

Chemical Analysis Report

NW-DIST-2022-09-14-01

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

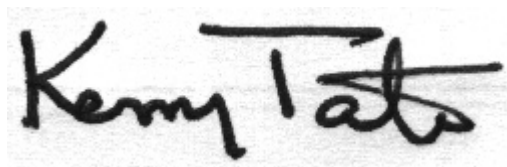
Event Description: **Navarre Run**
Request ID: **RQ-2022-09-19-27**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
Attn: Myranda Butler

For additional information please contact
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 30-SEP-2022 11:20

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

NON-CONFORMANCE REPORT INCLUDED

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: Discharge from Tiger Point Golf Course at
Maplewood Drive**

Collection Date/Time: 09/13/2022 10:00

Field ID: G4NW0211

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356129	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P419570	
	SM 2320 B-2011	Total Alkalinity	31		mg CaCO3/L	P419768	
	SM 2540 D-2011	TSS	4	I	mg/L	P419848	
	SM 4500-F- C-2011	Fluoride	0.041	I	mg F/L	P419772	
2356130	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P419725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P419681	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P420057	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P419670	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P419756	
2356150	EPA 200.7 Rev. 4.4	Calcium	7.33		mg/L	P419590	
		Iron	520		ug/L	P419590	
		Magnesium	2.60		mg/L	P419590	
		Potassium	2.4		mg/L	P419590	
		Sodium	9.6		mg/L	P419590	
		Strontium	25.0		ug/L	P419590	
		Tin	3.0	U	ug/L	P419590	
		Titanium	1.5	I	ug/L	P419590	
		Vanadium	2.0	U	ug/L	P419590	
		Zinc	5.0	U	ug/L	P419590	
		Aluminum	241		ug/L	P419590	
		Antimony	0.062	I	ug/L	P419590	
	EPA 200.8 Rev. 5.4	Arsenic	7.00		ug/L	P419590	
		Barium	6.17		ug/L	P419590	
		Beryllium	0.010	U	ug/L	P419590	
		Boron	48.1		ug/L	P419590	
		Cadmium	0.020	U	ug/L	P419590	
		Chromium	1.1	I	ug/L	P419590	
		Cobalt	0.090		ug/L	P419590	
		Copper	0.68	I	ug/L	P419590	
		Lead	0.20	U	ug/L	P419590	
		Manganese	15.6		ug/L	P419590	
		Molybdenum	0.18	I	ug/L	P419590	
		Nickel	0.53	I	ug/L	P419590	
		Selenium	0.27	I	ug/L	P419590	
		Silver	0.010	U	ug/L	P419590	
		Thallium	0.10	U	ug/L	P419590	
	SM 2340 B-2011	Hardness	29.0		mg/L	P419590	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Williams Creek upstream of Hwy 98

Collection Date/Time: 09/13/2022 10:43

Field ID: G4NW0531

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356131	DEP SOP: NU-094-1	Color (true)	230		PCU	P419565	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P419570	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P419940	
		Sulfate	3.5		mg SO4/L	P419942	
	SM 2320 B-2011	Total Alkalinity	4.0		mg CaCO3/L	P419768	
	SM 2540 C-2011	TDS	75		mg/L	P419890	
	SM 2540 D-2011	TSS	3	I	mg/L	P419846	
2356132	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P419772	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P419725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		mg N/L	P419806	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P420057	
	EPA 365.1 Rev. 2.0	Total-P	0.092		mg P/L	P419670	
2356151	SM 5310 B-2011	Organic Carbon	18		mg C/L	P419756	
	EPA 200.7 Rev. 4.4	Calcium	3.69		mg/L	P419590	
		Iron	970		ug/L	P419590	
		Magnesium	0.98		mg/L	P419590	
		Potassium	1.4		mg/L	P419590	
		Sodium	11.1		mg/L	P419590	
		Strontium	17.4		ug/L	P419590	
		Tin	3.0	U	ug/L	P419590	
		Titanium	4.4		ug/L	P419590	
		Vanadium	2.0	U	ug/L	P419590	
		Zinc	5.0	U	ug/L	P419590	
	EPA 200.8 Rev. 5.4	Aluminum	577		ug/L	P419590	
		Antimony	0.052	I	ug/L	P419590	
		Arsenic	0.87		ug/L	P419590	
		Barium	7.32		ug/L	P419590	
		Beryllium	0.026	I	ug/L	P419590	
		Boron	39.3		ug/L	P419590	
		Cadmium	0.020	U	ug/L	P419590	
		Chromium	0.69	I	ug/L	P419590	
		Cobalt	0.136		ug/L	P419590	
		Copper	0.55	I	ug/L	P419590	
		Lead	0.32	I	ug/L	P419590	
		Manganese	8.99		ug/L	P419590	
		Molybdenum	0.15	U	ug/L	P419590	
		Nickel	0.56	I	ug/L	P419590	
		Selenium	0.20	U	ug/L	P419590	
		Silver	0.010	U	ug/L	P419590	
		Thallium	0.10	U	ug/L	P419590	
	SM 2340 B-2011	Hardness	13.2		mg/L	P419590	

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: Tom King Creek

Collection Date/Time: 09/13/2022 12:20

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356127	DEP SOP: NU-094-1	Color (true)	280		PCU	P419565	
	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P419570	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P419940	
		Sulfate	4.1		mg SO4/L	P419942	
	SM 2320 B-2011	Total Alkalinity	2.8		mg CaCO3/L	P419768	
	SM 2540 C-2011	TDS	99		mg/L	P419890	
	SM 2540 D-2011	TSS	3	I	mg/L	P419846	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P419772	
2356128	EPA 350.1 Rev. 2.0	Ammonia-N	0.038	Y	mg N/L	P419789	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72	Y	mg N/L	P419681	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24	Y	mg N/L	P420057	
	EPA 365.1 Rev. 2.0	Total-P	0.016	Y	mg P/L	P419670	
	SM 5310 B-2011	Organic Carbon	22	Y	mg C/L	P419713	
2356148	EPA 8270E	Aldrin	0.67	U	ng/L	P419543	
		Alpha-BHC	0.10	U	ng/L	P419543	
		Alpha-Chlordane	0.20	U	ng/L	P419543	
		PCB-1016	2.0	U	ng/L	P419543	
		Beta-BHC	0.10	U	ng/L	P419543	
		PCB-1221	2.0	U	ng/L	P419543	
		Beta-Cyfluthrin	1.3	U	ng/L	P419543	
		PCB-1232	2.0	U	ng/L	P419543	
		Bifenthrin	0.51	U	ng/L	P419543	
		PCB-1242	2.0	U	ng/L	P419543	
		Carbophenothion	0.92	U	ng/L	P419543	
		PCB-1248	2.0	U	ng/L	P419543	
		Chlorothalonil	1.3	U	ng/L	P419543	
		PCB-1254	2.0	U	ng/L	P419543	
		Cis-Nonachlor	0.20	U	ng/L	P419543	
		PCB-1260	2.0	U	ng/L	P419543	
		Cypermethrin	1.5	U	ng/L	P419543	
		Dacthal	0.15	U	ng/L	P419543	
		DDD-p,p'	0.26	U	ng/L	P419543	
		DDE-p,p'	0.20	U	ng/L	P419543	
		DDT-p,p'	0.26	U	ng/L	P419543	
		Delta-BHC	0.74	I	ng/L	P419543	
		Deltamethrin	1.3	UJ	ng/L	P419543	CCV
		Dichlobenil	0.26	U	ng/L	P419543	
		Dicofol	1.3	U	ng/L	P419543	
		Dieldrin	0.41	U	ng/L	P419543	
		Endosulfan I	0.41	U	ng/L	P419543	
		Endosulfan II	0.41	U	ng/L	P419543	
		Endosulfan Sulfate	0.31	U	ng/L	P419543	
		Endrin	0.41	U	ng/L	P419543	
		Endrin Aldehyde	0.77	U	ng/L	P419543	

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356148	EPA 8270E	Endrin Ketone	0.41	U	ng/L	P419543	MS
		Esfenvalerate	0.77	U	ng/L	P419543	
		Ethalfuralin	0.15	U	ng/L	P419543	
		Fenpropathrin	0.26	U	ng/L	P419543	
		Gamma-BHC	0.13	U	ng/L	P419543	
		Gamma-Chlordane	0.20	U	ng/L	P419543	
		Heptachlor	0.20	U	ng/L	P419543	
		Heptachlor Epoxide	0.26	U	ng/L	P419543	
		Hexachlorobenzene**	1.0	U	ng/L	P419543	
		Kepone	5.1	U	ng/L	P419543	
		Lambda-Cyhalothrin	0.77	U	ng/L	P419543	
		Methoprene	0.77	U	ng/L	P419543	
		Methoxychlor	0.31	U	ng/L	P419543	
		MGK-264	0.20	U	ng/L	P419543	
		Mirex	0.36	U	ng/L	P419543	
		Oxychlordane	0.31	U	ng/L	P419543	
		Permethrin	1.6	U	ng/L	P419543	
		Phenothrin	0.92	U	ng/L	P419543	
		Piperonyl Butoxide	0.15	U	ng/L	P419543	
		Prallethrin	2.0	U	ng/L	P419543	
		Tau-Fluvalinate	0.26	U	ng/L	P419543	
		Tetramethrin	0.77	U	ng/L	P419543	
		Trans-Nonachlor	0.20	U	ng/L	P419543	
		Triclosan Methyl	0.15	U	ng/L	P419543	
		Trifluralin	0.20	U	ng/L	P419543	
	EPA 8276	Chlordane	2.6	U	ng/L	P419543	
		Toxaphene	15	U	ng/L	P419543	
		2,4-D	0.0020	U	ug/L	P419624	
2356149	EPA 8321B	Acesulfame K	0.17	I	ug/L	P419485	MS
		2,4,5-T	0.0040	U	ug/L	P419624	
		AMPA	0.10	U	ug/L	P419485	
		Acetaminophen	0.0080	U	ug/L	P419624	
		Acetamiprid	0.0020	U	ug/L	P419624	
		Endothall	0.25	U	ug/L	P419485	
		Glufosinate	0.10	U	ug/L	P419485	
		Glyphosate	0.10	U	ug/L	P419485	
		Afidopyropen	0.0020	U	ug/L	P419624	
		Sucralose	2.3		ug/L	P419485	
		Bentazon	0.0056		ug/L	P419624	MS
		Benzovindiflupyr	0.0020	U	ug/L	P419624	
		Carbamazepine	8.0E-04	U	ug/L	P419624	
		Clothianidin	0.0049	I	ug/L	P419624	
		Dinotefuran	0.0020	U	ug/L	P419624	
		Diuron	0.0020	U	ug/L	P419624	
		Fenuron	0.016	U	ug/L	P419624	

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2356149	EPA 8321B	Fluridone	8.0E-04	U	ug/L	P419624	
		Imazapyr	0.0040	U	ug/L	P419624	MS
		Hydrocodone	0.0020	U	ug/L	P419624	
		Ibuprofen	0.020	U	ug/L	P419624	
		Imidacloprid	0.018		ug/L	P419624	
		Linuron	0.0040	U	ug/L	P419624	
		Mandestrobin	0.0020	U	ug/L	P419624	
		MCPP	0.0023	I	ug/L	P419624	MS
		Naproxen	0.0080	U	ug/L	P419624	
		Primidone	0.0040	U	ug/L	P419624	
		Pyraclostrobin	0.0020	U	ug/L	P419624	
		Silvex	0.0040	U	ug/L	P419624	
		Thiamethoxam	0.0020	U	ug/L	P419624	MS
		Tolfenpyrad	0.0020	U	ug/L	P419624	
		Triclopyr	0.0040	U	ug/L	P419624	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample. The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 353.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 365.1 Rev. 2.0: Total-P: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

SM 5310 B-2011: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

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

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

Non-Conformance Report

NCR ID: 9549

Event(s)

NW-DIST-2022-09-14-01

Job(s)

TLH-2022-09-14-05

Sample(s)

2356128

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory.

H2SO4 Lot# SA2145160 | Expiration Date: 06/02/2023

Authorized by/Date: Kyle Klug 9/21/2022

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P419565

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419570

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419590

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: P419590

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
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419940

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419942

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419725

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419681

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420057

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419670

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

Reference Method: EPA 8270E
Batch ID: P419543

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P419543

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P419543

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276

Batch ID: P419543

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: P419485

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

Reference Method: EPA 8321B

Batch ID: P419624

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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	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: SM 2320 B-2011

Batch ID: P419768

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P419768

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P419890

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419846

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419848

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P419713

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2011
Batch ID: P419756

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: P419565

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419570

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	105		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	104		P	85 - 115
Sodium	104		P	85 - 115
Strontium	102		P	85 - 115
Tin	104		P	85 - 115
Titanium	99.3		P	85 - 115
Vanadium	98.5		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419590

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	105		P	85 - 115
Barium	104		P	85 - 115
Beryllium	97.1		P	85 - 115
Boron	105		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	100		P	85 - 115
Copper	104		P	85 - 115
Lead	93.4		P	85 - 115
Manganese	100		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	104		P	85 - 115
Selenium	102		P	85 - 115
Silver	88.1		P	85 - 115
Thallium	99.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419940

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.5		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419942

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: P419725

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419681

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420057

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419670

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

Reference Method: EPA 8270E
Batch ID: P419543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.0		P	10 - 92.0
Alpha-BHC	93.4		P	75 - 107
Alpha-Chlordane	76.0		P	50 - 108
Beta-BHC	109		P	36 - 138
Beta-Cyfluthrin	88.3		P	20 - 161
Bifenthrin	69.3		P	10 - 119
Carbophenothion	55.7		P	19 - 94.0
Chlorothalonil	79.3		P	26 - 186
Cis-Nonachlor	72.6		P	42 - 119
Cypermethrin	91.1		P	22 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P419543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dacthal	87.8		P	72 - 119
DDD-p,p'	72.5		P	45 - 107
DDE-p,p'	72.7		P	48 - 106
DDT-p,p'	74.3		P	48 - 110
Delta-BHC	116		P	54 - 140
Deltamethrin	85.1		P	22 - 189
Dichlobenil	83.8		P	36 - 117
Dicofol	73.1		P	46 - 155
Dieldrin	78.6		P	54 - 110
Endosulfan I	82.1		P	59 - 105
Endosulfan II	89.7		P	51 - 118
Endosulfan Sulfate	87.3		P	57 - 121
Endrin	75.8		P	10 - 120
Endrin Aldehyde	75.5		P	34 - 118
Endrin Ketone	79.9		P	69 - 177
Esfenvalerate	94.3		P	23 - 168
Ethalfuralin	86.1		P	49 - 99.0
Fenpropathrin	81.5		P	34 - 117
Gamma-BHC	108		P	72 - 117
Gamma-Chlordane	75.7		P	43 - 106
Heptachlor	69.6		P	41 - 98.0
Heptachlor Epoxide	81.6		P	57 - 106
Hexachlorobenzene	75.6		P	36 - 99.0
Kepone	133		P	16 - 215
Lambda-Cyhalothrin	78.2		P	21 - 177
Methoprene	69.5		P	10 - 119
Methoxychlor	87.5		P	60 - 112
MGK-264	77.9		P	26 - 122
Mirex	65.6		P	10 - 169
Oxychlordane	80.1		P	43 - 105
PCB-1016	91.5		P	48 - 112
PCB-1260	85.9		P	44 - 118
Permethrin	90.2		P	24 - 148
Phenothrin	64.5		P	10 - 106
Piperonyl Butoxide	95.0		P	10 - 139
Prallethrin	70.6		P	17 - 109
Tau-Fluvalinate	78.1		P	13 - 131
Tetramethrin	104		P	10 - 132
Trans-Nonachlor	76.6		P	44 - 106
Triclosan Methyl	74.7		P	59 - 109
Trifluralin	78.8		P	44 - 101

Reference Method: EPA 8276
Batch ID: P419543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	82.2		P	61 - 116
Toxaphene	83.4		P	48 - 124

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P419485

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	115		P	40 - 150
AMPA	106		P	40 - 150
Endothall	115		P	40 - 150
Glufosinate	107		P	40 - 150
Glyphosate	105		P	40 - 150
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P419624

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	86.4		P	30 - 160
2,4,5-T	88.3		P	30 - 160
Acetaminophen	93.4		P	30 - 150
Acetamiprid	89.1		P	30 - 160
Afidopyropen	70.7		P	30 - 160
Bentazon	111		P	30 - 150
Benzovindiflupyr	87.3		P	30 - 160
Carbamazepine	98.4		P	30 - 160
Clothianidin	90.6		P	30 - 160
Dinotefuran	95.6		P	30 - 160
Diuron	76.5		P	30 - 160
Fenuron	101		P	30 - 160
Fluridone	99.2		P	30 - 160
Hydrocodone	54.7		P	30 - 160
Ibuprofen	52.2		P	30 - 160
Imazapyr	89.9		P	30 - 160
Imidacloprid	93.6		P	30 - 160
Linuron	88.7		P	30 - 160
Mandestrobin	96.2		P	30 - 160
MCPP	88.1		P	30 - 160
Naproxen	73.1		P	30 - 160
Primidone	79.5		P	30 - 160
Pyraclostrobin	86.0		P	30 - 160
Silvex	92.4		P	30 - 160
Thiamethoxam	97.2		P	30 - 160
Tolfenpyrad	76.5		P	30 - 160
Triclopyr	86.6		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P419768

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

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P419713

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P419756

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 200.7 Rev. 4.4

Batch ID: P419590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356076	Calcium	104	106	P/P	80 - 120
2356076	Iron	104	106	P/P	80 - 120
2356076	Magnesium	104	105	P/P	80 - 120
2356076	Potassium	104	106	P/P	80 - 120
2356076	Sodium	99.8	101	P/P	80 - 120
2356076	Strontium	101	102	P/P	80 - 120
2356076	Tin	104	106	P/P	80 - 120
2356076	Titanium	101	102	P/P	80 - 120
2356076	Vanadium	99.8	101	P/P	80 - 120
2356076	Zinc	103	104	P/P	80 - 120
2356077	Calcium	106		P	80 - 120
2356077	Iron	107		P	80 - 120
2356077	Magnesium	105		P	80 - 120
2356077	Potassium	106		P	80 - 120
2356077	Sodium	102		P	80 - 120
2356077	Strontium	102		P	80 - 120
2356077	Tin	102		P	80 - 120
2356077	Titanium	101		P	80 - 120
2356077	Vanadium	99.1		P	80 - 120
2356077	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356076	Aluminum	99.4	102	P/P	80 - 120
2356076	Antimony	102	105	P/P	80 - 120
2356076	Arsenic	103	107	P/P	80 - 120
2356076	Barium	103	105	P/P	80 - 120
2356076	Beryllium	96.6	98.6	P/P	80 - 120
2356076	Boron	104	106	P/P	80 - 120
2356076	Cadmium	98.6	103	P/P	80 - 120
2356076	Chromium	99.7	103	P/P	80 - 120
2356076	Cobalt	97.8	102	P/P	80 - 120
2356076	Copper	104	107	P/P	80 - 120
2356076	Lead	93.4	96.9	P/P	80 - 120
2356076	Manganese	98.6	104	P/P	80 - 120
2356076	Molybdenum	98.6	103	P/P	80 - 120
2356076	Nickel	102	106	P/P	80 - 120
2356076	Selenium	98.8	103	P/P	80 - 120
2356076	Silver	85.4	88.3	P/P	80 - 120
2356076	Thallium	99.7	104	P/P	80 - 120
2356077	Aluminum	101		P	80 - 120
2356077	Antimony	102		P	80 - 120
2356077	Arsenic	103		P	80 - 120
2356077	Barium	103		P	80 - 120
2356077	Beryllium	98.1		P	80 - 120
2356077	Boron	107		P	80 - 120
2356077	Cadmium	98.2		P	80 - 120
2356077	Chromium	101		P	80 - 120
2356077	Cobalt	97.7		P	80 - 120
2356077	Copper	103		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419590

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356077	Lead	94.1		P	80 - 120
2356077	Manganese	101		P	80 - 120
2356077	Molybdenum	100		P	80 - 120
2356077	Nickel	100		P	80 - 120
2356077	Selenium	100		P	80 - 120
2356077	Silver	85.5		P	80 - 120
2356077	Thallium	99.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355979	Chloride	96.3		P	90 - 110
2356095	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355979	Sulfate	97.1		P	90 - 110
2356095	Sulfate	96.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356251	Ammonia-N	98.6	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356068	Ammonia-N	95.2	94.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356297	Kjeldahl Nitrogen	103	107	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420057

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356160	NO2NO3-N	96.3	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419670

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356170	Total-P	98.4	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P419543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356052	Aldrin	50.5	56.8	P/P	20 - 82.0
2356052	Alpha-BHC	95.7	93.9	P/P	71 - 109
2356052	Alpha-Chlordane	64.4	74.3	P/P	42 - 106
2356052	Beta-BHC	117	152	P/P	69 - 180
2356052	Beta-Cyfluthrin	72.1	91.1	P/P	18 - 175
2356052	Bifenthrin	56.9	72.3	P/P	21 - 128
2356052	Carbophenothion	50.9	63.1	P/P	10 - 126
2356052	Chlorothalonil	74.4	72.7	P/P	10 - 300
2356052	Cis-Nonachlor	58.2	66.5	P/P	34 - 106
2356052	Cypermethrin	73.7	88.0	P/P	22 - 158
2356052	Dacthal	86.8	93.4	P/P	54 - 116
2356052	DDD-p,p'	63.3	71.8	P/P	34 - 107
2356052	DDE-p,p'	64.2	77.0	P/P	33 - 110
2356052	DDT-p,p'	64.8	71.6	P/P	50 - 122
2356052	Delta-BHC	128	163	P/P	77 - 193
2356052	Deltamethrin	74.7	84.8	P/P	10 - 195
2356052	Dichlobenil	70.3	72.0	P/P	25 - 113
2356052	Dicofol	65.6	74.2	P/P	38 - 247
2356052	Dieldrin	67.0	79.6	P/P	45 - 118
2356052	Endosulfan I	70.8	83.0	P/P	51 - 106
2356052	Endosulfan II	86.8	99.7	P/P	37 - 122
2356052	Endosulfan Sulfate	76.6	90.8	P/P	43 - 132
2356052	Endrin	67.5	80.2	P/P	29 - 101
2356052	Endrin Aldehyde	65.1	64.8	P/P	19 - 110
2356052	Endrin Ketone	60.5	51.5	P/F	60 - 140
2356052	Esfenvalerate	72.5	95.4	P/P	26 - 199
2356052	Ethalfuralin	72.1	80.1	P/P	45 - 99.0
2356052	Fenpropathrin	67.1	82.5	P/P	35 - 120
2356052	Gamma-BHC	119	111	P/P	63 - 128
2356052	Gamma-Chlordane	65.9	81.0	P/P	40 - 104
2356052	Heptachlor	61.4	69.3	P/P	36 - 97.0
2356052	Heptachlor Epoxide	72.1	82.2	P/P	49 - 184
2356052	Hexachlorobenzene	67.5	74.5	P/P	39 - 96.0
2356052	Kepone	100	126	P/P	10 - 217
2356052	Lambda-Cyhalothrin	76.8	94.6	P/P	21 - 193
2356052	Methoprene	55.7	72.0	P/P	20 - 106
2356052	Methoxychlor	77.8	86.4	P/P	53 - 118
2356052	MGK-264	77.9	84.0	P/P	40 - 118
2356052	Mirex	55.0	69.1	P/P	26 - 92.0
2356052	Oxychlordane	69.7	82.6	P/P	44 - 99.0
2356052	Permethrin	74.4	87.7	P/P	33 - 182
2356052	Phenothrin	55.1	72.1	P/P	10 - 129
2356052	Piperonyl Butoxide	87.6	98.6	P/P	10 - 211
2356052	Prallethrin	63.9	73.9	P/P	24 - 113
2356052	Tau-Fluvalinate	61.1	83.4	P/P	14 - 149
2356052	Tetramethrin	102	127	P/P	17 - 151
2356052	Trans-Nonachlor	60.6	79.3	P/P	42 - 102
2356052	Triclosan Methyl	68.1	79.5	P/P	48 - 108
2356052	Trifluralin	68.6	79.9	P/P	47 - 96.0
2356612	PCB-1016	78.7	88.3	P/P	46 - 111
2356612	PCB-1260	74.8	77.8	P/P	45 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P419543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356612	Chlordane	78.5	84.0	P/P	53 - 126
2356612	Toxaphene	71.3	79.9	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P419485

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355958	Acesulfame K	88.7	87.5	P/P	40 - 150
2355958	AMPA	85.8	82.1	P/P	40 - 150
2355958	Endothall	188	189	F/F	40 - 150
2355958	Glufosinate	73.2	82.9	P/P	40 - 150
2355958	Glyphosate	105	126	P/P	40 - 150
2355958	Sucralose	102	100	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P419624

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356270	2,4,5-T	149	137	P/P	30 - 160
2356270	Acetaminophen	135	138	P/P	30 - 150
2356270	Acetamiprid	104	102	P/P	30 - 160
2356270	Afidopyrophen	132	130	P/P	30 - 160
2356270	Bentazon	147	152	P/F	30 - 150
2356270	Benzovindiflupyr	103	109	P/P	30 - 160
2356270	Carbamazepine	101	97.2	P/P	30 - 160
2356270	Clothianidin	123	141	P/P	30 - 160
2356270	Dinotefuran	137	141	P/P	30 - 160
2356270	Diuron	70.0	61.4	P/P	30 - 160
2356270	Fenuron	124	125	P/P	30 - 160
2356270	Fluridone	129	137	P/P	30 - 160
2356270	Hydrocodone	80.7	79.0	P/P	30 - 160
2356270	Ibuprofen	90.1	101	P/P	30 - 160
2356270	Imazapyr	186	196	F/F	30 - 160
2356270	Imidacloprid	153	144	P/P	30 - 160
2356270	Linuron	105	109	P/P	30 - 160
2356270	Mandestrobin	128	125	P/P	30 - 160
2356270	MCPP	172	180	F/F	30 - 160
2356270	Naproxen	128	106	P/P	30 - 160
2356270	Primidone	143	150	P/P	30 - 160
2356270	Pyraclostrobin	125	126	P/P	30 - 160
2356270	Silvex	151	150	P/P	30 - 160
2356270	Thiamethoxam	188	189	F/F	30 - 160
2356270	Tolfenpyrad	105	101	P/P	30 - 160
2356270	Triclopyr	145	144	P/P	30 - 160

Reference Method: SM 4500-F- C-2011

Batch ID: P419772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355843	Fluoride	98.2	98.2	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P419713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355980	Organic Carbon	102		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P419756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2356299	Organic Carbon	97.9	97.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419565

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356156	Color (true)	0.0919	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419570

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356080	Turbidity	1.12	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419590

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356076	Calcium	1.11	Spike	P	0 - 20
2356076	Iron	1.06	Spike	P	0 - 20
2356076	Magnesium	0.862	Spike	P	0 - 20
2356076	Potassium	1.50	Spike	P	0 - 20
2356076	Sodium	0.949	Spike	P	0 - 20
2356076	Strontium	1.35	Spike	P	0 - 20
2356076	Tin	1.50	Spike	P	0 - 20
2356076	Titanium	0.396	Spike	P	0 - 20
2356076	Vanadium	1.25	Spike	P	0 - 20
2356076	Zinc	0.926	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419590

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356076	Aluminum	2.85	Spike	P	0 - 20
2356076	Antimony	2.76	Spike	P	0 - 20
2356076	Arsenic	3.80	Spike	P	0 - 20
2356076	Barium	2.34	Spike	P	0 - 20
2356076	Beryllium	2.01	Spike	P	0 - 20
2356076	Boron	2.16	Spike	P	0 - 20
2356076	Cadmium	4.50	Spike	P	0 - 20
2356076	Chromium	3.58	Spike	P	0 - 20
2356076	Cobalt	4.31	Spike	P	0 - 20
2356076	Copper	3.21	Spike	P	0 - 20
2356076	Lead	3.61	Spike	P	0 - 20
2356076	Manganese	3.89	Spike	P	0 - 20
2356076	Molybdenum	4.08	Spike	P	0 - 20
2356076	Nickel	3.68	Spike	P	0 - 20
2356076	Selenium	4.24	Spike	P	0 - 20
2356076	Silver	3.44	Spike	P	0 - 20
2356076	Thallium	4.02	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355979	Chloride	0.489	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355979	Sulfate	1.73	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356251	Ammonia-N	0.184	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356068	Ammonia-N	0.880	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356130	Kjeldahl Nitrogen	0.693	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356297	Kjeldahl Nitrogen	2.42	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P420057

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356160	NO2NO3-N	3.28	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356170	Total-P	0.957	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P419543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356052	Aldrin	11.6	Spike	P	0 - 41
2356052	Alpha-BHC	1.90	Spike	P	0 - 25
2356052	Alpha-Chlordane	14.3	Spike	P	0 - 33
2356052	Beta-BHC	25.9	Spike	P	0 - 36
2356052	Beta-Cyfluthrin	23.3	Spike	P	0 - 42
2356052	Bifenthrin	23.8	Spike	P	0 - 53
2356052	Carbophenothion	21.5	Spike	P	0 - 49
2356052	Chlorothalonil	2.23	Spike	P	0 - 71
2356052	Cis-Nonachlor	13.3	Spike	P	0 - 29
2356052	Cypermethrin	17.7	Spike	P	0 - 40
2356052	Dacthal	7.29	Spike	P	0 - 26
2356052	DDD-p,p'	12.6	Spike	P	0 - 39
2356052	DDE-p,p'	18.1	Spike	P	0 - 33
2356052	DDT-p,p'	9.99	Spike	P	0 - 40
2356052	Delta-BHC	24.0	Spike	P	0 - 37
2356052	Deltamethrin	12.6	Spike	P	0 - 100
2356052	Dichlobenil	2.32	Spike	P	0 - 40
2356052	Dicofol	12.3	Spike	P	0 - 31
2356052	Dieldrin	17.2	Spike	P	0 - 27
2356052	Endosulfan I	15.8	Spike	P	0 - 23
2356052	Endosulfan II	13.8	Spike	P	0 - 28
2356052	Endosulfan Sulfate	17.0	Spike	P	0 - 38
2356052	Endrin	17.3	Spike	P	0 - 63
2356052	Endrin Aldehyde	0.413	Spike	P	0 - 60
2356052	Endrin Ketone	16.2	Spike	P	0 - 37
2356052	Esfenvalerate	27.3	Spike	P	0 - 52
2356052	Ethalfuralin	10.6	Spike	P	0 - 23
2356052	Fenpropathrin	20.7	Spike	P	0 - 32
2356052	Gamma-BHC	7.31	Spike	P	0 - 17
2356052	Gamma-Chlordane	20.6	Spike	P	0 - 40
2356052	Heptachlor	12.0	Spike	P	0 - 29
2356052	Heptachlor Epoxide	13.1	Spike	P	0 - 25
2356052	Hexachlorobenzene	9.98	Spike	P	0 - 36
2356052	Kepone	22.8	Spike	P	0 - 93
2356052	Lambda-Cyhalothrin	20.8	Spike	P	0 - 55
2356052	Methoprene	25.5	Spike	P	0 - 53
2356052	Methoxychlor	10.5	Spike	P	0 - 29
2356052	MGK-264	7.53	Spike	P	0 - 35
2356052	Mirex	22.8	Spike	P	0 - 46
2356052	Oxychlordane	17.0	Spike	P	0 - 29
2356052	Permethrin	16.5	Spike	P	0 - 44
2356052	Phenothrin	26.8	Spike	P	0 - 56
2356052	Piperonyl Butoxide	11.8	Spike	P	0 - 100
2356052	Prallethrin	14.5	Spike	P	0 - 42
2356052	Tau-Fluvalinate	30.9	Spike	P	0 - 54
2356052	Tetramethrin	21.5	Spike	P	0 - 51
2356052	Trans-Nonachlor	26.7	Spike	P	0 - 37
2356052	Triclosan Methyl	15.4	Spike	P	0 - 31
2356052	Trifluralin	15.2	Spike	P	0 - 30
2356612	PCB-1016	11.4	Spike	P	0 - 32
2356612	PCB-1260	3.97	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P419543

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356612	Chlordane	5.69	Spike	P	0 - 25
2356612	Toxaphene	11.4	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P419485

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355958	Acesulfame K	1.43	Spike	P	0 - 30
2355958	AMPA	2.59	Spike	P	0 - 30
2355958	Endothall	0.272	Spike	P	0 - 30
2355958	Glufosinate	12.5	Spike	P	0 - 30
2355958	Glyphosate	8.83	Spike	P	0 - 30
2355958	Sucralose	1.46	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P419624

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356270	2,4-D	9.15	Spike	P	0 - 30
2356270	2,4,5-T	8.92	Spike	P	0 - 30
2356270	Acetaminophen	1.82	Spike	P	0 - 30
2356270	Acetamiprid	1.94	Spike	P	0 - 30
2356270	Afidopyropen	0.994	Spike	P	0 - 30
2356270	Bentazon	2.58	Spike	P	0 - 30
2356270	Benzovindiflupyr	5.16	Spike	P	0 - 30
2356270	Carbamazepine	4.07	Spike	P	0 - 30
2356270	Clothianidin	14.0	Spike	P	0 - 30
2356270	Dinotefuran	2.62	Spike	P	0 - 30
2356270	Diuron	13.1	Spike	P	0 - 30
2356270	Fenuron	1.01	Spike	P	0 - 30
2356270	Fluridone	5.91	Spike	P	0 - 30
2356270	Hydrocodone	2.14	Spike	P	0 - 30
2356270	Ibuprofen	11.3	Spike	P	0 - 30
2356270	Imazapyr	4.70	Spike	P	0 - 30
2356270	Imidacloprid	5.96	Spike	P	0 - 30
2356270	Linuron	3.59	Spike	P	0 - 30
2356270	Mandestrobin	2.24	Spike	P	0 - 30
2356270	MCPP	3.71	Spike	P	0 - 30
2356270	Naproxen	19.1	Spike	P	0 - 30
2356270	Primidone	4.58	Spike	P	0 - 30
2356270	Pyraclostrobin	0.573	Spike	P	0 - 30
2356270	Silvex	1.25	Spike	P	0 - 30
2356270	Thiamethoxam	0.440	Spike	P	0 - 30
2356270	Tolfenpyrad	4.16	Spike	P	0 - 30
2356270	Triclopyr	0.443	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P419768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355843	Total Alkalinity	0.566	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P419890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356250	TDS	7.06	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P419772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355843	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419713

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355980	Organic Carbon	1.48	Sample	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P419756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2356299	Organic Carbon	0.190	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2356148

Field Sample ID: G4NW0193

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	112	P	29 - 130
EPA 8270E	Decachlorobiphenyl	83.1	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	64.0	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	67.1	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	79.2	P	30 - 101
EPA 8276	PCNB	103	P	48 - 121

Lab Sample ID: 2356149

Field Sample ID: G4NW0193

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	95.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	110	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.6	P	30 - 160
EPA 8321B	Diuron-d6	53.1	P	30 - 160
EPA 8321B	Endothall-d6	127	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	61.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.9	P	30 - 160
EPA 8321B	Primidone-d5	106	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A114723

Included Lab Sample IDs: 2356127, 2356131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.1	98.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114724

Included Lab Sample IDs: 2356127, 2356129, 2356131

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114764

Included Lab Sample IDs: 2356150, 2356151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	98.7	P/P	90 - 110
Antimony	97.8	100	P/P	90 - 110
Arsenic	103	106	P/P	90 - 110
Barium	97.0	99.2	P/P	90 - 110
Beryllium	96.8	99.3	P/P	90 - 110
Boron	99.6	97.9	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Chromium	102	103	P/P	90 - 110
Cobalt	99.1	101	P/P	90 - 110
Copper	103	105	P/P	90 - 110
Lead	90.3	90.5	P/P	90 - 110
Manganese	102	103	P/P	90 - 110
Molybdenum	98.1	99.5	P/P	90 - 110
Nickel	102	105	P/P	90 - 110
Selenium	101	103	P/P	90 - 110
Silver	97.1	97.6	P/P	90 - 110
Thallium	103	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114771

Included Lab Sample IDs: 2356150, 2356151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	103	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	100	100	P/P	90 - 110
Potassium	99.5	100	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Strontium	98.9	99.0	P/P	90 - 110
Tin	100	101	P/P	90 - 110
Titanium	96.9	97.4	P/P	90 - 110
Vanadium	97.7	97.4	P/P	90 - 110
Zinc	98.7	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A114773
Included Lab Sample IDs: 2356149

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	114	118	P/P	60 - 160
Sucralose	105	104	P/P	60 - 160

Reference Method: SM 5310 B-2011
Run ID: A114782
Included Lab Sample IDs: 2356128

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114783
Included Lab Sample IDs: 2356130, 2356132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	100	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A114799
Included Lab Sample IDs: 2356130, 2356132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	96.3	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A114801
Included Lab Sample IDs: 2356127, 2356129, 2356131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A114801
Included Lab Sample IDs: 2356127, 2356129, 2356131

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114804
Included Lab Sample IDs: 2356128

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.7	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A114814
Included Lab Sample IDs: 2356148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E
 Run ID: A114814
 Included Lab Sample IDs: 2356148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	99.6		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	96.0		P	80 - 120
Beta-Cyfluthrin	94.4		P	80 - 120
Bifenthrin	96.5		P	80 - 120
Carbophenothion	96.9		P	80 - 120
Chlorothalonil	89.7		P	80 - 120
Cis-Nonachlor	98.7		P	80 - 120
Cypermethrin	94.0		P	80 - 120
Dacthal	102		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	87.0		P	80 - 120
Deltamethrin	124*		F	80 - 120
Dichlobenil	102		P	80 - 120
Dicofol	95.4		P	80 - 120
Dieldrin	104		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	99.8		P	80 - 120
Endosulfan Sulfate	91.6		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	95.6		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	94.2		P	80 - 120
Ethalfuralin	102		P	80 - 120
Fenpropathrin	93.8		P	80 - 120
Gamma-BHC	96.7		P	80 - 120
Gamma-Chlordane	103		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Kepone	91.5		P	80 - 120
Lambda-Cyhalothrin	93.9		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	90.6		P	80 - 120
MGK-264	96.0		P	80 - 120
Mirex	104		P	80 - 120
Oxychlordane	98.8		P	80 - 120
Permethrin	97.9		P	80 - 120
Phenothrin	97.2		P	80 - 120
Piperonyl Butoxide	91.9		P	80 - 120
Prallethrin	99.2		P	80 - 120
Tau-Fluvalinate	93.2		P	80 - 120
Tetramethrin	94.3		P	80 - 120
Trans-Nonachlor	105		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	99.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114815

Included Lab Sample IDs: 2356130, 2356132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A114823

Included Lab Sample IDs: 2356128, 2356130

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.6	99.1	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A114825

Included Lab Sample IDs: 2356148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.0		P	80 - 120
Toxaphene	93.7		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A114829

Included Lab Sample IDs: 2356128

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

Reference Method: EPA 8321B

Run ID: A114835

Included Lab Sample IDs: 2356149

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	88.5	91.1	P/P	50 - 150
2,4,5-T	106	107	P/P	50 - 150
Acetaminophen	93.6	98.6	P/P	60 - 160
Acetamiprid	127	116	P/P	50 - 150
Afidopyropen	114	103	P/P	50 - 150
Bentazon	109	106	P/P	50 - 160
Benzovindiflupyr	107	110	P/P	50 - 160
Carbamazepine	115	114	P/P	60 - 150
Clothianidin	93.3	94.7	P/P	60 - 150
Dinotefuran	111	109	P/P	50 - 150
Diuron	100	122	P/P	60 - 160
Fenuron	106	106	P/P	60 - 150
Fluridone	113	112	P/P	60 - 160
Hydrocodone	103	102	P/P	60 - 150
Ibuprofen	106	118	P/P	50 - 160
Imazapyr	94.3	87.5	P/P	50 - 150
Imidacloprid	110	116	P/P	60 - 150
Linuron	109	102	P/P	60 - 150
Mandestrobin	109	114	P/P	50 - 150
MCPP	103	97.5	P/P	50 - 150
Naproxen	77.3	80.0	P/P	50 - 160
Primidone	92.7	104	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A114835
Included Lab Sample IDs: 2356149

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	111	111	P/P	60 - 150
Silvex	107	91.3	P/P	50 - 150
Thiamethoxam	111	110	P/P	50 - 150
Tolfenpyrad	114	124	P/P	60 - 150
Triclopyr	97.1	106	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A114842
Included Lab Sample IDs: 2356148

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.3		P	80 - 120
PCB-1260	101		P	80 - 120

Reference Method: EPA 8321B
Run ID: A114851
Included Lab Sample IDs: 2356149

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	109	105	P/P	60 - 160
Endothall	92.2	95.2	P/P	60 - 160
Glufosinate	83.6	90.5	P/P	60 - 160
Glyphosate	117	114	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114856
Included Lab Sample IDs: 2356132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.8	99.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A114857
Included Lab Sample IDs: 2356127, 2356131

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	99.3	P/P	90 - 110
Sulfate	98.9	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A114919
Included Lab Sample IDs: 2356128, 2356130, 2356132

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	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 SMP	MS
DEP SOP: NU-094-1	Color (true)	98.8					0.0919	
EPA 180.1 Rev. 2.0	Turbidity	101					1.12	
EPA 200.7 Rev. 4.4	Calcium	105	104	106	106			1.11
	Iron	105	104	106	107			1.06
	Magnesium	104	104	105	105			0.862
	Potassium	104	104	106	106			1.50
	Sodium	104	99.8	101	102			0.949
	Strontium	102	101	102	102			1.35
	Tin	104	104	106	102			1.50
	Titanium	99.3	101	102	101			0.396
	Vanadium	98.5	99.8	101	99.1			1.25
	Zinc	100	103	104	102			0.926
EPA 200.8 Rev. 5.4	Aluminum	101	99.4	102	101			2.85
	Antimony	102	102	105	102			2.76
	Arsenic	105	103	107	103			3.80
	Barium	104	103	105	103			2.34
	Beryllium	97.1	96.6	98.6	98.1			2.01
	Boron	105	104	106	107			2.16
	Cadmium	98.9	98.6	103	98.2			4.50
	Chromium	101	99.7	103	101			3.58
	Cobalt	100	97.8	102	97.7			4.31
	Copper	104	104	107	103			3.21
	Lead	93.4	93.4	96.9	94.1			3.61
	Manganese	100	98.6	104	101			3.89
	Molybdenum	100	98.6	103	100			4.08
	Nickel	104	102	106	100			3.68
	Selenium	102	98.8	103	100			4.24
	Silver	88.1	85.4	88.3	85.5			3.44
	Thallium	99.7	99.7	104	99.6			4.02
EPA 300.0 Rev. 2.1	Chloride	98.5	96.3	97.2			0.489	
	Sulfate	97.1	97.1	96.7			1.73	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	98.6	98.4				0.184
	Ammonia-N	98.8	95.2	94.0				0.880
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106						0.693
	Kjeldahl Nitrogen	96.2	103	107				2.42
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	96.3	99.8				3.28
EPA 365.1 Rev. 2.0	Total-P	102	98.4	100				0.957
EPA 8270E	Aldrin	57.0	50.5	56.8				11.6
	Alpha-BHC	93.4	95.7	93.9				1.90
	Alpha-Chlordane	76.0	64.4	74.3				14.3
	Beta-BHC	109	117	152				25.9
	Beta-Cyfluthrin	88.3	72.1	91.1				23.3
	Bifenthrin	69.3	56.9	72.3				23.8
	Carbophenothion	55.7	50.9	63.1				21.5
	Chlorothalonil	79.3	74.4	72.7				2.23
	Cis-Nonachlor	72.6	58.2	66.5				13.3
	Cypermethrin	91.1	73.7	88.0				17.7
	Dacthal	87.8	86.8	93.4				7.29
	DDD-p,p'	72.5	63.3	71.8				12.6
	DDE-p,p'	72.7	64.2	77.0				18.1
	DDT-p,p'	74.3	64.8	71.6				9.99
	Delta-BHC	116	128	163				24.0
	Deltamethrin	85.1	74.7	84.8				12.6
	Dichlobenil	83.8	70.3	72.0				2.32

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Dicofol	73.1	65.6	74.2		12.3
	Dieldrin	78.6	67.0	79.6		17.2
	Endosulfan I	82.1	70.8	83.0		15.8
	Endosulfan II	89.7	86.8	99.7		13.8
	Endosulfan Sulfate	87.3	76.6	90.8		17.0
	Endrin	75.8	67.5	80.2		17.3
	Endrin Aldehyde	75.5	65.1	64.8		0.413
	Endrin Ketone	79.9	60.5	51.5		16.2
	Esfenvalerate	94.3	72.5	95.4		27.3
	Ethalfuralin	86.1	72.1	80.1		10.6
	Fenpropathrin	81.5	67.1	82.5		20.7
	Gamma-BHC	108	119	111		7.31
	Gamma-Chlordane	75.7	65.9	81.0		20.6
	Heptachlor	69.6	61.4	69.3		12.0
	Heptachlor Epoxide	81.6	72.1	82.2		13.1
	Hexachlorobenzene	75.6	67.5	74.5		9.98
	Kepone	133	100	126		22.8
	Lambda-Cyhalothrin	78.2	76.8	94.6		20.8
	Methoprene	69.5	55.7	72.0		25.5
	Methoxychlor	87.5	77.8	86.4		10.5
	MGK-264	77.9	77.9	84.0		7.53
	Mirex	65.6	55.0	69.1		22.8
	Oxychlordane	80.1	69.7	82.6		17.0
	PCB-1016	91.5	78.7	88.3		11.4
	PCB-1260	85.9	74.8	77.8		3.97
	Permethrin	90.2	74.4	87.7		16.5
	Phenothrin	64.5	55.1	72.1		26.8
	Piperonyl Butoxide	95.0	87.6	98.6		11.8
	Prallethrin	70.6	63.9	73.9		14.5
	Tau-Fluvalinate	78.1	61.1	83.4		30.9
	Tetramethrin	104	102	127		21.5
	Trans-Nonachlor	76.6	60.6	79.3		26.7
	Triclosan Methyl	74.7	68.1	79.5		15.4
	Trifluralin	78.8	68.6	79.9		15.2
EPA 8276	Chlordane	82.2	78.5	84.0		5.69
	Toxaphene	83.4	71.3	79.9		11.4
EPA 8321B	2,4-D	86.4				9.15
	2,4,5-T	88.3	149	137		8.92
	Acesulfame K	115	88.7	87.5		1.43
	Acetaminophen	93.4	135	138		1.82
	Acetamiprid	89.1	104	102		1.94
	Afidopyropen	70.7	132	130		0.994
	AMPA	106	85.8	82.1		2.59
	Bentazon	111	147	152		2.58
	Benzovindiflupyr	87.3	103	109		5.16
	Carbamazepine	98.4	101	97.2		4.07
	Clothianidin	90.6	123	141		14.0
	Dinotefuran	95.6	137	141		2.62
	Diuron	76.5	70.0	61.4		13.1
	Endothall	115	188	189		0.272
	Fenuron	101	124	125		1.01
	Fluridone	99.2	129	137		5.91
	Glufosinate	107	73.2	82.9		12.5
	Glyphosate	105	105	126		8.83

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Hydrocodone	54.7	80.7	79.0		2.14
	Ibuprofen	52.2	90.1	101		11.3
	Imazapyr	89.9	186	196		4.70
	Imidacloprid	93.6	153	144		5.96
	Linuron	88.7	105	109		3.59
	Mandestrobin	96.2	128	125		2.24
	MCPP	88.1	172	180		3.71
	Naproxen	73.1	128	106		19.1
	Primidone	79.5	143	150		4.58
	Pyraclostrobin	86.0	125	126		0.573
	Silvex	92.4	151	150		1.25
	Sucralose	106	102	100		1.46
	Thiamethoxam	97.2	188	189		0.440
	Tolfenpyrad	76.5	105	101		4.16
	Triclopyr	86.6	145	144		0.443
SM 2320 B-2011	Total Alkalinity	101			0.566	
SM 2540 C-2011	TDS				7.06	
SM 4500-F- C-2011	Fluoride	100	98.2	98.2		0.0
SM 5310 B-2011	Organic Carbon	97.2	102		1.48	
	Organic Carbon	95.7	97.9	97.6		0.190

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2356127, 2356131
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2356127, 2356129, 2356131
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2356150, 2356151
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2356150, 2356151
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2356127, 2356131
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2356127, 2356131
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2356128, 2356130, 2356132
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2356128, 2356130, 2356132
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2356128, 2356130, 2356132
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2356128, 2356130, 2356132
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2356148
EPA 8270E	PCBs in water matrices by GC/MS/MS	2356148
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2356148
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2356149
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2356127, 2356129, 2356131
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2356150, 2356151
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2356127, 2356131
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2356127, 2356129, 2356131
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2356127, 2356129, 2356131
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2356128, 2356130, 2356132

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	09/14/2022			09/14/2022 15:06	Blanca Fach	2356127, 2356131
EPA 180.1 Rev. 2.0	09/14/2022			09/14/2022 13:49	Khloe J Berg	2356127
	09/14/2022			09/14/2022 13:50	Khloe J Berg	2356129
	09/14/2022			09/14/2022 13:51	Khloe J Berg	2356131
EPA 200.7 Rev. 4.4	09/14/2022	09/15/2022 10:20	Megan Whitefoot	09/16/2022 04:28	McKinley C Carter	2356150
	09/14/2022	09/15/2022 10:20	Megan Whitefoot	09/16/2022 04:36	McKinley C Carter	2356151
EPA 200.8 Rev. 5.4	09/14/2022	09/15/2022 10:20	Megan Whitefoot	09/15/2022 20:27	Emily M Philpot	2356150
	09/14/2022	09/15/2022 10:20	Megan Whitefoot	09/15/2022 20:37	Emily M Philpot	2356151
EPA 300.0 Rev. 2.1	09/14/2022			09/20/2022 17:47	James L Waggeberby	2356127
	09/14/2022			09/20/2022 18:03	James L Waggeberby	2356131
EPA 350.1 Rev. 2.0	09/14/2022			09/16/2022 12:45	Judith K. Clark	2356130
	09/14/2022			09/16/2022 12:47	Judith K. Clark	2356132
	09/14/2022			09/19/2022 12:47	Ping Hua	2356128
EPA 351.2 Rev. 2.0	09/14/2022	09/16/2022 09:29	Simonne.V. Calhoun	09/20/2022 12:56	Samantha L Bates	2356128
	09/14/2022	09/16/2022 09:29	Simonne.V. Calhoun	09/20/2022 12:58	Samantha L Bates	2356130
	09/14/2022	09/20/2022 11:51	Alexandra J Mattheus	09/21/2022 10:51	Alexandra J Mattheus	2356132
EPA 353.2 Rev. 2.0	09/14/2022			09/23/2022 14:48	Judith K. Clark	2356128
	09/14/2022			09/23/2022 14:49	Judith K. Clark	2356130
	09/14/2022			09/23/2022 14:50	Judith K. Clark	2356132
EPA 365.1 Rev. 2.0	09/14/2022	09/16/2022 15:34	Adam P Silver	09/19/2022 13:46	James L Waggeberby	2356130
	09/14/2022	09/16/2022 15:34	Adam P Silver	09/19/2022 13:47	James L Waggeberby	2356132
	09/14/2022	09/16/2022 15:34	Adam P Silver	09/20/2022 14:03	Simonne.V. Calhoun	2356128
EPA 8270E	09/14/2022	09/16/2022 08:00	Fe-Val Siddell	09/19/2022 18:43	Vandana T. Nagar	2356148
	09/14/2022	09/16/2022 08:00	Fe-Val Siddell	09/20/2022 23:18	Julie Wi	2356148
EPA 8276	09/14/2022	09/16/2022 08:00	Fe-Val Siddell	09/20/2022 10:36	Arthur Maknenko	2356148
EPA 8321B	09/14/2022	09/15/2022 13:00	Umesh Chiluwal	09/16/2022 03:53	Umesh Chiluwal	2356149
	09/14/2022	09/15/2022 13:00	Umesh Chiluwal	09/16/2022 22:29	Umesh Chiluwal	2356149
	09/14/2022	09/16/2022 09:00	Hoor Shaik	09/21/2022 05:28	Juyoung Kim	2356149
SM 2320 B-2011	09/14/2022			09/17/2022 11:50	Dale L. Simmons	2356127
	09/14/2022			09/17/2022 12:01	Dale L. Simmons	2356129
	09/14/2022			09/17/2022 12:12	Dale L. Simmons	2356131
SM 2340 B-2011	09/14/2022			09/16/2022 04:28	McKinley C Carter	2356150
	09/14/2022			09/16/2022 04:36	McKinley C Carter	2356151
SM 2540 C-2011	09/14/2022			09/16/2022 15:56	Yijie Li	2356127, 2356131
SM 2540 D-2011	09/14/2022			09/16/2022 15:56	Yijie Li	2356127, 2356129, 2356131
SM 4500-F- C-2011	09/14/2022			09/17/2022 11:50	Dale L. Simmons	2356127
	09/14/2022			09/17/2022 12:01	Dale L. Simmons	2356129
	09/14/2022			09/17/2022 12:12	Dale L. Simmons	2356131
SM 5310 B-2011	09/14/2022			09/16/2022 00:57	Khloe J Berg	2356128
	09/14/2022			09/16/2022 17:05	Khloe J Berg	2356130

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	09/14/2022			09/16/2022 17:19	Khloe J Berg	2356132