	5.1	UJ	ng/L	P424351	CCV
		Lambda-Cyhalothrin	0.77	U	ng/L	P424351	
		Methoprene	0.77	U	ng/L	P424351	
		Methoxychlor	0.31	U	ng/L	P424351	
		MGK-264	0.20	U	ng/L	P424351	

Field ID: 20030667 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378945	EPA 8270E	Mirex	0.36	U	ng/L	P424351	
		Oxychlordane	0.31	U	ng/L	P424351	
		Permethrin	1.6	U	ng/L	P424351	
		Phenothrin	0.92	U	ng/L	P424351	
		Piperonyl Butoxide	0.15	U	ng/L	P424351	
		Prallethrin	2.0	U	ng/L	P424351	
		Tau-Fluvalinate	0.26	U	ng/L	P424351	
		Tetramethrin	0.77	U	ng/L	P424351	
		Trans-Nonachlor	0.20	U	ng/L	P424351	
		Triclosan Methyl	0.15	U	ng/L	P424351	
		Trifluralin	0.20	U	ng/L	P424351	
	EPA 8276	Chlordane	2.0	U	ng/L	P424351	
		Toxaphene	15	U	ng/L	P424351	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Black CR South Fork @ CR218 **Collection Date/Time: 01/09/2023 12:00**

Field ID: 20030244 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378937	DEP SOP: NU-094-1	Color (true)	150		PCU	P424355	
	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P424361	
	EPA 300.0 Rev. 2.1	Chloride	9.7		mg Cl/L	P424534	
		Sulfate	3.1		mg SO4/L	P424537	
	SM 2320 B-2011	Total Alkalinity	8.8		mg CaCO3/L	P424597	
	SM 2540 C-2015	TDS	66		mg/L	P424910	
	SM 2540 D-2015	TSS	2	I	mg/L	P424819	
	SM 4500-F- C-2011	Fluoride	0.074	I	mg F/L	P424473	
2378938	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P424699	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P424936	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P424526	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P424379	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P424444	
2378951	EPA 8321B	2,4-D	0.0020	U	ug/L	P424452	
		Acesulfame K	0.10	U	ug/L	P424336	
		2,4,5-T	0.0040	U	ug/L	P424452	
		AMPA	0.10	U	ug/L	P424336	
		Acetaminophen	0.0080	U	ug/L	P424452	
		Acetamiprid	0.0020	U	ug/L	P424452	
		Endothall	0.25	U	ug/L	P424336	
		Glufosinate	0.10	U	ug/L	P424336	
		Glyphosate	0.10	U	ug/L	P424336	
		Afidopyropen	0.0020	U	ug/L	P424452	
		Bentazon	8.0E-04	U	ug/L	P424452	
		Sucralose	0.16		ug/L	P424336	
		Benzovindiflupyr	0.0020	U	ug/L	P424452	
		Carbamazepine	8.0E-04	U	ug/L	P424452	
		Clothianidin	0.0020	U	ug/L	P424452	
		Dinotefuran	0.0020	U	ug/L	P424452	
		Diuron	0.0020	U	ug/L	P424452	
		Fenuron	0.032	U	ug/L	P424452	
		Fluridone	8.0E-04	U	ug/L	P424452	
		Imazapyr	0.025		ug/L	P424452	
		Hydrocodone	0.0020	U	ug/L	P424452	
		Ibuprofen	0.080	U	ug/L	P424452	
		Imidacloprid	0.0020	U	ug/L	P424452	MS
		Linuron	0.0040	U	ug/L	P424452	
		Mandestrobin	0.0020	U	ug/L	P424452	
		MCPP	0.0020	U	ug/L	P424452	
		Naproxen	0.0080	U	ug/L	P424452	
		Primidone	0.0040	U	ug/L	P424452	
		Pyraclostrobin	0.0020	U	ug/L	P424452	
		Silvex	0.0040	U	ug/L	P424452	
		Thiamethoxam	0.0020	U	ug/L	P424452	

Field ID: 20030244 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378951	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P424452	
		Triclopyr	0.0040	U	ug/L	P424452	

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.
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: P424355

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424361

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424534

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424537

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424699

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424936

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424526

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424379

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

Reference Method: EPA 8270E
Batch ID: P424351

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: P424351

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'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	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
Ethalfluralin	0.15	U	ng/L
Ethalfluralin	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: P424351

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	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
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: P424351

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

Reference Method: EPA 8276
Batch ID: P424351

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: P424336

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: P424452

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: P424452

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

Reference Method: SM 2320 B-2011
Batch ID: P424597

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

Reference Method: SM 2540 C-2015
Batch ID: P424910

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P424819

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P424473

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P424444

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: P424355

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424361

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424534

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424537

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424699

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424936

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424526

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	106		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424379

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

Reference Method: EPA 8270E
Batch ID: P424351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	48.3		P	10 - 92.0
Alpha-BHC	78.8		P	75 - 107
Alpha-Chlordane	67.3		P	50 - 108
Beta-BHC	88.8		P	36 - 138

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P424351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	49.3		P	20 - 161
Bifenthrin	29.6		P	10 - 119
Chlorothalonil	94.1		P	26 - 186
Cis-Nonachlor	58.7		P	42 - 119
Cypermethrin	48.8		P	22 - 150
Dacthal	80.5		P	72 - 119
DDD-p,p'	64.1		P	45 - 107
DDE-p,p'	61.1		P	48 - 106
DDT-p,p'	54.6		P	48 - 110
Delta-BHC	100		P	54 - 140
Deltamethrin	64.1		P	22 - 189
Dichlobenil	81.1		P	36 - 117
Dicofol	63.9		P	46 - 155
Dieldrin	66.0		P	54 - 110
Endosulfan I	72.0		P	59 - 105
Endosulfan II	80.7		P	51 - 118
Endosulfan Sulfate	91.0		P	57 - 121
Endrin	69.5		P	10 - 120
Endrin Aldehyde	71.6		P	34 - 118
Endrin Ketone	76.4		P	69 - 177
Esfenvalerate	52.0		P	23 - 168
Ethalfluralin	57.4		P	49 - 99.0
Fenpropathrin	42.0		P	34 - 117
Gamma-BHC	88.1		P	72 - 117
Gamma-Chlordane	60.9		P	43 - 106
Heptachlor	62.9		P	41 - 98.0
Heptachlor Epoxide	76.8		P	57 - 106
Hexachlorobenzene	57.5		P	36 - 99.0
Kepone	143		P	16 - 215
Lambda-Cyhalothrin	37.7		P	21 - 177
Methoprene	40.7		P	10 - 119
Methoxychlor	69.5		P	60 - 112
MGK-264	89.6		P	26 - 122
Mirex	47.4		P	10 - 169
Oxychlordane	70.1		P	43 - 105
PCB-1016	73.6		P	48 - 112
PCB-1260	70.9		P	44 - 118
Permethrin	43.8		P	24 - 148
Phenothrin	20.9		P	10 - 106
Piperonyl Butoxide	86.4		P	10 - 139
Prallethrin	77.8		P	17 - 109
Tau-Fluvalinate	44.0		P	13 - 131
Tetramethrin	79.0		P	10 - 132
Trans-Nonachlor	66.3		P	44 - 106
Triclosan Methyl	65.0		P	59 - 109
Trifluralin	58.6		P	44 - 101

Reference Method: EPA 8276
Batch ID: P424351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	86.9		P	61 - 116

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P424351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	94.7		P	48 - 124

Reference Method: EPA 8321B
Batch ID: P424336

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	107		P	40 - 150
Endothall	123		P	40 - 150
Glufosinate	126		P	40 - 150
Glyphosate	105		P	40 - 150
Sucralose	107		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424452

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	40 - 150
2,4,5-T	84.4		P	40 - 150
Acetaminophen	88.7		P	30 - 150
Acetamiprid	98.6		P	40 - 150
Afidopyropen	73.3		P	30 - 150
Bentazon	85.6		P	30 - 150
Benzovindiflupyr	92.3		P	40 - 150
Carbamazepine	83.0		P	40 - 150
Clothianidin	98.6		P	40 - 150
Dinotefuran	98.0		P	40 - 150
Diuron	89.9		P	40 - 150
Fenuron	108		P	40 - 150
Fluridone	98.1		P	40 - 150
Hydrocodone	94.3		P	40 - 150
Ibuprofen	108		P	40 - 150
Imazapyr	93.9		P	40 - 150
Imidacloprid	103		P	40 - 150
Linuron	74.5		P	40 - 150
Mandestrobin	107		P	40 - 150
MCPP	105		P	40 - 150
Naproxen	86.8		P	40 - 150
Primidone	95.2		P	40 - 150
Pyraclostrobin	70.5		P	40 - 150
Silvex	82.8		P	40 - 150
Thiamethoxam	96.9		P	40 - 150
Tolfenpyrad	33.5		P	30 - 150
Triclopyr	84.6		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P424597

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	94 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P424910

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

Reference Method: SM 2540 D-2015
Batch ID: P424819

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	98.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P424473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P424444

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.6		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424534

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378987	Chloride	98.8		P	90 - 110
2378988	Chloride	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424537

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378987	Sulfate	99.0		P	90 - 110
2378988	Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424699

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2379718	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424936

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378990	Kjeldahl Nitrogen	97.0	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378763	NO2NO3-N	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424379

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378778	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P424351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378767	Aldrin	49.4	49.6	P/P	20 - 82.0
2378767	Alpha-BHC	81.8	80.7	P/P	71 - 109
2378767	Alpha-Chlordane	78.8	79.8	P/P	42 - 106
2378767	Beta-BHC	83.6	91.9	P/P	69 - 180
2378767	Beta-Cyfluthrin	84.5	86.9	P/P	18 - 175
2378767	Bifenthrin	57.1	62.2	P/P	21 - 128
2378767	Chlorothalonil	166	171	P/P	10 - 300
2378767	Cis-Nonachlor	65.2	75.5	P/P	34 - 106
2378767	Cypermethrin	86.8	81.2	P/P	22 - 158
2378767	Dacthal	78.2	78.0	P/P	54 - 116
2378767	DDD-p,p'	63.5	82.0	P/P	34 - 107
2378767	DDE-p,p'	65.8	70.9	P/P	33 - 110
2378767	DDT-p,p'	62.8	63.9	P/P	50 - 122
2378767	Delta-BHC	106	108	P/P	77 - 193

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P424351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378767	Deltamethrin	124	132	P/P	10 - 195
2378767	Dichlobenil	45.3	47.5	P/P	25 - 113
2378767	Dicofol	76.7	79.7	P/P	38 - 247
2378767	Dieldrin	62.9	68.7	P/P	45 - 118
2378767	Endosulfan I	72.6	71.2	P/P	51 - 106
2378767	Endosulfan II	84.4	84.8	P/P	37 - 122
2378767	Endosulfan Sulfate	87.8	89.6	P/P	43 - 132
2378767	Endrin	77.4	85.3	P/P	29 - 101
2378767	Endrin Aldehyde	61.4	63.6	P/P	19 - 110
2378767	Endrin Ketone	72.0	71.2	P/P	60 - 140
2378767	Esfenvalerate	109	111	P/P	26 - 199
2378767	Ethalfluralin	62.7	62.2	P/P	45 - 99.0
2378767	Fenpropathrin	57.5	66.0	P/P	35 - 120
2378767	Gamma-BHC	73.2	67.5	P/P	63 - 128
2378767	Gamma-Chlordane	72.9	76.9	P/P	40 - 104
2378767	Heptachlor	68.5	57.8	P/P	36 - 97.0
2378767	Heptachlor Epoxide	78.6	71.1	P/P	49 - 184
2378767	Hexachlorobenzene	57.2	60.8	P/P	39 - 96.0
2378767	Kepone	136	126	P/P	10 - 217
2378767	Lambda-Cyhalothrin	73.4	69.7	P/P	21 - 193
2378767	Methoprene	89.6	84.5	P/P	20 - 106
2378767	Methoxychlor	79.8	84.8	P/P	53 - 118
2378767	MGK-264	94.2	88.1	P/P	40 - 118
2378767	Mirex	52.0	49.1	P/P	26 - 92.0
2378767	Oxychlordane	76.2	67.4	P/P	44 - 99.0
2378767	Permethrin	74.1	73.5	P/P	33 - 182
2378767	Phenothrin	36.0	37.4	P/P	10 - 129
2378767	Piperonyl Butoxide	83.7	97.5	P/P	10 - 211
2378767	Prallethrin	104	109	P/P	24 - 113
2378767	Tau-Fluvalinate	94.1	103	P/P	14 - 149
2378767	Tetramethrin	92.0	95.9	P/P	17 - 151
2378767	Trans-Nonachlor	72.4	67.2	P/P	42 - 102
2378767	Triclosan Methyl	71.7	76.9	P/P	48 - 108
2378767	Trifluralin	63.2	68.0	P/P	47 - 96.0
2378945	PCB-1016	76.3	76.6	P/P	46 - 111
2378945	PCB-1260	74.3	72.7	P/P	45 - 114

Reference Method: EPA 8276
Batch ID: P424351

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378945	Chlordane	74.3	76.1	P/P	53 - 126
2378945	Toxaphene	128	112	P/P	56 - 211

Reference Method: EPA 8321B
Batch ID: P424336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378951	Acesulfame K	96.0	99.2	P/P	40 - 150
2378951	AMPA	106	113	P/P	40 - 150
2378951	Endothall	128	127	P/P	40 - 150
2378951	Glufosinate	108	122	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P424336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378951	Glyphosate	104	105	P/P	40 - 150
2378951	Sucralose	97.8	91.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378952	2,4-D	91.6	106	P/P	40 - 150
2378952	2,4,5-T	100	99.6	P/P	40 - 150
2378952	Acetaminophen	97.6	94.5	P/P	30 - 150
2378952	Acetamiprid	77.5	88.5	P/P	40 - 150
2378952	Afidopyropen	78.2	95.4	P/P	30 - 150
2378952	Benzovindiflupyr	90.0	92.5	P/P	40 - 150
2378952	Carbamazepine	61.0	63.5	P/P	40 - 150
2378952	Clothianidin	97.3	100	P/P	40 - 150
2378952	Dinotefuran	91.6	93.7	P/P	40 - 150
2378952	Diuron	58.1	58.8	P/P	40 - 150
2378952	Fenuron	72.6	75.5	P/P	40 - 150
2378952	Fluridone	91.7	83.9	P/P	40 - 150
2378952	Hydrocodone	81.4	82.5	P/P	40 - 150
2378952	Ibuprofen	81.5	89.5	P/P	40 - 150
2378952	Imidacloprid	145	154	P/F	40 - 150
2378952	Linuron	62.0	59.6	P/P	40 - 150
2378952	Mandestrobin	94.9	97.3	P/P	40 - 150
2378952	MCPP	117	114	P/P	40 - 150
2378952	Naproxen	82.3	79.4	P/P	40 - 150
2378952	Primidone	99.6	98.4	P/P	40 - 150
2378952	Pyraclostrobin	75.4	79.6	P/P	40 - 150
2378952	Silvex	78.3	84.8	P/P	40 - 150
2378952	Thiamethoxam	96.3	97.3	P/P	40 - 150
2378952	Tolfenpyrad	49.6	49.0	P/P	30 - 150
2378952	Triclopyr	101	109	P/P	40 - 150

Reference Method: SM 5310 B-2011
Batch ID: P424444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378779	Organic Carbon	97.8	97.5	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378776	Color (true)	0.830	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378775	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378987	Chloride	0.821	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424537

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378987	Sulfate	1.65	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2379718	Ammonia-N	0.700	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424936

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378990	Kjeldahl Nitrogen	2.06	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378763	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424379

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378778	Total-P	0.561	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 8270E
Batch ID: P424351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378767	Aldrin	0.293	Spike	P	0 - 41
2378767	Alpha-BHC	1.45	Spike	P	0 - 25
2378767	Alpha-Chlordane	1.20	Spike	P	0 - 33
2378767	Beta-BHC	9.39	Spike	P	0 - 36
2378767	Beta-Cyfluthrin	2.88	Spike	P	0 - 42
2378767	Bifenthrin	8.43	Spike	P	0 - 53
2378767	Chlorothalonil	3.20	Spike	P	0 - 71
2378767	Cis-Nonachlor	14.6	Spike	P	0 - 29
2378767	Cypermethrin	6.69	Spike	P	0 - 40
2378767	Dacthal	0.266	Spike	P	0 - 26
2378767	DDD-p,p'	25.4	Spike	P	0 - 39
2378767	DDE-p,p'	7.50	Spike	P	0 - 33
2378767	DDT-p,p'	1.77	Spike	P	0 - 40
2378767	Delta-BHC	2.31	Spike	P	0 - 37
2378767	Deltamethrin	6.50	Spike	P	0 - 100
2378767	Dichlobenil	4.62	Spike	P	0 - 40
2378767	Dicofol	3.83	Spike	P	0 - 31
2378767	Dieldrin	7.47	Spike	P	0 - 27
2378767	Endosulfan I	1.95	Spike	P	0 - 23
2378767	Endosulfan II	0.456	Spike	P	0 - 28
2378767	Endosulfan Sulfate	2.00	Spike	P	0 - 38
2378767	Endrin	9.74	Spike	P	0 - 63
2378767	Endrin Aldehyde	3.52	Spike	P	0 - 60
2378767	Endrin Ketone	1.17	Spike	P	0 - 37
2378767	Esfenvalerate	1.70	Spike	P	0 - 52
2378767	Ethalfluralin	0.796	Spike	P	0 - 23
2378767	Fenpropathrin	13.7	Spike	P	0 - 32
2378767	Gamma-BHC	8.18	Spike	P	0 - 17
2378767	Gamma-Chlordane	5.30	Spike	P	0 - 40
2378767	Heptachlor	17.0	Spike	P	0 - 29
2378767	Heptachlor Epoxide	10.1	Spike	P	0 - 25
2378767	Hexachlorobenzene	6.16	Spike	P	0 - 36
2378767	Kepone	7.77	Spike	P	0 - 93
2378767	Lambda-Cyhalothrin	5.07	Spike	P	0 - 55
2378767	Methoprene	5.92	Spike	P	0 - 53
2378767	Methoxychlor	6.01	Spike	P	0 - 29
2378767	MGK-264	6.73	Spike	P	0 - 35
2378767	Mirex	5.69	Spike	P	0 - 46
2378767	Oxychlordane	12.2	Spike	P	0 - 29
2378767	Permethrin	0.874	Spike	P	0 - 44
2378767	Phenothrin	3.90	Spike	P	0 - 56
2378767	Piperonyl Butoxide	15.3	Spike	P	0 - 100
2378767	Prallethrin	4.37	Spike	P	0 - 42
2378767	Tau-Fluvalinate	8.71	Spike	P	0 - 54
2378767	Tetramethrin	4.21	Spike	P	0 - 51
2378767	Trans-Nonachlor	7.47	Spike	P	0 - 37
2378767	Triclosan Methyl	7.08	Spike	P	0 - 31
2378767	Trifluralin	7.30	Spike	P	0 - 30
2378945	PCB-1016	0.405	Spike	P	0 - 32
2378945	PCB-1260	2.14	Spike	P	0 - 31

Quality Assurance Report
Precision

Reference Method: EPA 8276
Batch ID: P424351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378945	Chlordane	2.32	Spike	P	0 - 25
2378945	Toxaphene	13.9	Spike	P	0 - 26

Reference Method: EPA 8321B
Batch ID: P424336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378951	Acesulfame K	3.32	Spike	P	0 - 30
2378951	AMPA	6.64	Spike	P	0 - 30
2378951	Endothall	1.07	Spike	P	0 - 30
2378951	Glufosinate	12.0	Spike	P	0 - 30
2378951	Glyphosate	1.09	Spike	P	0 - 30
2378951	Sucralose	6.14	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P424452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378952	2,4-D	12.9	Spike	P	0 - 30
2378952	2,4,5-T	0.720	Spike	P	0 - 30
2378952	Acetaminophen	3.23	Spike	P	0 - 30
2378952	Acetamiprid	13.2	Spike	P	0 - 30
2378952	Afidopyropen	19.8	Spike	P	0 - 30
2378952	Bentazon	12.3	Spike	P	0 - 30
2378952	Benzovindiflupyr	2.71	Spike	P	0 - 30
2378952	Carbamazepine	3.99	Spike	P	0 - 30
2378952	Clothianidin	2.87	Spike	P	0 - 30
2378952	Dinotefuran	2.29	Spike	P	0 - 30
2378952	Diuron	1.12	Spike	P	0 - 30
2378952	Fenuron	4.03	Spike	P	0 - 30
2378952	Fluridone	5.90	Spike	P	0 - 30
2378952	Hydrocodone	1.27	Spike	P	0 - 30
2378952	Ibuprofen	9.38	Spike	P	0 - 30
2378952	Imazapyr	0.581	Spike	P	0 - 30
2378952	Imidacloprid	4.99	Spike	P	0 - 30
2378952	Linuron	3.99	Spike	P	0 - 30
2378952	Mandestrobin	2.50	Spike	P	0 - 30
2378952	MCPP	3.17	Spike	P	0 - 30
2378952	Naproxen	3.55	Spike	P	0 - 30
2378952	Primidone	1.13	Spike	P	0 - 30
2378952	Pyraclostrobin	5.42	Spike	P	0 - 30
2378952	Silvex	7.89	Spike	P	0 - 30
2378952	Thiamethoxam	0.952	Spike	P	0 - 30
2378952	Tolfenpyrad	1.33	Spike	P	0 - 30
2378952	Triclopyr	7.52	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P424597

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378716	Total Alkalinity	1.49	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P424910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378760	TDS	0.342	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P424473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378640	Fluoride	0.999	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P424444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378779	Organic Carbon	0.200	Spike	P	0 - 20

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2378945
Field Sample ID: 20030667

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	78.6	P	29 - 130
EPA 8270E	Decachlorobiphenyl	62.5	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	56.4	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	66.3	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	60.9	P	30 - 101
EPA 8276	PCNB	70.2	P	48 - 121

Lab Sample ID: 2378951
Field Sample ID: 20030244

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.8	P	30 - 160
EPA 8321B	Diuron-d6	62.4	P	30 - 160
EPA 8321B	Endothall-d6	124	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	107	P	30 - 160
EPA 8321B	Ibuprofen-d3	97.4	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	76.2	P	30 - 160

Lab Sample ID: 2378952
Field Sample ID: G2NE1188

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.3	P	30 - 160
EPA 8321B	Diuron-d6	52.8	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.6	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	71.6	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A116827
Included Lab Sample IDs: 2378937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A116828
Included Lab Sample IDs: 2378937

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A116833
Included Lab Sample IDs: 2378937

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

Reference Method: SM 5310 B-2011
Run ID: A116855
Included Lab Sample IDs: 2378938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.6	98.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A116866
Included Lab Sample IDs: 2378937

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A116870
Included Lab Sample IDs: 2378938

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A116885
Included Lab Sample IDs: 2378938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A116897
Included Lab Sample IDs: 2378951, 2378952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	113	108	P/P	60 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A116897
Included Lab Sample IDs: 2378951, 2378952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endothall	115	104	P/P	60 - 160
Glufosinate	112	93.8	P/P	60 - 160
Glyphosate	93.9	86.2	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A116916
Included Lab Sample IDs: 2378937

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.2	95.7	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A116918
Included Lab Sample IDs: 2378951, 2378952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	98.1	103	P/P	50 - 150
2,4,5-T	109	124	P/P	50 - 150
Acetaminophen	110	115	P/P	60 - 160
Acetamiprid	118	139	P/P	50 - 150
Afidopyropen	114	138	P/P	50 - 150
Bentazon	102	111	P/P	50 - 160
Benzovindiflupyr	119	123	P/P	50 - 150
Carbamazepine	107	115	P/P	60 - 150
Clothianidin	116	120	P/P	60 - 150
Dinotefuran	110	114	P/P	50 - 150
Diuron	111	144	P/P	60 - 160
Fenuron	108	115	P/P	60 - 150
Fluridone	109	123	P/P	60 - 160
Hydrocodone	116	119	P/P	60 - 150
Ibuprofen	124	123	P/P	50 - 160
Imazapyr	104	108	P/P	50 - 150
Imidacloprid	105	122	P/P	60 - 150
Linuron	102	108	P/P	60 - 150
Mandestrobin	115	136	P/P	50 - 150
MCPP	89.4	113	P/P	50 - 150
Naproxen	102	146	P/P	50 - 160
Primidone	105	107	P/P	60 - 150
Pyraclostrobin	102	115	P/P	60 - 150
Silvex	101	117	P/P	50 - 150
Thiamethoxam	116	128	P/P	50 - 150
Tolfenpyrad	109	109	P/P	60 - 150
Triclopyr	100	102	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A116935
Included Lab Sample IDs: 2378952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	104	103	P/P	50 - 160

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270E
Run ID: A116942
Included Lab Sample IDs: 2378945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	99.0		P	80 - 120
Alpha-Chlordane	92.6		P	80 - 120
Beta-BHC	95.0		P	80 - 120
Beta-Cyfluthrin	95.5		P	80 - 120
Bifenthrin	104		P	80 - 120
Chlorothalonil	98.7		P	80 - 120
Cis-Nonachlor	107		P	80 - 120
Cypermethrin	106		P	80 - 120
Dacthal	108		P	80 - 120
DDD-p,p'	97.9		P	80 - 120
DDE-p,p'	95.7		P	80 - 120
DDT-p,p'	98.1		P	80 - 120
Delta-BHC	99.9		P	80 - 120
Deltamethrin	96.7		P	80 - 120
Dichlobenil	91.5		P	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	95.0		P	80 - 120
Endosulfan I	104		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	97.0		P	80 - 120
Endrin	93.8		P	80 - 120
Endrin Aldehyde	103		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	93.0		P	80 - 120
Ethalfluralin	102		P	80 - 120
Fenpropathrin	105		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	107		P	80 - 120
Heptachlor Epoxide	108		P	80 - 120
Hexachlorobenzene	93.8		P	80 - 120
Kepone	78.4*		F	80 - 120
Lambda-Cyhalothrin	110		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	105		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	108		P	80 - 120
Oxychlordane	109		P	80 - 120
Permethrin	94.3		P	80 - 120
Phenothrin	101		P	80 - 120
Piperonyl Butoxide	94.1		P	80 - 120
Prallethrin	101		P	80 - 120
Tau-Fluvalinate	94.5		P	80 - 120
Tetramethrin	94.7		P	80 - 120
Trans-Nonachlor	106		P	80 - 120
Triclosan Methyl	99.0		P	80 - 120
Trifluralin	106		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A116950
Included Lab Sample IDs: 2378951, 2378952

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.9	84.8	P/P	60 - 160
Sucralose	107	89.9	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A116961
Included Lab Sample IDs: 2378938

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.9	98.9	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A116971
Included Lab Sample IDs: 2378945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	105		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8270E
Run ID: A116982
Included Lab Sample IDs: 2378945

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.1		P	80 - 120
PCB-1260	98.5		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A117111
Included Lab Sample IDs: 2378938

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

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

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	101				0.830	
EPA 180.1 Rev. 2.0	Turbidity	100				0.0	
EPA 300.0 Rev. 2.1	Chloride	104	98.8	99.1		0.821	
	Sulfate	106	99.0	99.6		1.65	
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	101	103			0.700
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	97.0	101			2.06
EPA 353.2 Rev. 2.0	NO2NO3-N	106	107	107			0.0
EPA 365.1 Rev. 2.0	Total-P	104	105	104			0.561
EPA 8270E	Aldrin	48.3	49.4	49.6			0.293
	Alpha-BHC	78.8	81.8	80.7			1.45
	Alpha-Chlordane	67.3	78.8	79.8			1.20
	Beta-BHC	88.8	83.6	91.9			9.39
	Beta-Cyfluthrin	49.3	84.5	86.9			2.88
	Bifenthrin	29.6	57.1	62.2			8.43
	Chlorothalonil	94.1	166	171			3.20
	Cis-Nonachlor	58.7	65.2	75.5			14.6
	Cypermethrin	48.8	86.8	81.2			6.69
	Dacthal	80.5	78.2	78.0			0.266
	DDD-p,p'	64.1	63.5	82.0			25.4
	DDE-p,p'	61.1	65.8	70.9			7.50
	DDT-p,p'	54.6	62.8	63.9			1.77
	Delta-BHC	100	106	108			2.31
	Deltamethrin	64.1	124	132			6.50
	Dichlobenil	81.1	45.3	47.5			4.62
	Dicofol	63.9	76.7	79.7			3.83
	Dieldrin	66.0	62.9	68.7			7.47
	Endosulfan I	72.0	72.6	71.2			1.95
	Endosulfan II	80.7	84.4	84.8			0.456
	Endosulfan Sulfate	91.0	87.8	89.6			2.00
	Endrin	69.5	77.4	85.3			9.74
	Endrin Aldehyde	71.6	61.4	63.6			3.52
	Endrin Ketone	76.4	72.0	71.2			1.17
	Esfenvalerate	52.0	109	111			1.70
	Ethalfluralin	57.4	62.7	62.2			0.796
	Fenpropathrin	42.0	57.5	66.0			13.7
	Gamma-BHC	88.1	73.2	67.5			8.18
	Gamma-Chlordane	60.9	72.9	76.9			5.30
	Heptachlor	62.9	68.5	57.8			17.0
	Heptachlor Epoxide	76.8	78.6	71.1			10.1
	Hexachlorobenzene	57.5	57.2	60.8			6.16
	Kepone	143	136	126			7.77
	Lambda-Cyhalothrin	37.7	73.4	69.7			5.07
	Methoprene	40.7	89.6	84.5			5.92
	Methoxychlor	69.5	79.8	84.8			6.01
	MGK-264	89.6	94.2	88.1			6.73
	Mirex	47.4	52.0	49.1			5.69
	Oxychlordane	70.1	76.2	67.4			12.2
	PCB-1016	73.6	76.3	76.6			0.405
	PCB-1260	70.9	74.3	72.7			2.14
	Permethrin	43.8	74.1	73.5			0.874
	Phenothrin	20.9	36.0	37.4			3.90
	Piperonyl Butoxide	86.4	83.7	97.5			15.3
	Prallethrin	77.8	104	109			4.37
	Tau-Fluvalinate	44.0	94.1	103			8.71

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Tetramethrin	79.0	92.0	95.9			4.21
	Trans-Nonachlor	66.3	72.4	67.2			7.47
	Triclosan Methyl	65.0	71.7	76.9			7.08
	Trifluralin	58.6	63.2	68.0			7.30
EPA 8276	Chlordane	86.9	74.3	76.1			2.32
	Toxaphene	94.7	128	112			13.9
EPA 8321B	2,4-D	105	91.6	106			12.9
	2,4,5-T	84.4	100	99.6			0.720
	Acesulfame K	103	96.0	99.2			3.32
	Acetaminophen	88.7	97.6	94.5			3.23
	Acetamiprid	98.6	77.5	88.5			13.2
	Afidopyropen	73.3	78.2	95.4			19.8
	AMPA	107	106	113			6.64
	Bentazon	85.6					12.3
	Benzovindiflupyr	92.3	90.0	92.5			2.71
	Carbamazepine	83.0	61.0	63.5			3.99
	Clothianidin	98.6	97.3	100			2.87
	Dinotefuran	98.0	91.6	93.7			2.29
	Diuron	89.9	58.1	58.8			1.12
	Endothall	123	128	127			1.07
	Fenuron	108	72.6	75.5			4.03
	Fluridone	98.1	91.7	83.9			5.90
	Glufosinate	126	108	122			12.0
	Glyphosate	105	104	105			1.09
	Hydrocodone	94.3	81.4	82.5			1.27
	Ibuprofen	108	81.5	89.5			9.38
	Imazapyr	93.9					0.581
	Imidacloprid	103	145	154			4.99
	Linuron	74.5	62.0	59.6			3.99
	Mandestrobin	107	94.9	97.3			2.50
	MCPP	105	117	114			3.17
	Naproxen	86.8	82.3	79.4			3.55
	Primidone	95.2	99.6	98.4			1.13
	Pyraclostrobin	70.5	75.4	79.6			5.42
	Silvex	82.8	78.3	84.8			7.89
	Sucralose	107	97.8	91.6			6.14
	Thiamethoxam	96.9	96.3	97.3			0.952
	Tolfenpyrad	33.5	49.6	49.0			1.33
	Triclopyr	84.6	101	109			7.52
SM 2320 B-2011	Total Alkalinity	103				1.49	
SM 2540 C-2015	TDS	105				0.342	
SM 2540 D-2015	TSS	98.1					
SM 4500-F- C-2011	Fluoride	101					0.999
SM 5310 B-2011	Organic Carbon	98.6	97.8	97.5			0.200

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2378937
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2378937
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2378937
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2378937
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2378938

Reference Method Descriptions

Method	Description	Associated Samples
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2378938
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2378938
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2378938
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2378945
EPA 8270E	PCBs in water matrices by GC/MS/MS	2378945
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2378945
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2378951, 2378952
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2378937
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2378937
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2378937
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2378937
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2378938

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	01/10/2023			01/10/2023 15:29	Samantha L Bates	2378937
EPA 180.1 Rev. 2.0	01/10/2023			01/10/2023 13:38	Khloe J Berg	2378937
EPA 300.0 Rev. 2.1	01/10/2023			01/13/2023 07:03	Anna M. Plaviak	2378937
EPA 350.1 Rev. 2.0	01/10/2023			01/18/2023 12:46	Ping Hua	2378938
EPA 351.2 Rev. 2.0	01/10/2023	01/25/2023 14:17	Samantha L Bates	01/26/2023 09:56	Samantha L Bates	2378938
EPA 353.2 Rev. 2.0	01/10/2023			01/12/2023 12:03	Beverly Y. Sanders	2378938
EPA 365.1 Rev. 2.0	01/10/2023	01/11/2023 13:40	Simonne.V. Calhoun	01/12/2023 12:27	Simonne.V. Calhoun	2378938
EPA 8270E	01/10/2023	01/12/2023 08:00	Rasheda Ghaffari	01/17/2023 18:56	Vandana T. Nagar	2378945
	01/10/2023	01/12/2023 08:00	Rasheda Ghaffari	01/17/2023 20:38	Julie Wi	2378945
EPA 8276	01/10/2023	01/12/2023 08:00	Rasheda Ghaffari	01/14/2023 06:19	Lipi Saha	2378945
EPA 8321B	01/10/2023	01/12/2023 09:30	June Rhew	01/12/2023 13:13	Manjita Shrestha	2378951
	01/10/2023	01/12/2023 09:30	June Rhew	01/12/2023 13:26	Manjita Shrestha	2378952
	01/10/2023	01/12/2023 09:30	June Rhew	01/13/2023 01:06	Manjita Shrestha	2378951
	01/10/2023	01/12/2023 09:30	June Rhew	01/13/2023 01:21	Manjita Shrestha	2378952
	01/10/2023	01/13/2023 09:00	June Rhew	01/13/2023 16:54	Juyoung Kim	2378952
	01/10/2023	01/13/2023 09:00	June Rhew	01/13/2023 17:13	Juyoung Kim	2378951
	01/10/2023	01/13/2023 09:00	June Rhew	01/18/2023 12:32	Juyoung Kim	2378952
SM 2320 B-2011	01/10/2023			01/14/2023 02:15	Dale L. Simmons	2378937
SM 2540 C-2015	01/10/2023			01/13/2023 16:42	Yijie Li	2378937
SM 2540 D-2015	01/10/2023			01/13/2023 16:42	Yijie Li	2378937
SM 4500-F- C-2011	01/10/2023			01/12/2023 04:19	Adam P Silver	2378937
SM 5310 B-2011	01/10/2023			01/11/2023 15:39	Khloe J Berg	2378938