

Chemical Analysis Report

NE-DIST-2023-02-22-02

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

Event Description: **LSJR South West 2023**
Request ID: **RQ-2023-02-20-13**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way West
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 20-MAR-2023 11:48



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: Black CR South Fork @ CR218

Collection Date/Time: 02/21/2023 12:30

Field ID: 20030244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2389419	DEP SOP: NU-094-1	Color (true)	160		PCU	P426247	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P426262	
	EPA 300.0 Rev. 2.1	Chloride	10	A	mg Cl/L	P426692	
		Sulfate	2.8	A	mg SO4/L	P426695	
	SM 2320 B-2011	Total Alkalinity	8.7		mg CaCO3/L	P426500	
	SM 2540 C-2015	TDS	62		mg/L	P426801	
	SM 2540 D-2015	TSS	3	I	mg/L	P426740	
2389420	SM 4500-F- C-2011	Fluoride	0.070	I	mg F/L	P426645	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P426465	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P427106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028		mg N/L	P426528	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P426387	
2389429	SM 5310 B-2011	Organic Carbon	14		mg C/L	P426711	
	EPA 8321B	2,4-D	0.0020	U	ug/L	P426090	
		Acesulfame K	0.10	U	ug/L	P426216	
		2,4,5-T	0.0040	U	ug/L	P426090	
		AMPA	0.10	U	ug/L	P426216	
		Acetaminophen	0.0080	U	ug/L	P426090	
		Acetamiprid	0.0020	U	ug/L	P426090	
		Endothall	0.25	U	ug/L	P426216	
		Glufosinate	0.10	U	ug/L	P426216	
		Glyphosate	0.10	U	ug/L	P426216	
		Afidopyropen	0.0020	U	ug/L	P426090	
		Bentazon	8.0E-04	U	ug/L	P426090	
		Sucralose	0.21		ug/L	P426216	
		Benzovindiflupyr	0.0020	U	ug/L	P426090	
		Carbamazepine	8.0E-04	U	ug/L	P426090	
		Clothianidin	0.0020	U	ug/L	P426090	
		Dinotefuran	0.0020	U	ug/L	P426090	
		Diuron	0.0020	U	ug/L	P426090	
		Fenuron	0.032	U	ug/L	P426090	
		Fluridone	8.0E-04	U	ug/L	P426090	
		Imazapyr	0.023		ug/L	P426090	
		Hydrocodone	0.0020	U	ug/L	P426090	
		Ibuprofen	0.080	U	ug/L	P426090	
		Imidacloprid	0.0020	U	ug/L	P426090	
		Linuron	0.0040	U	ug/L	P426090	
		Mandestrobin	0.0020	U	ug/L	P426090	
		MCP	0.0020	U	ug/L	P426090	
		Naproxen	0.0080	U	ug/L	P426090	
		Primidone	0.0040	U	ug/L	P426090	
		Pyraclostrobin	0.0020	U	ug/L	P426090	
		Silvex	0.0040	U	ug/L	P426090	
		Thiamethoxam	0.0020	U	ug/L	P426090	

Field ID: 20030244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2389429	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P426090	
		Triclopyr	0.0040	U	ug/L	P426090	

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

Sample Location: Swimming Pen Creek at Eagles Creek Dr.

Collection Date/Time: 02/21/2023 13:35

Field ID: G2NE1188

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2389430	EPA 8321B	2,4-D	0.19		ug/L	P426090	
		Acesulfame K	0.22	I	ug/L	P426216	
		2,4,5-T	0.0040	U	ug/L	P426090	
		AMPA	0.59		ug/L	P426216	
		Acetaminophen	0.0080	U	ug/L	P426090	
		Acetamiprid	0.0020	U	ug/L	P426090	
		Endothall	0.25	U	ug/L	P426216	
		Glufosinate	0.10	U	ug/L	P426216	
		Glyphosate	0.52		ug/L	P426216	
		Afidopyropen	0.0020	U	ug/L	P426090	
		Bentazon	0.14		ug/L	P426090	
		Sucralose	5.5		ug/L	P426216	
		Benzovindiflupyr	0.0020	U	ug/L	P426090	
		Carbamazepine	0.0011	I	ug/L	P426090	
		Clothianidin	0.0053	I	ug/L	P426090	
		Dinotefuran	0.0020	U	ug/L	P426090	
		Diuron	0.0079	I	ug/L	P426090	
		Fenuron	0.032	U	ug/L	P426090	
		Fluridone	0.0055		ug/L	P426090	
		Imazapyr	0.15		ug/L	P426090	
		Hydrocodone	0.0020	U	ug/L	P426090	
		Ibuprofen	0.080	U	ug/L	P426090	
		Imidacloprid	0.0039	I	ug/L	P426090	
		Linuron	0.0040	U	ug/L	P426090	
		Mandestrobin	0.0020	U	ug/L	P426090	
		MCPP	0.0025	I	ug/L	P426090	
		Naproxen	0.0080	U	ug/L	P426090	
		Primidone	0.011	I	ug/L	P426090	
		Pyraclostrobin	0.0020	U	ug/L	P426090	
		Silvex	0.0040	U	ug/L	P426090	
		Thiamethoxam	0.0098		ug/L	P426090	
		Tolfenpyrad	0.0020	U	ug/L	P426090	
		Triclopyr	0.0040	U	ug/L	P426090	

Ref. Method and Comment:

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

Sample Location: LITTLE BLACK CREEK AT SR 220

Collection Date/Time: 02/21/2023 13:15

Field ID: 20030667

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2389428	EPA 8270E	Aldrin	0.67	U	ng/L	P426119	RPD
		Alpha-BHC	0.10	U	ng/L	P426119	
		Alpha-Chlordane	0.21	UJ	ng/L	P426119	CCV
		PCB-1016	2.1	U	ng/L	P426119	
		Beta-BHC	0.10	U	ng/L	P426119	
		PCB-1221	2.1	U	ng/L	P426119	
		Beta-Cyfluthrin	1.3	U	ng/L	P426119	
		PCB-1232	2.1	U	ng/L	P426119	
		Bifenthrin	0.52	U	ng/L	P426119	
		PCB-1242	2.1	U	ng/L	P426119	
		PCB-1248	2.1	U	ng/L	P426119	
		Chlorothalonil	3.7	U	ng/L	P426119	MS, RPD
		PCB-1254	2.1	U	ng/L	P426119	
		Cis-Nonachlor	0.21	U	ng/L	P426119	
		PCB-1260	2.1	U	ng/L	P426119	
		Cypermethrin	1.5	U	ng/L	P426119	
		Dacthal	0.15	U	ng/L	P426119	
		DDD-p,p'	0.26	U	ng/L	P426119	
		DDE-p,p'	0.21	U	ng/L	P426119	
		DDT-p,p'	0.26	U	ng/L	P426119	
		Delta-BHC	0.41	U	ng/L	P426119	
		Deltamethrin	1.3	U	ng/L	P426119	
		Dichlobenil	0.26	U	ng/L	P426119	
		Dicofol	1.3	U	ng/L	P426119	
		Dieldrin	0.41	U	ng/L	P426119	
		Endosulfan I	0.41	U	ng/L	P426119	
		Endosulfan II	0.41	U	ng/L	P426119	
		Endosulfan Sulfate	0.31	U	ng/L	P426119	
		Endrin	0.41	U	ng/L	P426119	
		Endrin Aldehyde	0.77	U	ng/L	P426119	
		Endrin Ketone	0.41	U	ng/L	P426119	
		Esfenvalerate	0.77	U	ng/L	P426119	
		Ethalfuralin	0.15	U	ng/L	P426119	
		Fenpropathrin	0.26	U	ng/L	P426119	RPD
		Gamma-BHC	0.13	U	ng/L	P426119	
		Gamma-Chlordane	0.21	U	ng/L	P426119	
		Heptachlor	0.21	U	ng/L	P426119	
		Heptachlor Epoxide	0.26	U	ng/L	P426119	MS, RPD
		Hexachlorobenzene**	1.0	U	ng/L	P426119	
		Kepone	5.2	U	ng/L	P426119	
		Lambda-Cyhalothrin	0.77	U	ng/L	P426119	
		Methoprene	0.77	U	ng/L	P426119	
		Methoxychlor	0.31	UJ	ng/L	P426119	LCS, RPD
		MGK-264	0.21	U	ng/L	P426119	MS, RPD

Field ID: 20030667

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2389428	EPA 8270E	Mirex	0.36	U	ng/L	P426119	MS, RPD
		Oxychlordane	0.31	U	ng/L	P426119	
		Permethrin	1.7	U	ng/L	P426119	
		Phenothrin	0.93	U	ng/L	P426119	LCS
		Piperonyl Butoxide	0.15	UJ	ng/L	P426119	
		Prallethrin	2.1	U	ng/L	P426119	
		Tau-Fluvalinate	0.26	U	ng/L	P426119	
		Tetramethrin	0.77	U	ng/L	P426119	
		Trans-Nonachlor	0.21	U	ng/L	P426119	
		Triclosan Methyl	0.15	U	ng/L	P426119	
		Trifluralin	0.21	U	ng/L	P426119	
		Chlordane	2.1	U	ng/L	P426119	
		Toxaphene	15	U	ng/L	P426119	MS

Ref. Method and Comment:
EPA 8270E: 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: P426247

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426262

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426692

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426695

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426465

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427106

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426528

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426387

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

Reference Method: EPA 8270E
Batch ID: P426119

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: P426119

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
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: P426119

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: P426119

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

Reference Method: EPA 8276
Batch ID: P426119

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: P426090

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
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P426216

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P426216

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P426500

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

Reference Method: SM 2540 C-2015
Batch ID: P426801

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P426740

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P426645

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P426711

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: P426247

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.7		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426262

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	93.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426695

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426465

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426528

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	94.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426387

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

Reference Method: EPA 8270E
Batch ID: P426119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.3		P	10 - 92.0
Alpha-BHC	94.7		P	75 - 107
Alpha-Chlordane	62.5		P	50 - 108
Beta-BHC	79.0		P	36 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P426119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	73.5		P	20 - 161
Bifenthrin	47.6		P	10 - 119
Chlorothalonil	68.6		P	26 - 186
Cis-Nonachlor	86.5		P	42 - 119
Cypermethrin	73.8		P	22 - 150
Dacthal	82.0		P	72 - 119
DDD-p,p'	65.3		P	45 - 107
DDE-p,p'	80.4		P	48 - 106
DDT-p,p'	60.8		P	48 - 110
Delta-BHC	107		P	54 - 140
Deltamethrin	126		P	22 - 189
Dichlobenil	65.7		P	36 - 117
Dicofol	51.9		P	46 - 155
Dieldrin	81.5		P	54 - 110
Endosulfan I	74.5		P	59 - 105
Endosulfan II	77.0		P	51 - 118
Endosulfan Sulfate	102		P	57 - 121
Endrin	87.7		P	10 - 120
Endrin Aldehyde	82.2		P	34 - 118
Endrin Ketone	104		P	69 - 177
Esfenvalerate	70.2		P	23 - 168
Ethalfuralin	66.7		P	49 - 99.0
Fenpropathrin	59.0		P	34 - 117
Gamma-BHC	103		P	72 - 117
Gamma-Chlordane	58.7		P	43 - 106
Heptachlor	69.8		P	41 - 98.0
Heptachlor Epoxide	84.7		P	57 - 106
Hexachlorobenzene	48.6		P	36 - 99.0
Kepone	86.2		P	16 - 215
Lambda-Cyhalothrin	63.0		P	21 - 177
Methoprene	68.6		P	10 - 119
Methoxychlor	56.1		F	60 - 112
MGK-264	75.5		P	26 - 122
Mirex	72.9		P	10 - 169
Oxychlordane	79.5		P	43 - 105
PCB-1016	74.3		P	48 - 112
PCB-1260	70.9		P	44 - 118
Permethrin	79.4		P	24 - 148
Phenothrin	57.7		P	10 - 106
Piperonyl Butoxide	167		F	10 - 139
Prallethrin	85.8		P	17 - 109
Tau-Fluvalinate	63.8		P	13 - 131
Tetramethrin	81.8		P	10 - 132
Trans-Nonachlor	78.7		P	44 - 106
Triclosan Methyl	67.6		P	59 - 109
Trifluralin	65.5		P	44 - 101

Reference Method: EPA 8276

Batch ID: P426119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	75.6		P	61 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P426119

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	70.9		P	48 - 124

Reference Method: EPA 8321B
Batch ID: P426090

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	140		P	40 - 150
2,4,5-T	105		P	40 - 150
Acetaminophen	94.6		P	30 - 150
Acetamiprid	103		P	40 - 150
Afidopyropen	80.8		P	30 - 150
Bentazon	134		P	30 - 150
Benzovindiflupyr	90.3		P	40 - 150
Carbamazepine	95.2		P	40 - 150
Clothianidin	72.7		P	40 - 150
Dinotefuran	115		P	40 - 150
Diuron	70.3		P	40 - 150
Fenuron	78.2		P	40 - 150
Fluridone	83.5		P	40 - 150
Hydrocodone	88.0		P	40 - 150
Ibuprofen	65.6		P	40 - 150
Imazapyr	94.9		P	40 - 150
Imidacloprid	107		P	40 - 150
Linuron	71.4		P	40 - 150
Mandestrobin	102		P	40 - 150
MCPP	96.7		P	40 - 150
Naproxen	75.2		P	40 - 150
Primidone	94.3		P	40 - 150
Pyraclostrobin	82.1		P	40 - 150
Silvex	102		P	40 - 150
Thiamethoxam	87.7		P	40 - 150
Tolfenpyrad	49.5		P	30 - 150
Triclopyr	93.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P426216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	102		P	40 - 150
Endothall	117		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	104		P	40 - 150
Sucralose	108		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P426500

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.2		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P426801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.2		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P426740

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P426645

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389419	Chloride	92.7		P	90 - 110
2389479	Chloride	93.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426695

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389419	Sulfate	96.1		P	90 - 110
2389479	Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389420	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389381	Kjeldahl Nitrogen	105	95.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426528

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389438	NO2NO3-N	95.0	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389381	Total-P	98.9	97.1	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P426119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388525	PCB-1016	79.6	68.1	P/P	46 - 111
2388525	PCB-1260	66.4	59.3	P/P	45 - 114
2388547	Aldrin	54.7	35.1	P/P	20 - 82.0
2388547	Alpha-BHC	93.6	92.6	P/P	71 - 109
2388547	Alpha-Chlordane	81.3	83.6	P/P	42 - 106
2388547	Beta-BHC	97.6	97.5	P/P	69 - 180
2388547	Beta-Cyfluthrin	99.8	91.3	P/P	18 - 175
2388547	Bifenthrin	55.6	46.0	P/P	21 - 128
2388547	Chlorothalonil	21.6	5.59	P/F	10 - 300
2388547	Cis-Nonachlor	60.8	64.0	P/P	34 - 106
2388547	Cypermethrin	90.5	84.0	P/P	22 - 158
2388547	Dacthal	96.5	92.3	P/P	54 - 116
2388547	DDD-p,p'	72.3	81.4	P/P	34 - 107
2388547	DDE-p,p'	68.5	67.9	P/P	33 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P426119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388547	DDT-p,p'	62.8	54.8	P/P	50 - 122
2388547	Delta-BHC	124	131	P/P	77 - 193
2388547	Deltamethrin	119	79.4	P/P	10 - 195
2388547	Dichlobenil	57.4	54.8	P/P	25 - 113
2388547	Dicofol	90.3	69.3	P/P	38 - 247
2388547	Dieldrin	70.4	70.0	P/P	45 - 118
2388547	Endosulfan I	70.8	72.7	P/P	51 - 106
2388547	Endosulfan II	93.6	93.2	P/P	37 - 122
2388547	Endosulfan Sulfate	77.7	87.1	P/P	43 - 132
2388547	Endrin	73.5	77.0	P/P	29 - 101
2388547	Endrin Aldehyde	71.9	92.1	P/P	19 - 110
2388547	Endrin Ketone	87.2	92.3	P/P	60 - 140
2388547	Esfenvalerate	104	77.0	P/P	26 - 199
2388547	Ethalfuralin	66.4	56.3	P/P	45 - 99.0
2388547	Fenpropathrin	91.9	65.5	P/P	35 - 120
2388547	Gamma-BHC	107	95.8	P/P	63 - 128
2388547	Gamma-Chlordane	73.5	57.3	P/P	40 - 104
2388547	Heptachlor	63.8	58.1	P/P	36 - 97.0
2388547	Heptachlor Epoxide	65.6	29.7	P/F	49 - 184
2388547	Hexachlorobenzene	53.5	48.6	P/P	39 - 96.0
2388547	Kepone	115	97.5	P/P	10 - 217
2388547	Lambda-Cyhalothrin	95.1	76.1	P/P	21 - 193
2388547	Methoprene	67.8	55.9	P/P	20 - 106
2388547	Methoxychlor	75.0	55.6	P/P	53 - 118
2388547	MGK-264	47.7	30.7	P/F	40 - 118
2388547	Mirex	72.9	56.6	P/P	26 - 92.0
2388547	Oxychlordane	59.6	14.7	P/F	44 - 99.0
2388547	Permethrin	98.8	110	P/P	33 - 182
2388547	Phenothrin	79.3	96.7	P/P	10 - 129
2388547	Piperonyl Butoxide	115	120	P/P	10 - 211
2388547	Prallethrin	75.5	71.2	P/P	24 - 113
2388547	Tau-Fluvalinate	96.7	68.1	P/P	14 - 149
2388547	Tetramethrin	89.4	83.4	P/P	17 - 151
2388547	Trans-Nonachlor	58.2	68.0	P/P	42 - 102
2388547	Triclosan Methyl	66.9	71.3	P/P	48 - 108
2388547	Trifluralin	62.5	64.1	P/P	47 - 96.0

Reference Method: EPA 8276
Batch ID: P426119

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388525	Chlordane	59.1	60.6	P/P	53 - 126
2388525	Toxaphene	51.8	57.4	F/P	56 - 211

Reference Method: EPA 8321B
Batch ID: P426090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388382	2,4-D	103	108	P/P	40 - 150
2388382	2,4,5-T	96.2	98.7	P/P	40 - 150
2388382	Acetaminophen	96.8	109	P/P	30 - 150
2388382	Acetamiprid	79.0	69.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P426090

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388382	Afidopyropen	55.5	52.6	P/P	30 - 150
2388382	Bentazon	90.4	93.0	P/P	30 - 150
2388382	Benzovindiflupyr	77.8	88.0	P/P	40 - 150
2388382	Carbamazepine	64.8	72.3	P/P	40 - 150
2388382	Clothianidin	67.5	65.4	P/P	40 - 150
2388382	Dinotefuran	102	107	P/P	40 - 150
2388382	Diuron	47.5	51.0	P/P	40 - 150
2388382	Fenuron	53.0	52.8	P/P	40 - 150
2388382	Fluridone	65.6	63.1	P/P	40 - 150
2388382	Hydrocodone	71.6	71.9	P/P	40 - 150
2388382	Ibuprofen	79.0	86.7	P/P	40 - 150
2388382	Imazapyr	90.7	96.1	P/P	40 - 150
2388382	Linuron	61.5	68.4	P/P	40 - 150
2388382	Mandestrobin	87.5	90.9	P/P	40 - 150
2388382	MCPP	91.6	97.3	P/P	40 - 150
2388382	Naproxen	111	101	P/P	40 - 150
2388382	Primidone	75.1	81.6	P/P	40 - 150
2388382	Pyraclostrobin	80.7	80.8	P/P	40 - 150
2388382	Silvex	111	113	P/P	40 - 150
2388382	Thiamethoxam	82.2	78.2	P/P	40 - 150
2388382	Tolfenpyrad	55.8	53.8	P/P	30 - 150
2388382	Triclopyr	104	116	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P426216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389131	Acesulfame K	122	115	P/P	40 - 150
2389131	AMPA	73.1	67.5	P/P	40 - 150
2389131	Endothall	114	106	P/P	40 - 150
2389131	Glufosinate	76.6	79.4	P/P	40 - 150
2389131	Glyphosate	97.1	101	P/P	40 - 150
2389131	Sucralose	98.2	105	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P426645

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389356	Fluoride	98.2	98.8	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389482	Organic Carbon	96.4	95.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P426247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389382	Color (true)	1.66	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389063	Turbidity	1.83	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389419	Chloride	0.317	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389419	Sulfate	0.560	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389420	Ammonia-N	0.737	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389381	Kjeldahl Nitrogen	7.45	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389438	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389381	Total-P	1.11	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P426119

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388525	PCB-1016	15.5	Spike	P	0 - 32
2388525	PCB-1260	11.3	Spike	P	0 - 31
2388547	Aldrin	43.6	Spike	F	0 - 41
2388547	Alpha-BHC	1.04	Spike	P	0 - 25
2388547	Alpha-Chlordane	2.80	Spike	P	0 - 33
2388547	Beta-BHC	0.0785	Spike	P	0 - 36
2388547	Beta-Cyfluthrin	8.94	Spike	P	0 - 42
2388547	Bifenthrin	18.9	Spike	P	0 - 53
2388547	Chlorothalonil	118	Spike	F	0 - 71
2388547	Cis-Nonachlor	5.13	Spike	P	0 - 29
2388547	Cypermethrin	7.47	Spike	P	0 - 40
2388547	Dacthal	4.52	Spike	P	0 - 26
2388547	DDD-p,p'	11.8	Spike	P	0 - 39
2388547	DDE-p,p'	0.791	Spike	P	0 - 33
2388547	DDT-p,p'	13.5	Spike	P	0 - 40
2388547	Delta-BHC	5.11	Spike	P	0 - 37
2388547	Deltamethrin	40.3	Spike	P	0 - 100
2388547	Dichlobenil	4.66	Spike	P	0 - 40
2388547	Dicofol	26.3	Spike	P	0 - 31
2388547	Dieldrin	0.577	Spike	P	0 - 27
2388547	Endosulfan I	2.62	Spike	P	0 - 23
2388547	Endosulfan II	0.424	Spike	P	0 - 28
2388547	Endosulfan Sulfate	11.4	Spike	P	0 - 38
2388547	Endrin	4.67	Spike	P	0 - 63
2388547	Endrin Aldehyde	24.6	Spike	P	0 - 60
2388547	Endrin Ketone	5.70	Spike	P	0 - 37
2388547	Esfenvalerate	29.3	Spike	P	0 - 52
2388547	Ethalfuralin	16.3	Spike	P	0 - 23
2388547	Fenpropathrin	33.6	Spike	F	0 - 32
2388547	Gamma-BHC	11.4	Spike	P	0 - 17
2388547	Gamma-Chlordane	24.7	Spike	P	0 - 40
2388547	Heptachlor	9.29	Spike	P	0 - 29
2388547	Heptachlor Epoxide	75.4	Spike	F	0 - 25
2388547	Hexachlorobenzene	9.57	Spike	P	0 - 36
2388547	Kepone	16.7	Spike	P	0 - 93
2388547	Lambda-Cyhalothrin	22.1	Spike	P	0 - 55
2388547	Methoprene	19.2	Spike	P	0 - 53
2388547	Methoxychlor	29.7	Spike	F	0 - 29
2388547	MGK-264	43.2	Spike	F	0 - 35
2388547	Mirex	25.2	Spike	P	0 - 46
2388547	Oxychlordane	121	Spike	F	0 - 29
2388547	Permethrin	10.7	Spike	P	0 - 44
2388547	Phenothrin	19.7	Spike	P	0 - 56
2388547	Piperonyl Butoxide	4.02	Spike	P	0 - 100
2388547	Prallethrin	5.93	Spike	P	0 - 42
2388547	Tau-Fluvalinate	34.7	Spike	P	0 - 54
2388547	Tetramethrin	6.86	Spike	P	0 - 51
2388547	Trans-Nonachlor	15.5	Spike	P	0 - 37
2388547	Triclosan Methyl	6.37	Spike	P	0 - 31
2388547	Trifluralin	2.39	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P426119

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388525	Chlordane	2.48	Spike	P	0 - 25
2388525	Toxaphene	10.2	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P426090

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388382	2,4-D	4.39	Spike	P	0 - 30
2388382	2,4,5-T	2.53	Spike	P	0 - 30
2388382	Acetaminophen	11.7	Spike	P	0 - 30
2388382	Acetamiprid	13.3	Spike	P	0 - 30
2388382	Afidopyropen	5.46	Spike	P	0 - 30
2388382	Bentazon	2.83	Spike	P	0 - 30
2388382	Benzovindiflupyr	12.3	Spike	P	0 - 30
2388382	Carbamazepine	10.8	Spike	P	0 - 30
2388382	Clothianidin	2.18	Spike	P	0 - 30
2388382	Dinotefuran	4.68	Spike	P	0 - 30
2388382	Diuron	6.48	Spike	P	0 - 30
2388382	Fenuron	0.337	Spike	P	0 - 30
2388382	Fluridone	3.86	Spike	P	0 - 30
2388382	Hydrocodone	0.472	Spike	P	0 - 30
2388382	Ibuprofen	9.21	Spike	P	0 - 30
2388382	Imazapyr	5.34	Spike	P	0 - 30
2388382	Imidacloprid	4.45	Spike	P	0 - 30
2388382	Linuron	10.5	Spike	P	0 - 30
2388382	Mandestrobin	3.84	Spike	P	0 - 30
2388382	MCPP	6.09	Spike	P	0 - 30
2388382	Naproxen	9.58	Spike	P	0 - 30
2388382	Primidone	8.35	Spike	P	0 - 30
2388382	Pyraclostrobin	0.147	Spike	P	0 - 30
2388382	Silvex	1.65	Spike	P	0 - 30
2388382	Thiamethoxam	3.28	Spike	P	0 - 30
2388382	Tolfenpyrad	3.77	Spike	P	0 - 30
2388382	Triclopyr	10.7	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P426216

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389131	Acesulfame K	6.12	Spike	P	0 - 30
2389131	AMPA	7.93	Spike	P	0 - 30
2389131	Endothall	7.84	Spike	P	0 - 30
2389131	Glufosinate	3.56	Spike	P	0 - 30
2389131	Glyphosate	3.84	Spike	P	0 - 30
2389131	Sucralose	6.93	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P426500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389356	Total Alkalinity	1.53	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P426801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389380	TDS	4.49	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P426645

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389356	Fluoride	0.519	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P426711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389482	Organic Carbon	0.319	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2389428
Field Sample ID: 20030667

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	75.9	P	29 - 130
EPA 8270E	Decachlorobiphenyl	78.3	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	51.5	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	46.2	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	49.6	P	30 - 101
EPA 8276	PCNB	72.6	P	48 - 121

Lab Sample ID: 2389429
Field Sample ID: 20030244

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.2	P	30 - 160
EPA 8321B	Diuron-d6	60.6	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.7	P	30 - 160
EPA 8321B	Primidone-d5	97.7	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2389430
Field Sample ID: G2NE1188

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	115	P	30 - 160
EPA 8321B	Acetaminophen-d4	102	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.8	P	30 - 160
EPA 8321B	Diuron-d6	54.1	P	30 - 160
EPA 8321B	Endothall-d6	107	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.9	P	30 - 160
EPA 8321B	Primidone-d5	89.3	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117601

Included Lab Sample IDs: 2389419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117609

Included Lab Sample IDs: 2389419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A117655

Included Lab Sample IDs: 2389429, 2389430

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	120	115	P/P	50 - 150
2,4,5-T	104	104	P/P	50 - 150
Acetaminophen	102	102	P/P	60 - 160
Acetamiprid	87.6	95.2	P/P	50 - 150
Afidopyropen	97.1	92.5	P/P	50 - 150
Bentazon	138	118	P/P	50 - 160
Bentazon	139	133	P/P	50 - 160
Benzovindiflupyr	111	110	P/P	50 - 150
Carbamazepine	124	122	P/P	60 - 150
Clothianidin	106	110	P/P	60 - 150
Dinotefuran	116	120	P/P	50 - 150
Diuron	108	120	P/P	60 - 160
Fenuron	109	110	P/P	60 - 150
Fluridone	118	104	P/P	60 - 160
Hydrocodone	121	122	P/P	60 - 150
Ibuprofen	119	101	P/P	50 - 160
Imazapyr	100	105	P/P	50 - 150
Imidacloprid	92.0	96.2	P/P	60 - 150
Linuron	103	86.9	P/P	60 - 150
Mandestrobin	114	118	P/P	50 - 150
MCPP	96.6	107	P/P	50 - 150
Naproxen	93.5	135	P/P	50 - 160
Primidone	95.1	100	P/P	60 - 150
Pyraclostrobin	109	106	P/P	60 - 150
Silvex	103	88.8	P/P	50 - 150
Thiamethoxam	122	120	P/P	50 - 150
Tolfenpyrad	107	108	P/P	60 - 150
Triclopyr	104	92.5	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A117674

Included Lab Sample IDs: 2389429, 2389430

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	105	106	P/P	60 - 160
Endothall	122	108	P/P	60 - 160
Glufosinate	97.1	93.9	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A117674

Included Lab Sample IDs: 2389429, 2389430

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	105	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117677

Included Lab Sample IDs: 2389429, 2389430

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	116	119	P/P	60 - 160
Sucralose	110	108	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117687

Included Lab Sample IDs: 2389419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.7	95.0	P/P	90 - 110
Sulfate	98.2	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117698

Included Lab Sample IDs: 2389420

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117699

Included Lab Sample IDs: 2389420

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

Reference Method: SM 2320 B-2011

Run ID: A117719

Included Lab Sample IDs: 2389419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	95.7	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117729

Included Lab Sample IDs: 2389428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	99.2		P	80 - 120
PCB-1260	98.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117731
Included Lab Sample IDs: 2389428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.4		P	80 - 120
Alpha-BHC	110		P	80 - 120
Alpha-Chlordane	123*		F	80 - 120
Beta-BHC	105		P	80 - 120
Beta-Cyfluthrin	93.7		P	80 - 120
Bifenthrin	117		P	80 - 120
Chlorothalonil	84.7		P	80 - 120
Cis-Nonachlor	99.1		P	80 - 120
Cypermethrin	96.7		P	80 - 120
Dacthal	97.1		P	80 - 120
DDD-p,p'	104		P	80 - 120
DDE-p,p'	88.0		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	102		P	80 - 120
Deltamethrin	99.4		P	80 - 120
Dichlobenil	111		P	80 - 120
Dicofol	109		P	80 - 120
Dieldrin	86.0		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	89.1		P	80 - 120
Endosulfan Sulfate	83.6		P	80 - 120
Endrin	83.9		P	80 - 120
Endrin Aldehyde	93.9		P	80 - 120
Endrin Ketone	101		P	80 - 120
Esfenvalerate	92.5		P	80 - 120
Ethalfuralin	97.7		P	80 - 120
Fenpropathrin	111		P	80 - 120
Gamma-BHC	112		P	80 - 120
Gamma-Chlordane	89.4		P	80 - 120
Heptachlor	89.5		P	80 - 120
Heptachlor Epoxide	90.5		P	80 - 120
Hexachlorobenzene	84.1		P	80 - 120
Kepone	112		P	80 - 120
Lambda-Cyhalothrin	98.8		P	80 - 120
Methoprene	91.5		P	80 - 120
Methoxychlor	111		P	80 - 120
MGK-264	105		P	80 - 120
Mirex	107		P	80 - 120
Oxychlordane	90.0		P	80 - 120
Permethrin	108		P	80 - 120
Phenothrin	115		P	80 - 120
Piperonyl Butoxide	93.6		P	80 - 120
Prallethrin	91.7		P	80 - 120
Tau-Fluvalinate	95.0		P	80 - 120
Tetramethrin	117		P	80 - 120
Trans-Nonachlor	98.4		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	90.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117732

Included Lab Sample IDs: 2389420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	95.5	93.0	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A117774

Included Lab Sample IDs: 2389428

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	88.5		P	80 - 120
Toxaphene	82.7		P	80 - 120

Reference Method: SM 4500-F- C-2011

Run ID: A117776

Included Lab Sample IDs: 2389419

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	101	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A117812

Included Lab Sample IDs: 2389420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.0	95.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118044

Included Lab Sample IDs: 2389420

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.8	100	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)	99.7				1.66	
EPA 180.1 Rev. 2.0	Turbidity	102				1.83	
EPA 300.0 Rev. 2.1	Chloride	93.1	92.7	93.2		0.317	
	Sulfate	97.1	96.1	96.6		0.560	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	101	102			0.737
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.0	105	95.1			7.45
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	94.5	95.0	95.0			0.0
EPA 365.1 Rev. 2.0	Total-P	103	98.9	97.1			1.11
EPA 8270E	Aldrin	57.3	54.7	35.1			43.6
	Alpha-BHC	94.7	93.6	92.6			1.04
	Alpha-Chlordane	62.5	81.3	83.6			2.80
	Beta-BHC	79.0	97.6	97.5			0.0785
	Beta-Cyfluthrin	73.5	99.8	91.3			8.94
	Bifenthrin	47.6	55.6	46.0			18.9
	Chlorothalonil	68.6	21.6	5.59			118
	Cis-Nonachlor	86.5	60.8	64.0			5.13
	Cypermethrin	73.8	90.5	84.0			7.47
	Dacthal	82.0	96.5	92.3			4.52
	DDD-p,p'	65.3	72.3	81.4			11.8
	DDE-p,p'	80.4	68.5	67.9			0.791
	DDT-p,p'	60.8	62.8	54.8			13.5
	Delta-BHC	107	124	131			5.11
	Deltamethrin	126	119	79.4			40.3
	Dichlobenil	65.7	57.4	54.8			4.66
	Dicofol	51.9	90.3	69.3			26.3
	Dieldrin	81.5	70.4	70.0			0.577
	Endosulfan I	74.5	70.8	72.7			2.62
	Endosulfan II	77.0	93.6	93.2			0.424
	Endosulfan Sulfate	102	77.7	87.1			11.4
	Endrin	87.7	73.5	77.0			4.67
	Endrin Aldehyde	82.2	71.9	92.1			24.6
	Endrin Ketone	104	87.2	92.3			5.70
	Esfenvalerate	70.2	104	77.0			29.3
	Ethalfuralin	66.7	66.4	56.3			16.3
	Fenpropathrin	59.0	91.9	65.5			33.6
	Gamma-BHC	103	107	95.8			11.4
	Gamma-Chlordane	58.7	73.5	57.3			24.7
	Heptachlor	69.8	63.8	58.1			9.29
	Heptachlor Epoxide	84.7	65.6	29.7			75.4
	Hexachlorobenzene	48.6	53.5	48.6			9.57
	Kepone	86.2	115	97.5			16.7
	Lambda-Cyhalothrin	63.0	95.1	76.1			22.1
	Methoprene	68.6	67.8	55.9			19.2
	Methoxychlor	56.1	75.0	55.6			29.7
	MGK-264	75.5	47.7	30.7			43.2
	Mirex	72.9	72.9	56.6			25.2
	Oxychlordane	79.5	59.6	14.7			121
	PCB-1016	74.3	79.6	68.1			15.5
	PCB-1260	70.9	66.4	59.3			11.3
	Permethrin	79.4	98.8	110			10.7
	Phenothrin	57.7	79.3	96.7			19.7
	Piperonyl Butoxide	167	115	120			4.02
	Prallethrin	85.8	75.5	71.2			5.93
	Tau-Fluvalinate	63.8	96.7	68.1			34.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Tetramethrin	81.8	89.4	83.4			6.86
	Trans-Nonachlor	78.7	58.2	68.0			15.5
	Triclosan Methyl	67.6	66.9	71.3			6.37
	Trifluralin	65.5	62.5	64.1			2.39
EPA 8276	Chlordane	75.6	59.1	60.6			2.48
	Toxaphene	70.9	51.8	57.4			10.2
EPA 8321B	2,4-D	140	103	108			4.39
	2,4,5-T	105	96.2	98.7			2.53
	Acesulfame K	112	122	115			6.12
	Acetaminophen	94.6	96.8	109			11.7
	Acetamiprid	103	79.0	69.2			13.3
	Afidopyropen	80.8	55.5	52.6			5.46
	AMPA	102	73.1	67.5			7.93
	Bentazon	134	90.4	93.0			2.83
	Benzovindiflupyr	90.3	77.8	88.0			12.3
	Carbamazepine	95.2	64.8	72.3			10.8
	Clothianidin	72.7	67.5	65.4			2.18
	Dinotefuran	115	102	107			4.68
	Diuron	70.3	47.5	51.0			6.48
	Endothall	117	114	106			7.84
	Fenuron	78.2	53.0	52.8			0.337
	Fluridone	83.5	65.6	63.1			3.86
	Glufosinate	105	76.6	79.4			3.56
	Glyphosate	104	97.1	101			3.84
	Hydrocodone	88.0	71.6	71.9			0.472
	Ibuprofen	65.6	79.0	86.7			9.21
	Imazapyr	94.9	90.7	96.1			5.34
	Imidacloprid	107					4.45
	Linuron	71.4	61.5	68.4			10.5
	Mandestrobin	102	87.5	90.9			3.84
	MCPP	96.7	91.6	97.3			6.09
	Naproxen	75.2	111	101			9.58
	Primidone	94.3	75.1	81.6			8.35
	Pyraclostrobin	82.1	80.7	80.8			0.147
	Silvex	102	111	113			1.65
	Sucralose	108	98.2	105			6.93
	Thiamethoxam	87.7	82.2	78.2			3.28
	Tolfenpyrad	49.5	55.8	53.8			3.77
	Triclopyr	93.9	104	116			10.7
SM 2320 B-2011	Total Alkalinity	98.2				1.53	
SM 2540 C-2015	TDS	94.2				4.49	
SM 2540 D-2015	TSS	93.3					
SM 4500-F- C-2011	Fluoride	97.9	98.2	98.8			0.519
SM 5310 B-2011	Organic Carbon	95.7	96.4	95.8			0.319

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2389419
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2389419
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2389419
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2389419
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2389420

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2389420
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2389420
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2389420
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2389428
EPA 8270E	PCBs in water matrices by GC/MS/MS	2389428
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2389428
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2389429, 2389430
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2389419
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2389419
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2389419
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2389419
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2389420

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	02/22/2023			02/22/2023 14:07	Alexis Price	2389419
EPA 180.1 Rev. 2.0	02/22/2023			02/22/2023 14:00	Anna M. Plaviak	2389419
EPA 300.0 Rev. 2.1	02/22/2023			03/03/2023 17:25	Judith K. Clark	2389419
EPA 350.1 Rev. 2.0	02/22/2023			02/28/2023 11:20	Khloe J Berg	2389420
EPA 351.2 Rev. 2.0	02/22/2023	03/14/2023 10:34	Simonne.V. Calhoun	03/16/2023 14:13	Judith K. Clark	2389420
EPA 353.2 Rev. 2.0	02/22/2023			02/28/2023 09:26	Beverly Y. Sanders	2389420
EPA 365.1 Rev. 2.0	02/22/2023	02/27/2023 14:45	Alexis Price	02/28/2023 10:47	James L Waggeberby	2389420
EPA 8270E	02/22/2023	02/23/2023 08:00	Fe-Val Siddell	02/28/2023 00:07	Vandana T. Nagar	2389428
	02/22/2023	02/23/2023 08:00	Fe-Val Siddell	02/28/2023 06:33	Vandana T. Nagar	2389428
EPA 8276	02/22/2023	02/23/2023 08:00	Fe-Val Siddell	03/02/2023 13:01	Arthur Maknenko	2389428
EPA 8321B	02/22/2023	02/23/2023 08:30	Hoor Shaik	02/24/2023 02:58	Juyoung Kim	2389429
	02/22/2023	02/23/2023 08:30	Hoor Shaik	02/24/2023 03:17	Juyoung Kim	2389430
	02/22/2023	02/23/2023 08:30	Hoor Shaik	02/24/2023 12:50	Juyoung Kim	2389430
	02/22/2023	02/24/2023 10:00	Manjita Shrestha	02/24/2023 13:10	Manjita Shrestha	2389429
	02/22/2023	02/24/2023 10:00	Manjita Shrestha	02/24/2023 13:23	Manjita Shrestha	2389430
	02/22/2023	02/24/2023 10:00	Manjita Shrestha	02/24/2023 19:30	Manjita Shrestha	2389429
	02/22/2023	02/24/2023 10:00	Manjita Shrestha	02/24/2023 19:44	Manjita Shrestha	2389430
SM 2320 B-2011	02/22/2023			02/28/2023 21:02	Chandler E Cox	2389419
SM 2540 C-2015	02/22/2023			02/27/2023 16:17	Yijie Li	2389419
SM 2540 D-2015	02/22/2023			02/27/2023 16:17	Yijie Li	2389419
SM 4500-F- C-2011	02/22/2023			03/02/2023 23:44	Chandler E Cox	2389419
SM 5310 B-2011	02/22/2023			03/04/2023 05:21	Khloe J Berg	2389420