

Chemical Analysis Report

NW-DIST-2022-07-07-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Western Lake Run**
Request ID: **RQ-2022-06-27-23**
Customer: **NW-DIST**
Project ID: **SMP**

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 26-JUL-2022 09:07

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Metals, 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: Pond Creek downstream of HWY 90

Collection Date/Time: 07/06/2022 12:35

Field ID: G4NW0506

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339617	EPA 8321B	2,4-D	0.0020	U	ug/L	P416352	
		Acesulfame K	0.10	U	ug/L	P416535	
		2,4,5-T	0.0040	U	ug/L	P416352	
		AMPA	0.10	U	ug/L	P416535	
		Acetaminophen	0.0080	U	ug/L	P416352	
		Acetamiprid	0.0020	U	ug/L	P416352	
		Endothall	0.25	U	ug/L	P416535	
		Glufosinate	0.10	U	ug/L	P416535	
		Glyphosate	0.10	U	ug/L	P416535	
		Afidopyropen	0.0020	U	ug/L	P416352	
		Bentazon	8.0E-04	U	ug/L	P416352	
		Sucralose	0.18		ug/L	P416535	
		Benzovindiflupyr	0.0020	U	ug/L	P416352	
		Carbamazepine	8.0E-04	U	ug/L	P416352	
		Clothianidin	0.0020	U	ug/L	P416352	
		Dinotefuran	0.0020	U	ug/L	P416352	
		Diuron	0.0020	U	ug/L	P416352	
		Fenuron	0.032	U	ug/L	P416352	
		Fluridone	8.0E-04	U	ug/L	P416352	
		Imazapyr	0.0040	U	ug/L	P416352	
		Hydrocodone	0.0020	U	ug/L	P416352	
		Ibuprofen	0.080	U	ug/L	P416352	
		Imidacloprid	0.015		ug/L	P416352	MS
		Linuron	0.0040	U	ug/L	P416352	
		Mandestrobin	0.0020	U	ug/L	P416352	
		MCPP	0.0040	U	ug/L	P416352	
		Naproxen	0.0080	U	ug/L	P416352	
		Primidone	0.0040	U	ug/L	P416352	
		Pyraclostrobin	0.0020	U	ug/L	P416352	
		Silvex	0.0040	U	ug/L	P416352	
		Thiamethoxam	0.0020	U	ug/L	P416352	
		Tolfenpyrad	0.0020	U	ug/L	P416352	
		Triclopyr	0.0040	U	ug/L	P416352	

Ref. Method and Comment:

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

Sample Location: Crescent Lake

Collection Date/Time: 07/06/2022 15:10

Field ID: G5NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339602	DEP SOP: NU-094-1	Color (true)	20	A	PCU	P416282	
	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P416290	
	EPA 300.0 Rev. 2.1	Chloride	7.7		mg Cl/L	P416731	
		Sulfate	4.4		mg SO4/L	P416734	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P416387	
	SM 2540 C-2011	TDS	57		mg/L	P416545	
	SM 2540 D-2011	TSS	2	U	mg/L	P416548	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P416404	
2339604	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P416421	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.29		mg N/L	P416460	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P416651	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P416399	
	SM 5310 B-2011	Organic Carbon	3.3		mg C/L	P416395	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Pond Creek West of Headwaters of Blackwater Bay **Collection Date/Time: 07/06/2022 13:05**

Field ID: G4NW0277

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339615	EPA 8270E	Aldrin	0.69	U	ng/L	P416453	
		Alpha-BHC	0.11	U	ng/L	P416453	
		Alpha-Chlordane	0.41	I	ng/L	P416453	
		PCB-1016	2.1	U	ng/L	P416453	
		Beta-BHC	0.11	U	ng/L	P416453	
		PCB-1221	2.1	U	ng/L	P416453	
		Beta-Cyfluthrin	1.3	U	ng/L	P416453	
		PCB-1232	2.1	U	ng/L	P416453	
		Bifenthrin	0.53	U	ng/L	P416453	
		PCB-1242	2.1	U	ng/L	P416453	
		Carbophenothion	0.95	U	ng/L	P416453	
		PCB-1248	2.1	U	ng/L	P416453	
		Chlorothalonil	1.3	U	ng/L	P416453	
		PCB-1254	2.1	U	ng/L	P416453	
		Cis-Nonachlor	0.21	U	ng/L	P416453	
		PCB-1260	2.1	U	ng/L	P416453	
		Cypermethrin	1.6	U	ng/L	P416453	
		Dacthal	0.16	U	ng/L	P416453	
		DDD-p,p'	0.26	U	ng/L	P416453	
		DDE-p,p'	0.35	I	ng/L	P416453	
		DDT-p,p'	0.49	I	ng/L	P416453	
		Delta-BHC	0.42	U	ng/L	P416453	
		Deltamethrin	1.3	U	ng/L	P416453	
		Dichlobenil	0.26	U	ng/L	P416453	
		Dicofol	1.3	U	ng/L	P416453	
		Dieldrin	1.4	I	ng/L	P416453	
		Endosulfan I	0.42	U	ng/L	P416453	
		Endosulfan II	0.42	U	ng/L	P416453	
		Endosulfan Sulfate	0.32	U	ng/L	P416453	
		Endrin	0.42	U	ng/L	P416453	
		Endrin Aldehyde	0.79	U	ng/L	P416453	
		Endrin Ketone	0.42	U	ng/L	P416453	
		Esfenvalerate	0.79	U	ng/L	P416453	
		Ethalfuralin	0.16	U	ng/L	P416453	
		Fenpropathrin	0.26	U	ng/L	P416453	
		Gamma-BHC	0.13	U	ng/L	P416453	
		Gamma-Chlordane	0.45	I	ng/L	P416453	
		Heptachlor	0.21	U	ng/L	P416453	
		Heptachlor Epoxide	0.26	U	ng/L	P416453	
		Hexachlorobenzene**	1.1	U	ng/L	P416453	
		Kepone	5.3	U	ng/L	P416453	
		Lambda-Cyhalothrin	0.98	I	ng/L	P416453	
		Methoprene	0.79	U	ng/L	P416453	

Field ID: G4NW0277

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339615	EPA 8270E	Methoxychlor	0.32	U	ng/L	P416453	
		MGK-264	0.21	U	ng/L	P416453	
		Mirex	0.37	U	ng/L	P416453	
		Oxychlordane	0.32	U	ng/L	P416453	
		Permethrin	2.0	I	ng/L	P416453	
		Phenothrin	0.95	U	ng/L	P416453	
		Piperonyl Butoxide	0.30	I J	ng/L	P416453	LCS
		Prallethrin	2.1	U	ng/L	P416453	
		Tau-Fluvalinate	0.26	U	ng/L	P416453	
		Tetramethrin	0.79	U	ng/L	P416453	MS
		Trans-Nonachlor	0.21	U	ng/L	P416453	
		Triclosan Methyl	0.16	U	ng/L	P416453	
		Trifluralin	0.21	U	ng/L	P416453	
		Chlordane	4.3	I	ng/L	P416453	
2339616	EPA 8321B	Toxaphene	16	U	ng/L	P416453	
		2,4-D	0.0020	U	ug/L	P416352	
		Acesulfame K	0.10	U	ug/L	P416535	
		2,4,5-T	0.0040	U	ug/L	P416352	
		AMPA	0.10	U	ug/L	P416535	
		Acetaminophen	0.0080	U	ug/L	P416352	
		Acetamiprid	0.0020	U	ug/L	P416352	
		Endothall	0.25	U	ug/L	P416535	
		Glufosinate	0.10	U	ug/L	P416535	
		Glyphosate	0.10	U	ug/L	P416535	
		Afidopyropen	0.0020	U	ug/L	P416352	
		Bentazon	8.0E-04	U	ug/L	P416352	
		Sucralose	0.19		ug/L	P416535	
		Benzovindiflupyr	0.0020	U	ug/L	P416352	
		Carbamazepine	8.0E-04	U	ug/L	P416352	
		Clothianidin	0.0020	U	ug/L	P416352	
		Dinotefuran	0.0020	U	ug/L	P416352	
		Diuron	0.0020	U	ug/L	P416352	
		Fenuron	0.032	U	ug/L	P416352	
		Fluridone	8.0E-04	U	ug/L	P416352	
		Imazapyr	0.0040	U	ug/L	P416352	
		Hydrocodone	0.0020	U	ug/L	P416352	
		Ibuprofen	0.080	U	ug/L	P416352	
		Imidacloprid	0.016		ug/L	P416352	MS
		Linuron	0.0040	U	ug/L	P416352	
		Mandestrobin	0.0020	U	ug/L	P416352	
		MCPP	0.0040	U	ug/L	P416352	
		Naproxen	0.0080	U	ug/L	P416352	
		Primidone	0.0040	U	ug/L	P416352	
		Pyraclostrobin	0.0020	U	ug/L	P416352	
		Silvex	0.0040	U	ug/L	P416352	

Field ID: G4NW0277

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339616	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P416352	
		Tolfenpyrad	0.0020	U	ug/L	P416352	
		Triclopyr	0.0040	U	ug/L	P416352	

Ref. Method and Comment:

EPA 8270E: MS accuracy for kepone not assessed due to high content of this parameter in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Sample Location: Locklin Lake Center

Collection Date/Time: 07/06/2022 11:40

Field ID: G4NW0437

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339603	DEP SOP: NU-094-1	Color (true)	9.1		PCU	P416282	
	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P416290	
	EPA 300.0 Rev. 2.1	Chloride	4.9		mg Cl/L	P416731	
		Sulfate	1.1		mg SO4/L	P416734	
	SM 2320 B-2011	Total Alkalinity	10		mg CaCO3/L	P416387	
	SM 2540 C-2011	TDS	25		mg/L	P416545	
	SM 2540 D-2011	TSS	9	I	mg/L	P416548	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P416404	
2339605	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P416421	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P416459	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P416651	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P416399	
	SM 5310 B-2011	Organic Carbon	2.9		mg C/L	P416395	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Lake Karick (Center) (also 33040210)

Collection Date/Time: 07/06/2022 09:45

Field ID: G4NW0274

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2339606	DEP SOP: NU-094-1	Color (true)	16		PCU	P416282	
	EPA 180.1 Rev. 2.0	Turbidity	0.80	I	NTU	P416290	
	EPA 300.0 Rev. 2.1	Chloride	2.2		mg Cl/L	P416731	
		Sulfate	0.35	I	mg SO4/L	P416734	
	SM 2320 B-2011	Total Alkalinity	2.7		mg CaCO3/L	P416387	
	SM 2540 C-2011	TDS	20	I	mg/L	P416545	
	SM 2540 D-2011	TSS	2	U	mg/L	P416548	
2339607	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P416404	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P416421	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P416391	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P416651	
	EPA 365.1 Rev. 2.0	Total-P	0.005		mg P/L	P416399	
2339618	SM 5310 B-2011	Organic Carbon	3.3		mg C/L	P416395	
	EPA 200.7 Rev. 4.4	Calcium	0.92		mg/L	P416378	
		Iron	420		ug/L	P416378	
		Magnesium	0.39		mg/L	P416378	
		Potassium	0.30	U	mg/L	P416378	
		Sodium	1.5	I	mg/L	P416378	
		Strontium	3.0	I	ug/L	P416378	
		Tin	3.0	U	ug/L	P416378	
		Titanium	0.75	U	ug/L	P416378	
		Vanadium	2.0	U	ug/L	P416378	
		Zinc	5.0	U	ug/L	P416378	
	EPA 200.8 Rev. 5.4	Aluminum	21		ug/L	P416378	
		Antimony	0.050	U	ug/L	P416378	
		Arsenic	0.55		ug/L	P416378	
		Barium	4.08		ug/L	P416378	
		Beryllium	0.014	I	ug/L	P416378	
		Boron	8.2		ug/L	P416378	
		Cadmium	0.020	U	ug/L	P416378	
		Chromium	0.40	U	ug/L	P416378	
		Cobalt	0.026	I	ug/L	P416378	
		Copper	0.40	U	ug/L	P416616	
		Lead	0.20	U	ug/L	P416378	
		Manganese	5.16		ug/L	P416378	
		Molybdenum	0.15	U	ug/L	P416378	
		Nickel	0.50	U	ug/L	P416616	
		Selenium	0.20	U	ug/L	P416378	
		Silver	0.010	U	ug/L	P416378	
		Thallium	0.10	U	ug/L	P416378	
	SM 2340 B-2011	Hardness	3.9		mg/L	P416378	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P416282

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416290

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416378

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416378

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416616

Component	Result	Code	Units
Copper	0.40	U	ug/L
Nickel	0.50	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416731

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416734

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416421

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416391

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416459

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416460

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416651

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416399

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

Reference Method: EPA 8270E
Batch ID: P416453

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: P416453

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
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416453

Component	Result	Code	Units
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P416453

Component	Result	Code	Units
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P416453

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B

Batch ID: P416352

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	0.0040	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: P416535

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P416535

Component	Result	Code	Units
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: SM 2320 B-2011
Batch ID: P416387

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

Reference Method: SM 2540 C-2011
Batch ID: P416545

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P416548

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P416404

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P416395

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: P416282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.5		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416290

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.2		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	102		P	85 - 115
Magnesium	101		P	85 - 115
Potassium	103		P	85 - 115
Sodium	103		P	85 - 115
Strontium	101		P	85 - 115
Tin	101		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	97.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	101		P	85 - 115
Barium	104		P	85 - 115
Beryllium	93.8		P	85 - 115
Boron	107		P	85 - 115
Cadmium	96.1		P	85 - 115
Chromium	98.4		P	85 - 115
Cobalt	101		P	85 - 115
Lead	102		P	85 - 115
Manganese	98.6		P	85 - 115
Molybdenum	99.3		P	85 - 115
Selenium	99.0		P	85 - 115
Silver	98.9		P	85 - 115
Thallium	98.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416616

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	99.5		P	85 - 115
Nickel	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416731

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416734

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416391

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P416399

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

Reference Method: EPA 8270E
Batch ID: P416453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	67.5		P	10 - 92.0
Alpha-BHC	98.7		P	75 - 107
Alpha-Chlordane	95.5		P	50 - 108
Beta-BHC	113		P	36 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P416453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	79.2		P	20 - 161
Bifenthrin	56.6		P	10 - 119
Carbophenothion	49.9		P	19 - 94.0
Chlorothalonil	83.7		P	26 - 186
Cis-Nonachlor	58.0		P	42 - 119
Cypermethrin	74.1		P	22 - 150
Dacthal	104		P	72 - 119
DDD-p,p'	74.7		P	45 - 107
DDE-p,p'	95.5		P	48 - 106
DDT-p,p'	84.7		P	48 - 110
Delta-BHC	120		P	54 - 140
Deltamethrin	101		P	22 - 189
Dichlobenil	116		P	36 - 117
Dicofol	73.4		P	46 - 155
Dieldrin	99.6		P	54 - 110
Endosulfan I	101		P	59 - 105
Endosulfan II	85.6		P	51 - 118
Endosulfan Sulfate	91.1		P	57 - 121
Endrin	80.0		P	10 - 120
Endrin Aldehyde	69.2		P	34 - 118
Endrin Ketone	105		P	69 - 177
Esfenvalerate	68.6		P	23 - 168
Ethalfuralin	80.1		P	49 - 99.0
Fenpropathrin	66.7		P	34 - 117
Gamma-BHC	116		P	72 - 117
Gamma-Chlordane	87.1		P	43 - 106
Heptachlor	80.4		P	41 - 98.0
Heptachlor Epoxide	96.6		P	57 - 106
Hexachlorobenzene	83.0		P	36 - 99.0
Kepone	64.7		P	16 - 215
Lambda-Cyhalothrin	64.3		P	21 - 177
Methoprene	55.4		P	10 - 119
Methoxychlor	104		P	60 - 112
MGK-264	105		P	26 - 122
Mirex	60.6		P	10 - 169
Oxychlordane	94.8		P	43 - 105
PCB-1016	104		P	48 - 112
PCB-1260	105		P	44 - 118
Permethrin	87.9		P	24 - 148
Phenothrin	55.0		P	10 - 106
Piperonyl Butoxide	144		F	10 - 139
Prallethrin	92.6		P	17 - 109
Tau-Fluvalinate	61.9		P	13 - 131
Tetramethrin	130		P	10 - 132
Trans-Nonachlor	86.2		P	44 - 106
Triclosan Methyl	99.9		P	59 - 109
Trifluralin	80.3		P	44 - 101

Reference Method: EPA 8276
Batch ID: P416453

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

Reference Method: EPA 8276

Batch ID: P416453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103		P	61 - 116
Toxaphene	122		P	48 - 124

Reference Method: EPA 8321B

Batch ID: P416352

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.2		P	40 - 150
2,4,5-T	52.8		P	40 - 150
Acetaminophen	89.6		P	30 - 150
Acetamiprid	68.2		P	40 - 150
Afidopyropen	40.1		P	30 - 150
Bentazon	53.8		P	30 - 150
Benzovindiflupyr	76.8		P	40 - 150
Carbamazepine	83.5		P	40 - 150
Clothianidin	96.4		P	40 - 150
Dinotefuran	94.1		P	40 - 150
Diuron	76.0		P	40 - 150
Fenuron	92.0		P	40 - 150
Fluridone	79.4		P	40 - 150
Hydrocodone	87.9		P	40 - 150
Ibuprofen	64.6		P	40 - 150
Imazapyr	89.1		P	40 - 150
Imidacloprid	97.8		P	40 - 150
Linuron	63.1		P	40 - 150
Mandestrobin	79.2		P	40 - 150
MCPP	73.0		P	40 - 150
Naproxen	43.8		P	40 - 150
Primidone	81.3		P	40 - 150
Pyraclostrobin	69.8		P	40 - 150
Silvex	58.4		P	40 - 150
Thiamethoxam	87.1		P	40 - 150
Tolfenpyrad	33.6		P	30 - 150
Triclopyr	54.8		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.7		P	40 - 150
AMPA	111		P	40 - 150
Endothall	103		P	40 - 150
Glufosinate	123		P	40 - 150
Glyphosate	104		P	40 - 150
Sucralose	97.1		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P416387

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P416404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P416395

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P416378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338848	Calcium	105	105	P/P	80 - 120
2338848	Iron	98.8	104	P/P	80 - 120
2338848	Magnesium	100	103	P/P	80 - 120
2338848	Potassium	106	105	P/P	80 - 120
2338848	Sodium	101	105	P/P	80 - 120
2338848	Strontium	101	102	P/P	80 - 120
2338848	Tin	102	101	P/P	80 - 120
2338848	Titanium	102	102	P/P	80 - 120
2338848	Vanadium	101	100	P/P	80 - 120
2338848	Zinc	97.0	96.7	P/P	80 - 120
2339748	Calcium	105		P	80 - 120
2339748	Iron	105		P	80 - 120
2339748	Magnesium	104		P	80 - 120
2339748	Potassium	105		P	80 - 120
2339748	Sodium	106		P	80 - 120
2339748	Strontium	104		P	80 - 120
2339748	Tin	100		P	80 - 120
2339748	Titanium	104		P	80 - 120
2339748	Vanadium	103		P	80 - 120
2339748	Zinc	97.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P416378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338848	Aluminum	100	99.8	P/P	80 - 120
2338848	Antimony	98.6	99.3	P/P	80 - 120
2338848	Arsenic	97.4	99.5	P/P	80 - 120
2338848	Barium	102	103	P/P	80 - 120
2338848	Beryllium	94.2	94.3	P/P	80 - 120
2338848	Boron	105	104	P/P	80 - 120
2338848	Cadmium	94.7	95.3	P/P	80 - 120
2338848	Chromium	96.9	97.9	P/P	80 - 120
2338848	Cobalt	98.3	99.4	P/P	80 - 120
2338848	Lead	101	101	P/P	80 - 120
2338848	Manganese	96.2	96.4	P/P	80 - 120
2338848	Molybdenum	98.8	98.9	P/P	80 - 120
2338848	Selenium	95.8	98.1	P/P	80 - 120
2338848	Silver	97.0	97.4	P/P	80 - 120
2338848	Thallium	97.3	99.0	P/P	80 - 120
2339748	Aluminum	99.6		P	80 - 120
2339748	Antimony	101		P	80 - 120
2339748	Arsenic	102		P	80 - 120
2339748	Barium	103		P	80 - 120
2339748	Beryllium	96.2		P	80 - 120
2339748	Boron	105		P	80 - 120
2339748	Cadmium	95.4		P	80 - 120
2339748	Chromium	93.7		P	80 - 120
2339748	Cobalt	99.6		P	80 - 120
2339748	Lead	102		P	80 - 120
2339748	Manganese	96.1		P	80 - 120
2339748	Molybdenum	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339748	Selenium	97.8		P	80 - 120
2339748	Silver	96.3		P	80 - 120
2339748	Thallium	97.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339618	Copper	91.4	96.9	P/P	80 - 120
2339618	Nickel	91.6	97.4	P/P	80 - 120
2339698	Copper	98.2		P	80 - 120
2339698	Nickel	97.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416731

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339681	Chloride	95.7		P	90 - 110
2339743	Chloride	95.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339681	Sulfate	92.2		P	90 - 110
2339743	Sulfate	94.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339604	Ammonia-N	97.0	95.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416391

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339376	Kjeldahl Nitrogen	91.6	96.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339532	Kjeldahl Nitrogen	99.3	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339379	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P416651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339556	NO2NO3-N	94.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P416399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339682	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P416453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339176	PCB-1016	99.8	102	P/P	46 - 111
2339176	PCB-1260	109	109	P/P	45 - 114
2339366	Aldrin	76.5	71.6	P/P	20 - 82.0
2339366	Alpha-BHC	107	103	P/P	71 - 109
2339366	Alpha-Chlordane	94.8	82.7	P/P	42 - 106
2339366	Beta-BHC	114	110	P/P	69 - 180
2339366	Beta-Cyfluthrin	127	130	P/P	18 - 175
2339366	Bifenthrin	85.0	93.0	P/P	21 - 128
2339366	Carbophenothion	74.6	70.5	P/P	10 - 126
2339366	Chlorothalonil	126	139	P/P	10 - 300
2339366	Cis-Nonachlor	68.8	75.0	P/P	34 - 106
2339366	Cypermethrin	120	116	P/P	22 - 158
2339366	Dacthal	105	95.9	P/P	54 - 116
2339366	DDD-p,p'	86.5	78.4	P/P	34 - 107
2339366	DDE-p,p'	93.4	88.0	P/P	33 - 110
2339366	DDT-p,p'	92.8	86.2	P/P	50 - 122
2339366	Delta-BHC	120	121	P/P	77 - 193
2339366	Deltamethrin	164	169	P/P	10 - 195
2339366	Dichlobenil	93.3	104	P/P	25 - 113
2339366	Dicofol	75.7	72.4	P/P	38 - 247
2339366	Dieldrin	89.7	81.2	P/P	45 - 118
2339366	Endosulfan I	94.2	86.9	P/P	51 - 106
2339366	Endosulfan II	92.1	93.4	P/P	37 - 122
2339366	Endosulfan Sulfate	80.6	82.0	P/P	43 - 132
2339366	Endrin	89.0	89.5	P/P	29 - 101
2339366	Endrin Aldehyde	68.5	66.5	P/P	19 - 110
2339366	Endrin Ketone	111	104	P/P	60 - 140
2339366	Esfenvalerate	120	122	P/P	26 - 199
2339366	Ethalfuralin	89.0	82.7	P/P	45 - 99.0
2339366	Fenpropathrin	96.3	93.5	P/P	35 - 120
2339366	Gamma-BHC	116	112	P/P	63 - 128
2339366	Gamma-Chlordane	84.9	84.5	P/P	40 - 104
2339366	Heptachlor	81.5	77.4	P/P	36 - 97.0
2339366	Heptachlor Epoxide	117	77.0	P/P	49 - 184
2339366	Hexachlorobenzene	84.8	85.2	P/P	39 - 96.0
2339366	Lambda-Cyhalothrin	106	113	P/P	21 - 193
2339366	Methoprene	77.7	72.3	P/P	20 - 106
2339366	Methoxychlor	104	100	P/P	53 - 118
2339366	MGK-264	107	97.8	P/P	40 - 118
2339366	Mirex	71.7	72.9	P/P	26 - 92.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P416453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339366	Oxychlordane	95.9	83.5	P/P	44 - 99.0
2339366	Permethrin	129	124	P/P	33 - 182
2339366	Phenothrin	96.5	93.0	P/P	10 - 129
2339366	Piperonyl Butoxide	164	174	P/P	10 - 211
2339366	Prallethrin	99.2	89.9	P/P	24 - 113
2339366	Tau-Fluvalinate	117	126	P/P	14 - 149
2339366	Tetramethrin	159	149	F/P	17 - 151
2339366	Trans-Nonachlor	91.6	88.9	P/P	42 - 102
2339366	Triclosan Methyl	97.2	80.4	P/P	48 - 108
2339366	Trifluralin	87.5	87.0	P/P	47 - 96.0

Reference Method: EPA 8276

Batch ID: P416453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339176	Chlordane	112	107	P/P	53 - 126
2339176	Toxaphene	144	144	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P416352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339492	2,4-D	82.4	76.3	P/P	40 - 150
2339492	2,4,5-T	56.3	46.9	P/P	40 - 150
2339492	Acetaminophen	123	115	P/P	30 - 150
2339492	Acetamiprid	90.4	112	P/P	40 - 150
2339492	Afidopyropen	64.5	75.4	P/P	30 - 150
2339492	Bentazon	43.2	46.3	P/P	30 - 150
2339492	Benzovindiflupyr	82.8	89.3	P/P	40 - 150
2339492	Carbamazepine	87.9	89.8	P/P	40 - 150
2339492	Clothianidin	109	121	P/P	40 - 150
2339492	Diuron	69.9	73.9	P/P	40 - 150
2339492	Fenuron	91.6	91.6	P/P	40 - 150
2339492	Fluridone	85.3	82.1	P/P	40 - 150
2339492	Hydrocodone	110	107	P/P	40 - 150
2339492	Ibuprofen	65.8	71.4	P/P	40 - 150
2339492	Imazapyr	90.1	88.7	P/P	40 - 150
2339492	Imidacloprid	132	151	P/F	40 - 150
2339492	Linuron	68.2	79.8	P/P	40 - 150
2339492	Mandestrobin	83.8	87.8	P/P	40 - 150
2339492	MCP	70.1	72.4	P/P	40 - 150
2339492	Naproxen	68.2	66.9	P/P	40 - 150
2339492	Primidone	113	111	P/P	40 - 150
2339492	Pyraclostrobin	84.1	87.4	P/P	40 - 150
2339492	Silvex	68.5	67.3	P/P	40 - 150
2339492	Tolfenpyrad	43.2	48.6	P/P	30 - 150
2339492	Triclopyr	58.5	56.7	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P416535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P416535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2338847	Acesulfame K	74.7	77.2	P/P	40 - 150
2338847	AMPA	116	118	P/P	40 - 150
2338847	Endothall	100	97.4	P/P	40 - 150
2338847	Glufosinate	110	117	P/P	40 - 150
2338847	Glyphosate	106	105	P/P	40 - 150
2338847	Sucralose	96.6	96.7	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P416404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339553	Fluoride	104	103	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P416395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2339524	Organic Carbon	99.9	99.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P416282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339602	Color (true)	0.408	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P416290

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339270	Turbidity	6.36	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P416378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338848	Calcium	0.135	Spike	P	0 - 20
2338848	Iron	5.50	Spike	P	0 - 20
2338848	Magnesium	2.46	Spike	P	0 - 20
2338848	Potassium	0.980	Spike	P	0 - 20
2338848	Sodium	2.79	Spike	P	0 - 20
2338848	Strontium	0.826	Spike	P	0 - 20
2338848	Tin	1.10	Spike	P	0 - 20
2338848	Titanium	0.371	Spike	P	0 - 20
2338848	Vanadium	0.343	Spike	P	0 - 20
2338848	Zinc	0.330	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338848	Aluminum	0.500	Spike	P	0 - 20
2338848	Antimony	0.754	Spike	P	0 - 20
2338848	Arsenic	2.07	Spike	P	0 - 20
2338848	Barium	0.873	Spike	P	0 - 20
2338848	Beryllium	0.146	Spike	P	0 - 20
2338848	Boron	0.344	Spike	P	0 - 20
2338848	Cadmium	0.588	Spike	P	0 - 20
2338848	Chromium	0.967	Spike	P	0 - 20
2338848	Cobalt	1.15	Spike	P	0 - 20
2338848	Lead	0.531	Spike	P	0 - 20
2338848	Manganese	0.202	Spike	P	0 - 20
2338848	Molybdenum	0.114	Spike	P	0 - 20
2338848	Selenium	2.31	Spike	P	0 - 20
2338848	Silver	0.413	Spike	P	0 - 20
2338848	Thallium	1.72	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P416616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339618	Copper	5.79	Spike	P	0 - 20
2339618	Nickel	6.08	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416731

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339681	Chloride	0.443	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339681	Sulfate	0.455	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P416421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339604	Ammonia-N	1.16	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416391

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339376	Kjeldahl Nitrogen	2.92	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339532	Kjeldahl Nitrogen	4.82	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P416460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339379	Kjeldahl Nitrogen	0.0689	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416651

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339556	NO2NO3-N	1.87	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P416399

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339682	Total-P	1.52	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P416453

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339176	PCB-1016	2.05	Spike	P	0 - 32
2339176	PCB-1260	0.293	Spike	P	0 - 31
2339366	Aldrin	6.73	Spike	P	0 - 41
2339366	Alpha-BHC	4.20	Spike	P	0 - 25
2339366	Alpha-Chlordane	12.4	Spike	P	0 - 33
2339366	Beta-BHC	3.58	Spike	P	0 - 36
2339366	Beta-Cyfluthrin	2.14	Spike	P	0 - 42
2339366	Bifenthrin	8.94	Spike	P	0 - 53
2339366	Carbophenothion	5.71	Spike	P	0 - 30
2339366	Chlorothalonil	9.55	Spike	P	0 - 71
2339366	Cis-Nonachlor	8.59	Spike	P	0 - 29
2339366	Cypermethrin	3.27	Spike	P	0 - 40
2339366	Dacthal	8.72	Spike	P	0 - 26
2339366	DDD-p,p'	9.85	Spike	P	0 - 39
2339366	DDE-p,p'	5.97	Spike	P	0 - 33
2339366	DDT-p,p'	7.38	Spike	P	0 - 40
2339366	Delta-BHC	1.34	Spike	P	0 - 37
2339366	Deltamethrin	2.66	Spike	P	0 - 100
2339366	Dichlobenil	11.1	Spike	P	0 - 40
2339366	Dicofol	4.37	Spike	P	0 - 31
2339366	Dieldrin	6.65	Spike	P	0 - 27
2339366	Endosulfan I	8.07	Spike	P	0 - 23
2339366	Endosulfan II	1.45	Spike	P	0 - 28
2339366	Endosulfan Sulfate	1.72	Spike	P	0 - 38
2339366	Endrin	0.478	Spike	P	0 - 63
2339366	Endrin Aldehyde	2.97	Spike	P	0 - 60
2339366	Endrin Ketone	6.12	Spike	P	0 - 37
2339366	Esfenvalerate	1.75	Spike	P	0 - 52
2339366	Ethalfuralin	7.25	Spike	P	0 - 23
2339366	Fenpropathrin	2.97	Spike	P	0 - 32
2339366	Gamma-BHC	3.15	Spike	P	0 - 17
2339366	Gamma-Chlordane	0.503	Spike	P	0 - 40
2339366	Heptachlor	5.17	Spike	P	0 - 29
2339366	Heptachlor Epoxide	19.0	Spike	P	0 - 25
2339366	Hexachlorobenzene	0.484	Spike	P	0 - 36
2339366	Kepone	3.24	Spike	P	0 - 93
2339366	Lambda-Cyhalothrin	6.46	Spike	P	0 - 55
2339366	Methoprene	7.13	Spike	P	0 - 53
2339366	Methoxychlor	4.26	Spike	P	0 - 29
2339366	MGK-264	9.34	Spike	P	0 - 35
2339366	Mirex	1.68	Spike	P	0 - 46
2339366	Oxychlordane	13.9	Spike	P	0 - 29
2339366	Permethrin	3.89	Spike	P	0 - 44
2339366	Phenothrin	3.66	Spike	P	0 - 56

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P416453

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339366	Piperonyl Butoxide	5.80	Spike	P	0 - 100
2339366	Prallethrin	9.80	Spike	P	0 - 42
2339366	Tau-Fluvalinate	6.94	Spike	P	0 - 54
2339366	Tetramethrin	6.21	Spike	P	0 - 51
2339366	Trans-Nonachlor	3.01	Spike	P	0 - 37
2339366	Triclosan Methyl	18.9	Spike	P	0 - 31
2339366	Trifluralin	0.586	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P416453

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339176	Chlordane	4.99	Spike	P	0 - 25
2339176	Toxaphene	0.200	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P416352

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339492	2,4-D	7.75	Spike	P	0 - 30
2339492	2,4,5-T	18.1	Spike	P	0 - 30
2339492	Acetaminophen	6.53	Spike	P	0 - 30
2339492	Acetamiprid	21.5	Spike	P	0 - 30
2339492	Afidopyropen	15.5	Spike	P	0 - 30
2339492	Bentazon	6.92	Spike	P	0 - 30
2339492	Benzovindiflupyr	7.54	Spike	P	0 - 30
2339492	Carbamazepine	2.16	Spike	P	0 - 30
2339492	Clothianidin	6.59	Spike	P	0 - 30
2339492	Dinotefuran	2.99	Spike	P	0 - 30
2339492	Diuron	5.58	Spike	P	0 - 30
2339492	Fenuron	0.0265	Spike	P	0 - 30
2339492	Fluridone	3.83	Spike	P	0 - 30
2339492	Hydrocodone	3.28	Spike	P	0 - 30
2339492	Ibuprofen	8.19	Spike	P	0 - 30
2339492	Imazapyr	1.02	Spike	P	0 - 30
2339492	Imidacloprid	9.31	Spike	P	0 - 30
2339492	Linuron	15.8	Spike	P	0 - 30
2339492	Mandestrobin	4.57	Spike	P	0 - 30
2339492	MCP	3.20	Spike	P	0 - 30
2339492	Naproxen	1.85	Spike	P	0 - 30
2339492	Primidone	2.01	Spike	P	0 - 30
2339492	Pyraclostrobin	3.87	Spike	P	0 - 30
2339492	Silvex	1.80	Spike	P	0 - 30
2339492	Thiamethoxam	9.03	Spike	P	0 - 30
2339492	Tolfenpyrad	11.8	Spike	P	0 - 30
2339492	Triclopyr	3.24	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P416535

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338847	Acesulfame K	3.24	Spike	P	0 - 30
2338847	AMPA	1.64	Spike	P	0 - 30
2338847	Endothall	2.65	Spike	P	0 - 30
2338847	Glufosinate	5.62	Spike	P	0 - 30
2338847	Glyphosate	0.887	Spike	P	0 - 30
2338847	Sucralose	0.148	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P416387

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339553	Total Alkalinity	0.0629	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011

Batch ID: P416545

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2338875	TDS	5.46	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P416404

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339553	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P416395

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2339524	Organic Carbon	0.138	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2339615

Field Sample ID: G4NW0277

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	114	P	29 - 130
EPA 8270E	Decachlorobiphenyl	75.9	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	81.3	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	87.0	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	101	P	30 - 101
EPA 8276	PCNB	101	P	48 - 121

Lab Sample ID: 2339616

Field Sample ID: G4NW0277

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	121	P	30 - 160
EPA 8321B	Carbamazepine-d10	92.1	P	30 - 160
EPA 8321B	Diuron-d6	63.2	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	99.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.1	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	97.1	P	30 - 160

Lab Sample ID: 2339617

Field Sample ID: G4NW0506

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.0	P	30 - 160
EPA 8321B	Diuron-d6	62.1	P	30 - 160
EPA 8321B	Endothall-d6	98.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	100	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.7	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	97.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A113337

Included Lab Sample IDs: 2339602, 2339603, 2339606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A113341

Included Lab Sample IDs: 2339602, 2339603, 2339606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105

Reference Method: SM 2320 B-2011

Run ID: A113406

Included Lab Sample IDs: 2339602, 2339603, 2339606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.1	98.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A113406

Included Lab Sample IDs: 2339602, 2339603, 2339606

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

Reference Method: SM 5310 B-2011

Run ID: A113409

Included Lab Sample IDs: 2339604, 2339605, 2339607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.9	99.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113417

Included Lab Sample IDs: 2339604, 2339605, 2339607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.4	97.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113424

Included Lab Sample IDs: 2339618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.3	101	P/P	90 - 110
Antimony	98.1	98.6	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Barium	99.0	99.3	P/P	90 - 110
Beryllium	96.2	95.8	P/P	90 - 110
Boron	100	102	P/P	90 - 110
Cadmium	97.1	98.4	P/P	90 - 110
Chromium	98.1	99.0	P/P	90 - 110
Cobalt	100	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113424

Included Lab Sample IDs: 2339618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	99.4	98.4	P/P	90 - 110
Manganese	98.3	98.6	P/P	90 - 110
Molybdenum	98.6	99.4	P/P	90 - 110
Selenium	97.6	97.5	P/P	90 - 110
Silver	98.4	99.4	P/P	90 - 110
Thallium	97.5	94.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A113427

Included Lab Sample IDs: 2339618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	98.9	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	101	100	P/P	90 - 110
Sodium	104	101	P/P	90 - 110
Strontium	102	99.0	P/P	90 - 110
Tin	98.2	96.7	P/P	90 - 110
Titanium	101	99.2	P/P	90 - 110
Vanadium	99.7	98.2	P/P	90 - 110
Zinc	94.9	94.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A113460

Included Lab Sample IDs: 2339616, 2339617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	120	115	P/P	60 - 160
Endothall	97.0	94.4	P/P	60 - 160
Glufosinate	106	113	P/P	60 - 160
Glyphosate	112	108	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A113462

Included Lab Sample IDs: 2339602, 2339603, 2339606

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.2	96.5	P/P	90 - 110
Chloride	96.5	98.5	P/P	90 - 110
Sulfate	96.0	96.2	P/P	90 - 110
Sulfate	96.2	98.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A113464

Included Lab Sample IDs: 2339616, 2339617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	108	P/P	50 - 150
2,4,5-T	115	117	P/P	50 - 150
Acetaminophen	107	108	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A113464

Included Lab Sample IDs: 2339616, 2339617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetamiprid	112	113	P/P	50 - 150
Afidopyropen	102	107	P/P	50 - 150
Bentazon	89.9	92.9	P/P	50 - 160
Benzovindiflupyr	109	117	P/P	50 - 150
Carbamazepine	112	114	P/P	60 - 150
Clothianidin	107	97.1	P/P	60 - 150
Dinotefuran	107	106	P/P	50 - 150
Diuron	105	100	P/P	60 - 160
Fenuron	104	101	P/P	60 - 150
Fluridone	109	103	P/P	60 - 160
Hydrocodone	105	104	P/P	60 - 150
Ibuprofen	113	125	P/P	50 - 160
Imazapyr	101	108	P/P	50 - 150
Imidacloprid	98.8	111	P/P	60 - 150
Linuron	109	104	P/P	60 - 150
Mandestrobin	110	109	P/P	50 - 150
MCPP	112	116	P/P	50 - 150
Naproxen	108	131	P/P	50 - 160
Primidone	93.8	97.7	P/P	60 - 150
Pyraclostrobin	108	109	P/P	60 - 150
Silvex	104	119	P/P	50 - 150
Thiamethoxam	103	102	P/P	50 - 150
Tolfenpyrad	99.3	97.3	P/P	60 - 150
Triclopyr	125	112	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A113490

Included Lab Sample IDs: 2339604, 2339605, 2339607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	99.5	P/P	90 - 110
Total-P	99.5	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113493

Included Lab Sample IDs: 2339607

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

Reference Method: EPA 8321B

Run ID: A113494

Included Lab Sample IDs: 2339616, 2339617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.5	94.2	P/P	60 - 160
Sucralose	98.9	97.8	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A113503

Included Lab Sample IDs: 2339604, 2339605, 2339607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	96.0	96.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113519

Included Lab Sample IDs: 2339618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	94.1	92.4	P/P	90 - 110
Nickel	94.3	92.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113524

Included Lab Sample IDs: 2339605

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	97.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A113528

Included Lab Sample IDs: 2339615

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	95.0		P	80 - 120
PCB-1260	103		P	80 - 120

Reference Method: EPA 8270E

Run ID: A113560

Included Lab Sample IDs: 2339615

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	107		P	80 - 120
Alpha-Chlordane	106		P	80 - 120
Beta-BHC	103		P	80 - 120
Beta-Cyfluthrin	114		P	80 - 120
Bifenthrin	117		P	80 - 120
Carbophenothion	98.8		P	80 - 120
Chlorothalonil	97.1		P	80 - 120
Cis-Nonachlor	114		P	80 - 120
Cypermethrin	107		P	80 - 120
Dacthal	99.1		P	80 - 120
DDD-p,p'	117		P	80 - 120
DDE-p,p'	106		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	106		P	80 - 120
Deltamethrin	117		P	80 - 120
Dichlobenil	105		P	80 - 120
Dicofol	90.7		P	80 - 120
Dieldrin	99.8		P	80 - 120
Endosulfan I	106		P	80 - 120
Endosulfan II	118		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113560
Included Lab Sample IDs: 2339615

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	102		P	80 - 120
Endrin	113		P	80 - 120
Endrin Aldehyde	113		P	80 - 120
Endrin Ketone	114		P	80 - 120
Esfenvalerate	108		P	80 - 120
Ethalfuralin	94.9		P	80 - 120
Fenpropathrin	111		P	80 - 120
Gamma-BHC	108		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	105		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	97.3		P	80 - 120
Kepone	115		P	80 - 120
Lambda-Cyhalothrin	120		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	108		P	80 - 120
MGK-264	108		P	80 - 120
Mirex	112		P	80 - 120
Oxychlordane	101		P	80 - 120
Permethrin	119		P	80 - 120
Phenothrin	116		P	80 - 120
Piperonyl Butoxide	87.8		P	80 - 120
Prallethrin	111		P	80 - 120
Tau-Fluvalinate	116		P	80 - 120
Tetramethrin	113		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Triclosan Methyl	106		P	80 - 120
Trifluralin	92.4		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A113561
Included Lab Sample IDs: 2339604

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

Reference Method: EPA 8276
Run ID: A113601
Included Lab Sample IDs: 2339615

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.1		P	80 - 120
Toxaphene	113		P	80 - 120

* 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 SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	99.5				0.408	
EPA 180.1 Rev. 2.0	Turbidity	97.2				6.36	
EPA 200.7 Rev. 4.4	Calcium	104	105	105	105		0.135
	Iron	102	98.8	104	105		5.50
	Magnesium	101	100	103	104		2.46
	Potassium	103	106	105	105		0.980
	Sodium	103	101	105	106		2.79
	Strontium	101	101	102	104		0.826
	Tin	101	102	101	100		1.10
	Titanium	101	102	102	104		0.371
	Vanadium	100	103	101	100		0.343
	Zinc	97.5	97.0	96.7	97.0		0.330
EPA 200.8 Rev. 5.4	Aluminum	102	100	99.8	99.6		0.500
	Antimony	100	98.6	99.3	101		0.754
	Arsenic	101	97.4	99.5	102		2.07
	Barium	104	102	103	103		0.873
	Beryllium	93.8	94.2	94.3	96.2		0.146
	Boron	107	105	104	105		0.344
	Cadmium	96.1	94.7	95.3	95.4		0.588
	Chromium	98.4	96.9	97.9	93.7		0.967
	Cobalt	101	98.3	99.4	99.6		1.15
	Copper	99.5	91.4	96.9	98.2		5.79
	Lead	102	101	101	102		0.531
	Manganese	98.6	96.2	96.4	96.1		0.202
	Molybdenum	99.3	98.8	98.9	101		0.114
	Nickel	102	91.6	97.4	97.6		6.08
	Selenium	99.0	95.8	98.1	97.8		2.31
	Silver	98.9	97.0	97.4	96.3		0.413
	Thallium	98.6	97.3	99.0	97.3		1.72
EPA 300.0 Rev. 2.1	Chloride	98.0	95.7	95.4		0.443	
	Sulfate	97.6	92.2	94.7		0.455	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	97.0	95.8			1.16
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0	91.6	96.7			2.92
	Kjeldahl Nitrogen	109	99.3	104			4.82
	Kjeldahl Nitrogen	108	101	101			0.0689
EPA 353.2 Rev. 2.0	NO2NO3-N	96.5	94.0	96.0			1.87
EPA 365.1 Rev. 2.0	Total-P	103	104	106			1.52
EPA 8270E	Aldrin	67.5	76.5	71.6			6.73
	Alpha-BHC	98.7	107	103			4.20
	Alpha-Chlordane	95.5	94.8	82.7			12.4
	Beta-BHC	113	114	110			3.58
	Beta-Cyfluthrin	79.2	127	130			2.14
	Bifenthrin	56.6	85.0	93.0			8.94
	Carbophenothion	49.9	74.6	70.5			5.71
	Chlorothalonil	83.7	126	139			9.55
	Cis-Nonachlor	58.0	68.8	75.0			8.59
	Cypermethrin	74.1	120	116			3.27
	Dacthal	104	105	95.9			8.72
	DDD-p,p'	74.7	86.5	78.4			9.85
	DDE-p,p'	95.5	93.4	88.0			5.97
	DDT-p,p'	84.7	92.8	86.2			7.38
	Delta-BHC	120	120	121			1.34
	Deltamethrin	101	164	169			2.66
	Dichlobenil	116	93.3	104			11.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Dicofol	73.4	75.7	72.4			4.37
	Dieldrin	99.6	89.7	81.2			6.65
	Endosulfan I	101	94.2	86.9			8.07
	Endosulfan II	85.6	92.1	93.4			1.45
	Endosulfan Sulfate	91.1	80.6	82.0			1.72
	Endrin	80.0	89.0	89.5			0.478
	Endrin Aldehyde	69.2	68.5	66.5			2.97
	Endrin Ketone	105	111	104			6.12
	Esfenvalerate	68.6	120	122			1.75
	Ethalfuralin	80.1	89.0	82.7			7.25
	Fenpropathrin	66.7	96.3	93.5			2.97
	Gamma-BHC	116	116	112			3.15
	Gamma-Chlordane	87.1	84.9	84.5			0.503
	Heptachlor	80.4	81.5	77.4			5.17
	Heptachlor Epoxide	96.6	117	77.0			19.0
	Hexachlorobenzene	83.0	84.8	85.2			0.484
	Kepone	64.7					3.24
	Lambda-Cyhalothrin	64.3	106	113			6.46
	Methoprene	55.4	77.7	72.3			7.13
	Methoxychlor	104	104	100			4.26
	MGK-264	105	107	97.8			9.34
	Mirex	60.6	71.7	72.9			1.68
	Oxychlordane	94.8	95.9	83.5			13.9
	PCB-1016	104	99.8	102			2.05
	PCB-1260	105	109	109			0.293
	Permethrin	87.9	129	124			3.89
	Phenothrin	55.0	96.5	93.0			3.66
	Piperonyl Butoxide	144	164	174			5.80
	Prallethrin	92.6	99.2	89.9			9.80
	Tau-Fluvalinate	61.9	117	126			6.94
	Tetramethrin	130	159	149			6.21
	Trans-Nonachlor	86.2	91.6	88.9			3.01
	Triclosan Methyl	99.9	97.2	80.4			18.9
	Trifluralin	80.3	87.5	87.0			0.586
EPA 8276	Chlordane	103	112	107			4.99
	Toxaphene	122	144	144			0.200
EPA 8321B	2,4-D	71.2	82.4	76.3			7.75
	2,4,5-T	52.8	56.3	46.9			18.1
	Acesulfame K	78.7	74.7	77.2			3.24
	Acetaminophen	89.6	123	115			6.53
	Acetamiprid	68.2	90.4	112			21.5
	Afidopyropen	40.1	64.5	75.4			15.5
	AMPA	111	116	118			1.64
	Bentazon	53.8	43.2	46.3			6.92
	Benzovindiflupyr	76.8	82.8	89.3			7.54
	Carbamazepine	83.5	87.9	89.8			2.16
	Clothianidin	96.4	109	121			6.59
	Dinotefuran	94.1					2.99
	Diuron	76.0	69.9	73.9			5.58
	Endothall	103	100	97.4			2.65
	Fenuron	92.0	91.6	91.6			0.0265
	Fluridone	79.4	85.3	82.1			3.83
	Glufosinate	123	110	117			5.62
	Glyphosate	104	106	105			0.887

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Hydrocodone	87.9	110	107		3.28
	Ibuprofen	64.6	65.8	71.4		8.19
	Imazapyr	89.1	90.1	88.7		1.02
	Imidacloprid	97.8	132	151		9.31
	Linuron	63.1	68.2	79.8		15.8
	Mandestrobin	79.2	83.8	87.8		4.57
	MCPP	73.0	70.1	72.4		3.20
	Naproxen	43.8	68.2	66.9		1.85
	Primidone	81.3	113	111		2.01
	Pyraclostrobin	69.8	84.1	87.4		3.87
	Silvex	58.4	68.5	67.3		1.80
	Sucralose	97.1	96.6	96.7		0.148
	Thiamethoxam	87.1				9.03
	Tolfenpyrad	33.6	43.2	48.6		11.8
	Triclopyr	54.8	58.5	56.7		3.24
SM 2320 B-2011	Total Alkalinity	101			0.0629	
SM 2540 C-2011	TDS				5.46	
SM 4500-F- C-2011	Fluoride	102	104	103		0.480
SM 5310 B-2011	Organic Carbon	97.8	99.9	99.7		0.138

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2339602, 2339603, 2339606
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2339602, 2339603, 2339606
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2339618
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2339618
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2339602, 2339603, 2339606
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2339602, 2339603, 2339606
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2339604, 2339605, 2339607
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2339604, 2339605, 2339607
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2339604, 2339605, 2339607
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2339604, 2339605, 2339607
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2339615
EPA 8270E	PCBs in water matrices by GC/MS/MS	2339615
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2339615
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2339616, 2339617
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2339602, 2339603, 2339606
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2339618
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2339602, 2339603, 2339606
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2339602, 2339603, 2339606
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2339602, 2339603, 2339606
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2339604, 2339605, 2339607

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	07/07/2022			07/07/2022 14:41	Blanca Fach	2339602
	07/07/2022			07/07/2022 14:43	Blanca Fach	2339603
	07/07/2022			07/07/2022 14:44	Blanca Fach	2339606
EPA 180.1 Rev. 2.0	07/07/2022			07/07/2022 14:21	Anna M. Plaviak	2339602
	07/07/2022			07/07/2022 14:22	Anna M. Plaviak	2339603
	07/07/2022			07/07/2022 14:25	Anna M. Plaviak	2339606
EPA 200.7 Rev. 4.4	07/07/2022	07/11/2022 09:57	Mackenzie Hunt	07/11/2022 20:35	McKinley C Carter	2339618
EPA 200.8 Rev. 5.4	07/07/2022	07/11/2022 09:57	Mackenzie Hunt	07/11/2022 18:09	Alexander Thompson	2339618
	07/07/2022	07/14/2022 09:21	Mackenzie Hunt	07/15/2022 00:43	Emily M Philpot	2339618
EPA 300.0 Rev. 2.1	07/07/2022			07/14/2022 21:06	Anna M. Plaviak	2339602
	07/07/2022			07/14/2022 21:42	Anna M. Plaviak	2339603
	07/07/2022			07/14/2022 21:54	Anna M. Plaviak	2339606
EPA 350.1 Rev. 2.0	07/07/2022			07/11/2022 11:55	Ping Hua	2339604
	07/07/2022			07/11/2022 12:03	Ping Hua	2339605
	07/07/2022			07/11/2022 12:05	Ping Hua	2339607
EPA 351.2 Rev. 2.0	07/07/2022	07/12/2022 16:32	Samantha L Bates	07/13/2022 16:47	Alexandra J Mattheus	2339607
	07/07/2022	07/13/2022 14:48	Samantha L Bates	07/14/2022 13:39	Alexandra J Mattheus	2339605
	07/07/2022	07/13/2022 14:48	Samantha L Bates	07/18/2022 11:53	Alexandra J Mattheus	2339604
EPA 353.2 Rev. 2.0	07/07/2022			07/14/2022 10:50	Judith K. Clark	2339604
	07/07/2022			07/14/2022 10:51	Judith K. Clark	2339605
	07/07/2022			07/14/2022 10:52	Judith K. Clark	2339607
EPA 365.1 Rev. 2.0	07/07/2022	07/13/2022 09:52	Adam P Silver	07/13/2022 17:50	James L Waggeberby	2339604
	07/07/2022	07/13/2022 09:52	Adam P Silver	07/13/2022 17:58	James L Waggeberby	2339605
	07/07/2022	07/13/2022 09:52	Adam P Silver	07/13/2022 17:59	James L Waggeberby	2339607
EPA 8270E	07/07/2022	07/12/2022 08:22	Rasheda Ghaffari	07/14/2022 23:01	Arthur Maknenko	2339615
	07/07/2022	07/12/2022 08:22	Rasheda Ghaffari	07/17/2022 04:49	Michael Poppell	2339615
EPA 8276	07/07/2022	07/12/2022 08:22	Rasheda Ghaffari	07/19/2022 08:50	Julie Wi	2339615
EPA 8321B	07/07/2022	07/11/2022 10:00	Umesh Chiluwal	07/11/2022 14:26	Umesh Chiluwal	2339616
	07/07/2022	07/11/2022 10:00	Umesh Chiluwal	07/11/2022 14:39	Umesh Chiluwal	2339617
	07/07/2022	07/11/2022 10:00	Umesh Chiluwal	07/12/2022 00:06	Umesh Chiluwal	2339616
	07/07/2022	07/11/2022 10:00	Umesh Chiluwal	07/12/2022 00:21	Umesh Chiluwal	2339617
	07/07/2022	07/12/2022 09:00	June Rhew	07/12/2022 21:57	Juyoung Kim	2339616
	07/07/2022	07/12/2022 09:00	June Rhew	07/12/2022 22:18	Juyoung Kim	2339617
SM 2320 B-2011	07/07/2022			07/09/2022 10:04	Dale L. Simmons	2339602
	07/07/2022			07/09/2022 10:17	Dale L. Simmons	2339603
	07/07/2022			07/09/2022 10:27	Dale L. Simmons	2339606
SM 2340 B-2011	07/07/2022			07/11/2022 20:35	McKinley C Carter	2339618
SM 2540 C-2011	07/07/2022			07/08/2022 15:22	Yijie Li	2339602, 2339603, 2339606
SM 2540 D-2011	07/07/2022			07/08/2022 15:22	Yijie Li	2339602, 2339603, 2339606
SM 4500-F- C-2011	07/07/2022			07/09/2022 10:04	Dale L. Simmons	2339602

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500-F- C-2011	07/07/2022			07/09/2022 10:17	Dale L. Simmons	2339603
	07/07/2022			07/09/2022 10:27	Dale L. Simmons	2339606
SM 5310 B-2011	07/07/2022			07/09/2022 02:07	Khloe J Berg	2339604
	07/07/2022			07/09/2022 02:23	Khloe J Berg	2339605
	07/07/2022			07/09/2022 02:38	Khloe J Berg	2339607