

Chemical Analysis Report

NW-DIST-2022-08-26-01

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

Event Description: **Navarre Run**
Request ID: **RQ-2022-08-22-48**
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
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 19-SEP-2022 15:19

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: 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: Tom King Creek

Collection Date/Time: 08/25/2022 11:41

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2352678	DEP SOP: NU-094-1	Color (true)	220		PCU	P418765	
	EPA 180.1 Rev. 2.0	Turbidity	7.6	A	NTU	P418764	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P419468	
		Sulfate	3.5		mg SO4/L	P419471	
	SM 2320 B-2011	Total Alkalinity	3.6	J	mg CaCO3/L	P419033	LCS
	SM 2540 C-2011	TDS	73		mg/L	P419261	
	SM 2540 D-2011	TSS	5	I	mg/L	P419200	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P419279	
2352679	EPA 350.1 Rev. 2.0	Ammonia-N	0.020		mg N/L	P418888	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P418910	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P419051	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P418983	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P419161	
2352687	EPA 8270E	Aldrin	0.67	U	ng/L	P418734	
		Alpha-BHC	0.10	U	ng/L	P418734	
		Alpha-Chlordane	0.21	U	ng/L	P418734	
		PCB-1016	2.1	U	ng/L	P418734	
		Beta-BHC	0.10	U	ng/L	P418734	
		PCB-1221	2.1	U	ng/L	P418734	
		Beta-Cyfluthrin	1.3	U	ng/L	P418734	
		PCB-1232	2.1	U	ng/L	P418734	
		Bifenthrin	0.52	U	ng/L	P418734	
		PCB-1242	2.1	U	ng/L	P418734	
		Carbophenothion	0.93	U	ng/L	P418734	
		PCB-1248	2.1	U	ng/L	P418734	
		Chlorothalonil	1.3	U	ng/L	P418734	
		PCB-1254	2.1	U	ng/L	P418734	
		Cis-Nonachlor	0.21	U	ng/L	P418734	
		PCB-1260	2.1	U	ng/L	P418734	
		Cypermethrin	1.6	U	ng/L	P418734	
		Dacthal	0.16	U	ng/L	P418734	
		DDD-p,p'	0.26	U	ng/L	P418734	
		DDE-p,p'	0.21	U	ng/L	P418734	
		DDT-p,p'	0.26	U	ng/L	P418734	
		Delta-BHC	0.41	U	ng/L	P418734	
		Deltamethrin	1.3	U	ng/L	P418734	
		Dichlobenil	0.26	U	ng/L	P418734	
		Dicofol	1.3	U	ng/L	P418734	
		Dieldrin	0.53	I	ng/L	P418734	
		Endosulfan I	0.41	U	ng/L	P418734	
		Endosulfan II	0.41	U	ng/L	P418734	
		Endosulfan Sulfate	0.31	U	ng/L	P418734	
		Endrin	0.41	U	ng/L	P418734	
		Endrin Aldehyde	0.78	U	ng/L	P418734	

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2352687	EPA 8270E	Endrin Ketone	0.41	U	ng/L	P418734	
		Esfenvalerate	0.78	U	ng/L	P418734	
		Ethalfuralin	0.16	U	ng/L	P418734	
		Fenpropathrin	0.26	U	ng/L	P418734	
		Gamma-BHC	0.13	U	ng/L	P418734	
		Gamma-Chlordane	0.21	U	ng/L	P418734	
		Heptachlor	0.21	U	ng/L	P418734	
		Heptachlor Epoxide	0.26	U	ng/L	P418734	
		Hexachlorobenzene**	1.0	U	ng/L	P418734	
		Kepone	5.2	U	ng/L	P418734	
		Lambda-Cyhalothrin	0.78	U	ng/L	P418734	
		Methoprene	0.78	U	ng/L	P418734	
		Methoxychlor	0.31	U	ng/L	P418734	
		MGK-264	0.21	U	ng/L	P418734	
		Mirex	0.36	U	ng/L	P418734	
		Oxychlordane	0.31	U	ng/L	P418734	
		Permethrin	1.7	U	ng/L	P418734	
		Phenothrin	0.93	U	ng/L	P418734	
		Piperonyl Butoxide	0.22	I	ng/L	P418734	
		Prallethrin	2.1	U	ng/L	P418734	
		Tau-Fluvalinate	0.26	U	ng/L	P418734	
		Tetramethrin	0.78	U	ng/L	P418734	
		Trans-Nonachlor	0.21	U	ng/L	P418734	
		Triclosan Methyl	0.16	U	ng/L	P418734	
		Trifluralin	0.21	U	ng/L	P418734	
	EPA 8276	Chlordane	2.6	U	ng/L	P418734	
	Toxaphene	16	U	ng/L	P418734		
2352688	EPA 8321B	2,4-D	0.033		ug/L	P418839	
		Acesulfame K	0.13	I	ug/L	P418641	
		2,4,5-T	0.0040	U	ug/L	P418839	
		AMPA	0.10	U	ug/L	P418641	
		Acetaminophen	0.0080	U	ug/L	P418839	
		Acetamiprid	0.0020	U	ug/L	P418839	
		Endothall	0.25	U	ug/L	P418641	MS
		Glufosinate	0.10	U	ug/L	P418641	
		Glyphosate	0.10	U	ug/L	P418641	
		Afidopyropen	0.0020	U	ug/L	P418839	
		Bentazon	0.0012	I	ug/L	P418839	
		Sucralose	1.8		ug/L	P418641	
		Benzovindiflupyr	0.0020	U	ug/L	P418839	
		Carbamazepine	8.0E-04	U	ug/L	P418839	
		Clothianidin	0.0020	U	ug/L	P418839	
		Dinotefuran	0.0020	U	ug/L	P418839	
		Diuron	0.0020	I	ug/L	P418839	
		Fenuron	0.032	U	ug/L	P418839	

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2352688	EPA 8321B	Fluridone	8.0E-04	U	ug/L	P418839	
		Imazapyr	0.0040	U	ug/L	P418839	
		Hydrocodone	0.0020	U	ug/L	P418839	
		Ibuprofen	0.080	U	ug/L	P418839	
		Imidacloprid	0.0055	I	ug/L	P418839	
		Linuron	0.0040	U	ug/L	P418839	
		Mandestrobin	0.0020	U	ug/L	P418839	
		MCPP	0.0099	I	ug/L	P418839	
		Naproxen	0.0080	U	ug/L	P418839	
		Primidone	0.0040	U	ug/L	P418839	MS
		Pyraclostrobin	0.0020	U	ug/L	P418839	
		Silvex	0.0040	U	ug/L	P418839	
		Thiamethoxam	0.0020	U	ug/L	P418839	
		Tolfenpyrad	0.0020	U	ug/L	P418839	
		Triclopyr	0.0040	U	ug/L	P418839	

Ref. Method and Comment:

SM 2320 B-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.

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

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

Collection Date/Time: 08/25/2022 10:13

Field ID: G4NW0211

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2352680	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P418764	
	SM 2320 B-2011	Total Alkalinity	32	J	mg CaCO3/L	P419033	LCS
	SM 2540 D-2011	TSS	4	I	mg/L	P419201	
	SM 4500-F- C-2011	Fluoride	0.040	I	mg F/L	P419279	
2352681	EPA 350.1 Rev. 2.0	Ammonia-N	0.14		mg N/L	P418888	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P418823	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P419051	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P418983	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P419161	
2352689	EPA 200.7 Rev. 4.4	Calcium	9.47		mg/L	P419103	
		Iron	360		ug/L	P419103	
		Magnesium	3.04		mg/L	P419103	
		Potassium	3.1		mg/L	P419103	
		Sodium	10.8		mg/L	P419103	
		Strontium	33.1		ug/L	P419103	
		Tin	3.0	U	ug/L	P419103	
		Titanium	1.7	I	ug/L	P419103	
		Vanadium	2.0	U	ug/L	P419103	
		Zinc	5.0	U	ug/L	P419103	
	EPA 200.8 Rev. 5.4	Aluminum	260		ug/L	P419103	
		Antimony	0.066	I	ug/L	P419103	
		Arsenic	6.77		ug/L	P419103	
		Barium	7.76		ug/L	P419103	
		Beryllium	0.012	I	ug/L	P419103	
		Boron	44.4		ug/L	P419103	
		Cadmium	0.020	I	ug/L	P419103	
		Chromium	1.3	I	ug/L	P419103	
		Cobalt	0.098		ug/L	P419103	
		Copper	0.99		ug/L	P419103	
		Lead	0.20	U	ug/L	P419103	
		Manganese	21.9		ug/L	P419103	
		Molybdenum	0.17	I	ug/L	P419103	
		Nickel	0.57	I	ug/L	P419103	
		Selenium	0.20	U	ug/L	P419103	
		Silver	0.010	U	ug/L	P419103	
		Thallium	0.10	U	ug/L	P419103	
	SM 2340 B-2011	Hardness	36.2		mg/L	P419103	

Ref. Method and Comment:

SM 2320 B-2011: Refer to the Lab Analysis Report for an explanation of QC Codes.

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: P418765

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418764

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419103

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: P419103

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: P419468

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: P419471

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418888

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418823

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418910

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419051

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418983

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

Reference Method: EPA 8270E
Batch ID: P418734

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P418734

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P418734

Component	Result	Code	Units
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

Reference Method: EPA 8276

Batch ID: P418734

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8276
Batch ID: P418734

Component	Result	Code	Units
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: P418641

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: P418839

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: SM 2320 B-2011
Batch ID: P419033

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P419261

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419200

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P419201

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P419279

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P419161

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: P418765

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.9		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	110		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	104		P	85 - 115
Sodium	104		P	85 - 115
Strontium	104		P	85 - 115
Tin	110		P	85 - 115
Titanium	107		P	85 - 115
Vanadium	106		P	85 - 115
Zinc	109		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419103

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	103		P	85 - 115
Barium	105		P	85 - 115
Beryllium	99.9		P	85 - 115
Boron	101		P	85 - 115
Cadmium	99.4		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	98.9		P	85 - 115
Copper	101		P	85 - 115
Lead	92.8		P	85 - 115
Manganese	102		P	85 - 115
Molybdenum	98.8		P	85 - 115
Nickel	102		P	85 - 115
Selenium	101		P	85 - 115
Silver	88.8		P	85 - 115
Thallium	97.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419468

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.2		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419471

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418888

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	92.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418823

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418910

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418983

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

Reference Method: EPA 8270E
Batch ID: P418734

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	51.0		P	10 - 92.0
Alpha-BHC	84.0		P	75 - 107
Alpha-Chlordane	63.4		P	50 - 108
Beta-BHC	104		P	36 - 138
Beta-Cyfluthrin	60.0		P	20 - 161
Bifenthrin	39.3		P	10 - 119
Carbophenothion	40.1		P	19 - 94.0
Chlorothalonil	54.3		P	26 - 186
Cis-Nonachlor	52.3		P	42 - 119
Cypermethrin	61.9		P	22 - 150
Dacthal	82.2		P	72 - 119
DDD-p,p'	61.1		P	45 - 107
DDE-p,p'	58.7		P	48 - 106
DDT-p,p'	66.1		P	48 - 110
Delta-BHC	111		P	54 - 140
Deltamethrin	47.9		P	22 - 189

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P418734

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dichlobenil	90.3		P	36 - 117
Dicofol	72.6		P	46 - 155
Dieldrin	63.7		P	54 - 110
Endosulfan I	70.2		P	59 - 105
Endosulfan II	72.9		P	51 - 118
Endosulfan Sulfate	73.4		P	57 - 121
Endrin	63.0		P	10 - 120
Endrin Aldehyde	68.6		P	34 - 118
Endrin Ketone	91.8		P	69 - 177
Esfenvalerate	59.2		P	23 - 168
Ethalfuralin	71.0		P	49 - 99.0
Fenpropathrin	60.0		P	34 - 117
Gamma-BHC	88.1		P	72 - 117
Gamma-Chlordane	59.7		P	43 - 106
Heptachlor	58.9		P	41 - 98.0
Heptachlor Epoxide	70.7		P	57 - 106
Hexachlorobenzene	68.8		P	36 - 99.0
Kepone	186		P	16 - 215
Lambda-Cyhalothrin	50.1		P	21 - 177
Methoprene	39.4		P	10 - 119
Methoxychlor	82.1		P	60 - 112
MGK-264	77.5		P	26 - 122
Mirex	44.3		P	10 - 169
Oxychlordane	68.8		P	43 - 105
PCB-1016	76.7		P	48 - 112
PCB-1260	69.0		P	44 - 118
Permethrin	57.9		P	24 - 148
Phenothrin	36.0		P	10 - 106
Piperonyl Butoxide	107		P	10 - 139
Prallethrin	65.5		P	17 - 109
Tau-Fluvalinate	46.0		P	13 - 131
Tetramethrin	102		P	10 - 132
Trans-Nonachlor	55.5		P	44 - 106
Triclosan Methyl	66.9		P	59 - 109
Trifluralin	67.0		P	44 - 101

Reference Method: EPA 8276

Batch ID: P418734

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	74.1		P	61 - 116
Toxaphene	67.8		P	48 - 124

Reference Method: EPA 8321B

Batch ID: P418641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	117		P	40 - 150
AMPA	112		P	40 - 150
Endothall	103		P	40 - 150
Glufosinate	117		P	40 - 150
Glyphosate	107		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P418641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	115		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P418839

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	72.6		P	40 - 150
2,4,5-T	67.1		P	40 - 150
Acetaminophen	108		P	30 - 150
Acetamiprid	72.1		P	40 - 150
Afidopyropen	62.7		P	30 - 150
Bentazon	82.1		P	30 - 150
Benzovindiflupyr	70.1		P	40 - 150
Carbamazepine	81.4		P	40 - 150
Clothianidin	77.8		P	40 - 150
Dinotefuran	73.6		P	40 - 150
Diuron	89.0		P	40 - 150
Fenuron	99.5		P	40 - 150
Fluridone	84.5		P	40 - 150
Hydrocodone	112		P	40 - 150
Ibuprofen	59.2		P	40 - 150
Imazapyr	73.8		P	40 - 150
Imidacloprid	93.3		P	40 - 150
Linuron	90.9		P	40 - 150
Mandestrobin	86.3		P	40 - 150
MCPP	75.2		P	40 - 150
Naproxen	84.3		P	40 - 150
Primidone	70.9		P	40 - 150
Pyraclostrobin	83.0		P	40 - 150
Silvex	59.1		P	40 - 150
Thiamethoxam	97.2		P	40 - 150
Tolfenpyrad	44.1		P	30 - 150
Triclopyr	54.9		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P419033

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

Reference Method: SM 4500-F- C-2011
Batch ID: P419279

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

Reference Method: SM 5310 B-2011
Batch ID: P419161

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P419103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353636	Calcium	105		P	80 - 120
2353636	Iron	110	106	P/P	80 - 120
2353636	Magnesium	105		P	80 - 120
2353636	Potassium	101		P	80 - 120
2353636	Sodium	103		P	80 - 120
2353636	Strontium	104	103	P/P	80 - 120
2353636	Tin	110	109	P/P	80 - 120
2353636	Titanium	109	109	P/P	80 - 120
2353636	Vanadium	107	107	P/P	80 - 120
2353636	Zinc	106	107	P/P	80 - 120
2353686	Calcium	111		P	80 - 120
2353686	Iron	111		P	80 - 120
2353686	Magnesium	110		P	80 - 120
2353686	Potassium	114		P	80 - 120
2353686	Sodium	108		P	80 - 120
2353686	Strontium	105		P	80 - 120
2353686	Tin	111		P	80 - 120
2353686	Titanium	110		P	80 - 120
2353686	Vanadium	108		P	80 - 120
2353686	Zinc	109		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353636	Aluminum	99.6	99.7	P/P	80 - 120
2353636	Antimony	106	106	P/P	80 - 120
2353636	Arsenic	104	103	P/P	80 - 120
2353636	Barium	104	105	P/P	80 - 120
2353636	Beryllium	103	99.0	P/P	80 - 120
2353636	Boron	97.9	97.4	P/P	80 - 120
2353636	Cadmium	101	102	P/P	80 - 120
2353636	Chromium	100	100	P/P	80 - 120
2353636	Cobalt	97.8	97.3	P/P	80 - 120
2353636	Copper	96.5	97.2	P/P	80 - 120
2353636	Lead	93.6	93.7	P/P	80 - 120
2353636	Manganese	100	93.5	P/P	80 - 120
2353636	Molybdenum	102	102	P/P	80 - 120
2353636	Nickel	101	99.4	P/P	80 - 120
2353636	Selenium	102	101	P/P	80 - 120
2353636	Silver	86.9	87.8	P/P	80 - 120
2353636	Thallium	99.4	100	P/P	80 - 120
2353686	Aluminum	101		P	80 - 120
2353686	Antimony	105		P	80 - 120
2353686	Arsenic	105		P	80 - 120
2353686	Barium	105		P	80 - 120
2353686	Beryllium	99.9		P	80 - 120
2353686	Boron	99.4		P	80 - 120
2353686	Cadmium	99.0		P	80 - 120
2353686	Chromium	104		P	80 - 120
2353686	Cobalt	98.2		P	80 - 120
2353686	Copper	104		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419103

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353686	Lead	93.5		P	80 - 120
2353686	Manganese	102		P	80 - 120
2353686	Molybdenum	100		P	80 - 120
2353686	Nickel	102		P	80 - 120
2353686	Selenium	101		P	80 - 120
2353686	Silver	87.6		P	80 - 120
2353686	Thallium	97.7		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352704	Chloride	96.6		P	90 - 110
2352758	Chloride	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352704	Sulfate	93.3		P	90 - 110
2352758	Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418888

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352679	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418823

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352296	Kjeldahl Nitrogen	100	96.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352499	Kjeldahl Nitrogen	105	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352572	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352599	Total-P	105	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P418734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352692	Aldrin	56.1	67.3	P/P	20 - 82.0
2352692	Alpha-BHC	81.7	80.4	P/P	71 - 109
2352692	Alpha-Chlordane	61.6	50.9	P/P	42 - 106
2352692	Beta-BHC	96.1	95.0	P/P	69 - 180
2352692	Beta-Cyfluthrin	73.2	50.4	P/P	18 - 175
2352692	Bifenthrin	67.9	44.9	P/P	21 - 128
2352692	Carbophenothion	45.0	38.0	P/P	10 - 126
2352692	Chlorothalonil	38.5	32.0	P/P	10 - 300
2352692	Cis-Nonachlor	49.7	51.7	P/P	34 - 106
2352692	Cypermethrin	73.2	51.3	P/P	22 - 158
2352692	Dacthal	73.7	63.4	P/P	54 - 116
2352692	DDD-p,p'	51.6	52.8	P/P	34 - 107
2352692	DDE-p,p'	55.8	54.9	P/P	33 - 110
2352692	DDT-p,p'	75.3	79.0	P/P	50 - 122
2352692	Delta-BHC	105	80.4	P/P	77 - 193
2352692	Deltamethrin	148	154	P/P	10 - 195
2352692	Dichlobenil	59.9	58.6	P/P	25 - 113
2352692	Dicofol	85.2	87.1	P/P	38 - 247
2352692	Dieldrin	61.7	56.8	P/P	45 - 118
2352692	Endosulfan I	62.3	67.5	P/P	51 - 106
2352692	Endosulfan II	73.1	70.2	P/P	37 - 122
2352692	Endosulfan Sulfate	59.7	55.2	P/P	43 - 132
2352692	Endrin	57.7	63.0	P/P	29 - 101
2352692	Endrin Aldehyde	48.5	44.4	P/P	19 - 110
2352692	Endrin Ketone	71.0	62.0	P/P	60 - 140
2352692	Esfenvalerate	83.2	59.0	P/P	26 - 199
2352692	Ethalfuralin	72.8	81.4	P/P	45 - 99.0
2352692	Fenpropathrin	93.6	98.3	P/P	35 - 120
2352692	Gamma-BHC	83.6	85.7	P/P	63 - 128
2352692	Gamma-Chlordane	63.3	53.1	P/P	40 - 104
2352692	Heptachlor	68.1	65.0	P/P	36 - 97.0
2352692	Heptachlor Epoxide	70.9	57.7	P/P	49 - 184
2352692	Hexachlorobenzene	69.4	66.4	P/P	39 - 96.0
2352692	Kepone	139	191	P/P	10 - 217
2352692	Lambda-Cyhalothrin	65.9	48.7	P/P	21 - 193
2352692	Methoprene	54.2	43.5	P/P	20 - 106
2352692	Methoxychlor	81.1	89.8	P/P	53 - 118
2352692	MGK-264	67.8	54.7	P/P	40 - 118
2352692	Mirex	50.1	39.3	P/P	26 - 92.0
2352692	Oxychlordane	69.2	61.3	P/P	44 - 99.0
2352692	Permethrin	76.4	54.1	P/P	33 - 182
2352692	Phenothrin	59.5	36.8	P/P	10 - 129
2352692	Piperonyl Butoxide	105	101	P/P	10 - 211
2352692	Prallethrin	59.7	47.9	P/P	24 - 113
2352692	Tau-Fluvalinate	73.6	43.1	P/P	14 - 149
2352692	Tetramethrin	108	75.1	P/P	17 - 151
2352692	Trans-Nonachlor	57.0	46.9	P/P	42 - 102
2352692	Triclosan Methyl	62.3	56.3	P/P	48 - 108
2352692	Trifluralin	71.6	72.8	P/P	47 - 96.0
2352698	PCB-1016	86.6	88.5	P/P	46 - 111
2352698	PCB-1260	89.5	88.3	P/P	45 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P418734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352698	Chlordane	88.5	88.7	P/P	53 - 126
2352698	Toxaphene	91.7	91.1	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P418641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352247	Acesulfame K	84.1	83.2	P/P	40 - 150
2352247	AMPA	98.2	98.8	P/P	40 - 150
2352247	Endothall	171	174	F/F	40 - 150
2352247	Glufosinate	123	103	P/P	40 - 150
2352247	Glyphosate	119	120	P/P	40 - 150
2352247	Sucralose	110	110	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P418839

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352724	2,4-D	77.7	80.5	P/P	40 - 150
2352724	2,4,5-T	81.7	83.6	P/P	40 - 150
2352724	Acetaminophen	74.0	83.6	P/P	30 - 150
2352724	Acetamiprid	47.7	45.5	P/P	40 - 150
2352724	Afidopyropen	55.7	67.7	P/P	30 - 150
2352724	Bentazon	124	121	P/P	30 - 150
2352724	Benzovindiflupyr	78.3	83.5	P/P	40 - 150
2352724	Carbamazepine	74.1	76.9	P/P	40 - 150
2352724	Clothianidin	49.8	54.6	P/P	40 - 150
2352724	Dinotefuran	94.1	108	P/P	40 - 150
2352724	Diuron	85.6	80.7	P/P	40 - 150
2352724	Fenuron	97.5	97.1	P/P	40 - 150
2352724	Fluridone	105	106	P/P	40 - 150
2352724	Hydrocodone	104	113	P/P	40 - 150
2352724	Ibuprofen	67.1	81.2	P/P	40 - 150
2352724	Imazapyr	83.1	96.8	P/P	40 - 150
2352724	Imidacloprid	66.1	74.2	P/P	40 - 150
2352724	Linuron	91.8	99.3	P/P	40 - 150
2352724	Mandestrobin	98.0	93.3	P/P	40 - 150
2352724	MCPP	88.9	95.3	P/P	40 - 150
2352724	Naproxen	125	117	P/P	40 - 150
2352724	Primidone	44.9	35.3	P/F	40 - 150
2352724	Pyraclostrobin	92.5	94.9	P/P	40 - 150
2352724	Silvex	73.9	79.1	P/P	40 - 150
2352724	Thiamethoxam	82.0	89.7	P/P	40 - 150
2352724	Tolfenpyrad	57.1	61.2	P/P	30 - 150
2352724	Triclopyr	73.3	81.5	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P419279

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352597	Fluoride	102	101	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P419161

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2352547	Organic Carbon	95.2	95.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P418765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352589	Color (true)	1.23	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P418764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352678	Turbidity	14.3	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353636	Calcium	2.26	Spike	P	0 - 20
2353636	Iron	3.28	Spike	P	0 - 20
2353636	Magnesium	3.69	Spike	P	0 - 20
2353636	Potassium	2.49	Spike	P	0 - 20
2353636	Sodium	1.54	Spike	P	0 - 20
2353636	Strontium	0.885	Spike	P	0 - 20
2353636	Tin	1.01	Spike	P	0 - 20
2353636	Titanium	0.407	Spike	P	0 - 20
2353636	Vanadium	0.0197	Spike	P	0 - 20
2353636	Zinc	0.246	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419103

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353636	Aluminum	0.0665	Spike	P	0 - 20
2353636	Antimony	0.276	Spike	P	0 - 20
2353636	Arsenic	1.06	Spike	P	0 - 20
2353636	Barium	1.12	Spike	P	0 - 20
2353636	Beryllium	3.66	Spike	P	0 - 20
2353636	Boron	0.254	Spike	P	0 - 20
2353636	Cadmium	0.672	Spike	P	0 - 20
2353636	Chromium	0.279	Spike	P	0 - 20
2353636	Cobalt	0.515	Spike	P	0 - 20
2353636	Copper	0.734	Spike	P	0 - 20
2353636	Lead	0.104	Spike	P	0 - 20
2353636	Manganese	1.13	Spike	P	0 - 20
2353636	Molybdenum	0.0878	Spike	P	0 - 20
2353636	Nickel	1.67	Spike	P	0 - 20
2353636	Selenium	0.515	Spike	P	0 - 20
2353636	Silver	0.959	Spike	P	0 - 20
2353636	Thallium	0.972	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352704	Chloride	0.0217	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352704	Sulfate	0.0618	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P418888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352679	Ammonia-N	1.26	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418823

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352296	Kjeldahl Nitrogen	1.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P418910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352499	Kjeldahl Nitrogen	0.867	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352572	NO2NO3-N	1.11	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P418983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352599	Total-P	1.75	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P418734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352692	Aldrin	18.2	Spike	P	0 - 41
2352692	Alpha-BHC	1.55	Spike	P	0 - 25

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P418734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352692	Alpha-Chlordane	18.9	Spike	P	0 - 33
2352692	Beta-BHC	1.23	Spike	P	0 - 36
2352692	Beta-Cyfluthrin	36.9	Spike	P	0 - 42
2352692	Bifenthrin	40.7	Spike	P	0 - 53
2352692	Carbophenothion	16.8	Spike	P	0 - 49
2352692	Chlorothalonil	18.3	Spike	P	0 - 71
2352692	Cis-Nonachlor	3.93	Spike	P	0 - 29
2352692	Cypermethrin	35.2	Spike	P	0 - 40
2352692	Dacthal	15.0	Spike	P	0 - 26
2352692	DDD-p,p'	2.24	Spike	P	0 - 39
2352692	DDE-p,p'	1.67	Spike	P	0 - 33
2352692	DDT-p,p'	4.76	Spike	P	0 - 40
2352692	Delta-BHC	26.6	Spike	P	0 - 37
2352692	Deltamethrin	4.09	Spike	P	0 - 100
2352692	Dichlobenil	2.23	Spike	P	0 - 40
2352692	Dicofol	2.21	Spike	P	0 - 31
2352692	Dieldrin	8.15	Spike	P	0 - 27
2352692	Endosulfan I	8.03	Spike	P	0 - 23
2352692	Endosulfan II	3.95	Spike	P	0 - 28
2352692	Endosulfan Sulfate	7.90	Spike	P	0 - 38
2352692	Endrin	8.76	Spike	P	0 - 63
2352692	Endrin Aldehyde	8.79	Spike	P	0 - 60
2352692	Endrin Ketone	13.5	Spike	P	0 - 37
2352692	Esfenvalerate	34.1	Spike	P	0 - 52
2352692	Ethalfuralin	11.2	Spike	P	0 - 23
2352692	Fenpropathrin	4.91	Spike	P	0 - 32
2352692	Gamma-BHC	2.47	Spike	P	0 - 17
2352692	Gamma-Chlordane	17.6	Spike	P	0 - 40
2352692	Heptachlor	4.67	Spike	P	0 - 29
2352692	Heptachlor Epoxide	20.6	Spike	P	0 - 25
2352692	Hexachlorobenzene	4.49	Spike	P	0 - 36
2352692	Kepone	31.9	Spike	P	0 - 93
2352692	Lambda-Cyhalothrin	30.0	Spike	P	0 - 55
2352692	Methoprene	21.9	Spike	P	0 - 53
2352692	Methoxychlor	10.2	Spike	P	0 - 29
2352692	MGK-264	21.4	Spike	P	0 - 35
2352692	Mirex	24.0	Spike	P	0 - 46
2352692	Oxychlordane	12.2	Spike	P	0 - 29
2352692	Permethrin	34.1	Spike	P	0 - 44
2352692	Phenothrin	47.2	Spike	P	0 - 56
2352692	Piperonyl Butoxide	4.16	Spike	P	0 - 100
2352692	Prallethrin	22.0	Spike	P	0 - 42
2352692	Tau-Fluvalinate	52.2	Spike	P	0 - 54
2352692	Tetramethrin	35.7	Spike	P	0 - 51
2352692	Trans-Nonachlor	19.4	Spike	P	0 - 37
2352692	Triclosan Methyl	10.1	Spike	P	0 - 31
2352692	Trifluralin	1.74	Spike	P	0 - 30
2352698	PCB-1016	2.21	Spike	P	0 - 32
2352698	PCB-1260	1.29	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P418734

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352698	Chlordane	0.185	Spike	P	0 - 25
2352698	Toxaphene	0.663	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P418641

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352247	Acesulfame K	0.987	Spike	P	0 - 30
2352247	AMPA	0.614	Spike	P	0 - 30
2352247	Endothall	1.59	Spike	P	0 - 30
2352247	Glufosinate	17.2	Spike	P	0 - 30
2352247	Glyphosate	1.40	Spike	P	0 - 30
2352247	Sucralose	0.450	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P418839

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352724	2,4-D	3.61	Spike	P	0 - 30
2352724	2,4,5-T	2.26	Spike	P	0 - 30
2352724	Acetaminophen	12.1	Spike	P	0 - 30
2352724	Acetamiprid	4.64	Spike	P	0 - 30
2352724	Afidopyropen	19.4	Spike	P	0 - 30
2352724	Bentazon	1.98	Spike	P	0 - 30
2352724	Benzovindiflupyr	6.34	Spike	P	0 - 30
2352724	Carbamazepine	3.75	Spike	P	0 - 30
2352724	Clothianidin	9.25	Spike	P	0 - 30
2352724	Dinotefuran	13.7	Spike	P	0 - 30
2352724	Diuron	6.01	Spike	P	0 - 30
2352724	Fenuron	0.455	Spike	P	0 - 30
2352724	Fluridone	1.59	Spike	P	0 - 30
2352724	Hydrocodone	8.10	Spike	P	0 - 30
2352724	Ibuprofen	19.0	Spike	P	0 - 30
2352724	Imazapyr	15.2	Spike	P	0 - 30
2352724	Imidacloprid	11.5	Spike	P	0 - 30
2352724	Linuron	7.90	Spike	P	0 - 30
2352724	Mandestrobin	4.93	Spike	P	0 - 30
2352724	MCPP	6.97	Spike	P	0 - 30
2352724	Naproxen	6.99	Spike	P	0 - 30
2352724	Primidone	24.0	Spike	P	0 - 30
2352724	Pyraclostrobin	2.62	Spike	P	0 - 30
2352724	Silvex	6.75	Spike	P	0 - 30
2352724	Thiamethoxam	9.02	Spike	P	0 - 30
2352724	Tolfenpyrad	6.89	Spike	P	0 - 30
2352724	Triclopyr	10.5	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P419033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352596	Total Alkalinity	0.0670	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P419261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352507	TDS	3.15	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P419279

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352597	Fluoride	0.487	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419161

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2352547	Organic Carbon	0.285	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2352687

Field Sample ID: G4NW0193

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	60.0	P	29 - 130
EPA 8270E	Decachlorobiphenyl	66.2	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	47.9	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	51.5	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	49.1	P	30 - 101
EPA 8276	PCNB	72.7	P	48 - 121

Lab Sample ID: 2352688

Field Sample ID: G4NW0193

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	84.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	60.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.8	P	30 - 160
EPA 8321B	Diuron-d6	78.7	P	30 - 160
EPA 8321B	Endothall-d6	140	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	72.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.4	P	30 - 160
EPA 8321B	Primidone-d5	30.3	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A114368
Included Lab Sample IDs: 2352688

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	110	P/P	60 - 160
Sucralose	113	113	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A114374
Included Lab Sample IDs: 2352688

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	110	P/P	60 - 160
Endothall	113	113	P/P	60 - 160
Glufosinate	130	127	P/P	60 - 160
Glyphosate	108	109	P/P	60 - 160

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A114382
Included Lab Sample IDs: 2352678, 2352680

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

Reference Method: DEP SOP: NU-094-1
Run ID: A114383
Included Lab Sample IDs: 2352678

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A114437
Included Lab Sample IDs: 2352679, 2352681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.3	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114482
Included Lab Sample IDs: 2352681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.1	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114500
Included Lab Sample IDs: 2352679

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.0	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276
Run ID: A114501
Included Lab Sample IDs: 2352687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.0		P	80 - 120
Toxaphene	111		P	80 - 120

Reference Method: EPA 8270E
Run ID: A114503
Included Lab Sample IDs: 2352687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	101		P	80 - 120
PCB-1260	99.3		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A114506
Included Lab Sample IDs: 2352678, 2352680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A114510
Included Lab Sample IDs: 2352679, 2352681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114512
Included Lab Sample IDs: 2352681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	103	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A114516
Included Lab Sample IDs: 2352687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.4		P	80 - 120
Alpha-BHC	99.6		P	80 - 120
Alpha-Chlordane	98.2		P	80 - 120
Beta-BHC	99.6		P	80 - 120
Beta-Cyfluthrin	101		P	80 - 120
Bifenthrin	103		P	80 - 120
Carbophenothion	100		P	80 - 120
Chlorothalonil	106		P	80 - 120
Cis-Nonachlor	99.7		P	80 - 120
Cypermethrin	101		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A114516
Included Lab Sample IDs: 2352687

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Delta-BHC	98.4		P	80 - 120
Deltamethrin	105		P	80 - 120
Dichlobenil	100		P	80 - 120
Dicofol	98.2		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	96.7		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	97.1		P	80 - 120
Endrin	98.6		P	80 - 120
Endrin Aldehyde	95.0		P	80 - 120
Endrin Ketone	119		P	80 - 120
Esfenvalerate	102		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	98.7		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	99.0		P	80 - 120
Heptachlor	99.6		P	80 - 120
Heptachlor Epoxide	104		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Kepone	83.9		P	80 - 120
Lambda-Cyhalothrin	99.1		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	99.1		P	80 - 120
MGK-264	96.9		P	80 - 120
Mirex	104		P	80 - 120
Oxychlordane	99.9		P	80 - 120
Permethrin	102		P	80 - 120
Phenothrin	99.5		P	80 - 120
Piperonyl Butoxide	91.7		P	80 - 120
Prallethrin	95.5		P	80 - 120
Tau-Fluvalinate	101		P	80 - 120
Tetramethrin	104		P	80 - 120
Trans-Nonachlor	104		P	80 - 120
Triclosan Methyl	105		P	80 - 120
Trifluralin	100		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114523
Included Lab Sample IDs: 2352679

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

Reference Method: SM 5310 B-2011
Run ID: A114555
Included Lab Sample IDs: 2352679, 2352681

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.3	95.6	P/P	90 - 110
Organic Carbon	95.6	95.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A114599

Included Lab Sample IDs: 2352678, 2352680

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114600

Included Lab Sample IDs: 2352678

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

Reference Method: EPA 8321B

Run ID: A114605

Included Lab Sample IDs: 2352688

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.8	93.3	P/P	50 - 150
2,4,5-T	106	120	P/P	50 - 150
Acetaminophen	92.2	95.1	P/P	60 - 160
Acetamiprid	85.7	85.3	P/P	50 - 150
Afidopyropen	95.0	92.7	P/P	50 - 150
Bentazon	92.5	91.0	P/P	50 - 160
Benzovindiflupyr	99.0	115	P/P	50 - 150
Carbamazepine	117	95.6	P/P	60 - 150
Clothianidin	104	103	P/P	60 - 150
Dinotefuran	115	94.9	P/P	50 - 150
Diuron	91.4	101	P/P	60 - 160
Fenuron	83.1	88.1	P/P	60 - 150
Fluridone	109	104	P/P	60 - 160
Hydrocodone	106	77.2	P/P	60 - 150
Ibuprofen	142	147	P/P	50 - 160
Imazapyr	97.6	96.1	P/P	50 - 150
Imidacloprid	103	74.4	P/P	60 - 150
Linuron	106	111	P/P	60 - 150
Mandestrobin	97.1	112	P/P	50 - 150
MCPP	94.8	102	P/P	50 - 150
Naproxen	132	127	P/P	50 - 160
Primidone	111	112	P/P	60 - 150
Pyraclostrobin	104	111	P/P	60 - 150
Silvex	85.6	61.7	P/P	50 - 150
Thiamethoxam	96.8	111	P/P	50 - 150
Tolfenpyrad	104	125	P/P	60 - 150
Triclopyr	95.1	86.9	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114629

Included Lab Sample IDs: 2352689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	98.2	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	105	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114629

Included Lab Sample IDs: 2352689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.7	100	P/P	90 - 110
Beryllium	101	102	P/P	90 - 110
Boron	99.9	95.1	P/P	90 - 110
Cadmium	103	104	P/P	90 - 110
Chromium	104	104	P/P	90 - 110
Cobalt	100	99.4	P/P	90 - 110
Copper	103	103	P/P	90 - 110
Lead	91.8	91.6	P/P	90 - 110
Manganese	103	103	P/P	90 - 110
Molybdenum	99.3	98.8	P/P	90 - 110
Nickel	103	102	P/P	90 - 110
Selenium	102	102	P/P	90 - 110
Silver	98.4	98.6	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114713

Included Lab Sample IDs: 2352689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	109	107	P/P	90 - 110
Potassium	105	103	P/P	90 - 110
Sodium	103	103	P/P	90 - 110
Strontium	99.6	101	P/P	90 - 110
Tin	104	107	P/P	90 - 110
Titanium	101	104	P/P	90 - 110
Vanadium	102	103	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114728

Included Lab Sample IDs: 2352689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	98.0	99.1	P/P	95 - 105

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114771

Included Lab Sample IDs: 2352689

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	95 - 105
Magnesium	99.1	100	P/P	95 - 105

* 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)	99.7					1.23	
EPA 180.1 Rev. 2.0	Turbidity	96.9					14.3	
EPA 200.7 Rev. 4.4	Calcium	108	105	111				2.26
	Iron	110	110	106	111			3.28
	Magnesium	106	105	110				3.69
	Potassium	104	101	114				2.49
	Sodium	104	103	108				1.54
	Strontium	104	104	103	105			0.885
	Tin	110	110	109	111			1.01
	Titanium	107	109	109	110			0.407
	Vanadium	106	107	107	108			0.0197
	Zinc	109	106	107	109			0.246
EPA 200.8 Rev. 5.4	Aluminum	102	99.6	99.7	101			0.0665
	Antimony	104	106	106	105			0.276
	Arsenic	103	104	103	105			1.06
	Barium	105	104	105	105			1.12
	Beryllium	99.9	103	99.0	99.9			3.66
	Boron	101	97.9	97.4	99.4			0.254
	Cadmium	99.4	101	102	99.0			0.672
	Chromium	102	100	100	104			0.279
	Cobalt	98.9	97.8	97.3	98.2			0.515
	Copper	101	96.5	97.2	104			0.734
	Lead	92.8	93.6	93.7	93.5			0.104
	Manganese	102	100	93.5	102			1.13
	Molybdenum	98.8	102	102	100			0.0878
	Nickel	102	101	99.4	102			1.67
	Selenium	101	102	101	101			0.515
	Silver	88.8	86.9	87.8	87.6			0.959
	Thallium	97.4	99.4	100	97.7			0.972
EPA 300.0 Rev. 2.1	Chloride	99.2	96.6	97.6			0.0217	
	Sulfate	97.8	93.3	95.6			0.0618	
EPA 350.1 Rev. 2.0	Ammonia-N	92.8	102	103				1.26
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	100	96.9				1.70
	Kjeldahl Nitrogen	104	105	106				0.867
EPA 353.2 Rev. 2.0	NO2NO3-N	103	102	104				1.11
EPA 365.1 Rev. 2.0	Total-P	105	105	103				1.75
EPA 8270E	Aldrin	51.0	56.1	67.3				18.2
	Alpha-BHC	84.0	81.7	80.4				1.55
	Alpha-Chlordane	63.4	61.6	50.9				18.9
	Beta-BHC	104	96.1	95.0				1.23
	Beta-Cyfluthrin	60.0	73.2	50.4				36.9
	Bifenthrin	39.3	67.9	44.9				40.7
	Carbophenothion	40.1	45.0	38.0				16.8
	Chlorothalonil	54.3	38.5	32.0				18.3
	Cis-Nonachlor	52.3	49.7	51.7				3.93
	Cypermethrin	61.9	73.2	51.3				35.2
	Dacthal	82.2	73.7	63.4				15.0
	DDD-p,p'	61.1	51.6	52.8				2.24
	DDE-p,p'	58.7	55.8	54.9				1.67
	DDT-p,p'	66.1	75.3	79.0				4.76
	Delta-BHC	111	105	80.4				26.6
	Deltamethrin	47.9	148	154				4.09
	Dichlobenil	90.3	59.9	58.6				2.23
	Dicofol	72.6	85.2	87.1				2.21

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Dieldrin	63.7	61.7	56.8		8.15
	Endosulfan I	70.2	62.3	67.5		8.03
	Endosulfan II	72.9	73.1	70.2		3.95
	Endosulfan Sulfate	73.4	59.7	55.2		7.90
	Endrin	63.0	57.7	63.0		8.76
	Endrin Aldehyde	68.6	48.5	44.4		8.79
	Endrin Ketone	91.8	71.0	62.0		13.5
	Esfenvalerate	59.2	83.2	59.0		34.1
	Ethalfuralin	71.0	72.8	81.4		11.2
	Fenpropathrin	60.0	93.6	98.3		4.91
	Gamma-BHC	88.1	83.6	85.7		2.47
	Gamma-Chlordane	59.7	63.3	53.1		17.6
	Heptachlor	58.9	68.1	65.0		4.67
	Heptachlor Epoxide	70.7	70.9	57.7		20.6
	Hexachlorobenzene	68.8	69.4	66.4		4.49
	Kepone	186	139	191		31.9
	Lambda-Cyhalothrin	50.1	65.9	48.7		30.0
	Methoprene	39.4	54.2	43.5		21.9
	Methoxychlor	82.1	81.1	89.8		10.2
	MGK-264	77.5	67.8	54.7		21.4
	Mirex	44.3	50.1	39.3		24.0
	Oxychlordane	68.8	69.2	61.3		12.2
	PCB-1016	76.7	86.6	88.5		2.21
	PCB-1260	69.0	89.5	88.3		1.29
	Permethrin	57.9	76.4	54.1		34.1
	Phenothrin	36.0	59.5	36.8		47.2
	Piperonyl Butoxide	107	105	101		4.16
	Prallethrin	65.5	59.7	47.9		22.0
	Tau-Fluvalinate	46.0	73.6	43.1		52.2
	Tetramethrin	102	108	75.1		35.7
	Trans-Nonachlor	55.5	57.0	46.9		19.4
	Triclosan Methyl	66.9	62.3	56.3		10.1
	Trifluralin	67.0	71.6	72.8		1.74
EPA 8276	Chlordane	74.1	88.5	88.7		0.185
	Toxaphene	67.8	91.7	91.1		0.663
EPA 8321B	2,4-D	72.6	80.5	77.7		3.61
	2,4,5-T	67.1	83.6	81.7		2.26
	Acesulfame K	117	83.2	84.1		0.987
	Acetaminophen	108	74.0	83.6		12.1
	Acetamiprid	72.1	47.7	45.5		4.64
	Afidopyropen	62.7	55.7	67.7		19.4
	AMPA	112	98.2	98.8		0.614
	Bentazon	82.1	121	124		1.98
	Benzovindiflupyr	70.1	78.3	83.5		6.34
	Carbamazepine	81.4	74.1	76.9		3.75
	Clothianidin	77.8	49.8	54.6		9.25
	Dinotefuran	73.6	94.1	108		13.7
	Diuron	89.0	85.6	80.7		6.01
	Endothall	103	171	174		1.59
	Fenuron	99.5	97.5	97.1		0.455
	Fluridone	84.5	105	106		1.59
	Glufosinate	117	123	103		17.2
	Glyphosate	107	119	120		1.40
	Hydrocodone	112	104	113		8.10

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Ibuprofen	59.2	81.2	67.1		19.0
	Imazapyr	73.8	96.8	83.1		15.2
	Imidacloprid	93.3	66.1	74.2		11.5
	Linuron	90.9	91.8	99.3		7.90
	Mandestrobin	86.3	98.0	93.3		4.93
	MCPP	75.2	95.3	88.9		6.97
	Naproxen	84.3	117	125		6.99
	Primidone	70.9	44.9	35.3		24.0
	Pyraclostrobin	83.0	92.5	94.9		2.62
	Silvex	59.1	79.1	73.9		6.75
	Sucralose	115	110	110		0.450
	Thiamethoxam	97.2	82.0	89.7		9.02
	Tolfenpyrad	44.1	57.1	61.2		6.89
	Triclopyr	54.9	81.5	73.3		10.5
SM 2320 B-2011	Total Alkalinity	106			0.0670	
SM 2540 C-2011	TDS				3.15	
SM 4500-F- C-2011	Fluoride	101	102	101		0.487
SM 5310 B-2011	Organic Carbon	97.0	95.2	95.6		0.285

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2352678
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2352678, 2352680
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2352689
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2352689
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2352678
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2352678
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2352679, 2352681
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2352679, 2352681
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2352679, 2352681
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2352679, 2352681
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2352687
EPA 8270E	PCBs in water matrices by GC/MS/MS	2352687
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2352687
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2352688
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2352678, 2352680
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2352689
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2352678
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2352678, 2352680
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2352678, 2352680
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2352679, 2352681

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	08/26/2022			08/26/2022 15:06	Blanca Fach	2352678
EPA 180.1 Rev. 2.0	08/26/2022			08/26/2022 13:15	Chandler E Cox	2352678
	08/26/2022			08/26/2022 14:01	Chandler E Cox	2352680
EPA 200.7 Rev. 4.4	08/26/2022	09/06/2022 10:20	Megan Whitefoot	09/14/2022 05:31	McKinley C Carter	2352689
	08/26/2022	09/06/2022 10:20	Megan Whitefoot	09/14/2022 18:44	McKinley C Carter	2352689
	08/26/2022	09/06/2022 10:20	Megan Whitefoot	09/15/2022 18:35	McKinley C Carter	2352689
EPA 200.8 Rev. 5.4	08/26/2022	09/06/2022 10:20	Megan Whitefoot	09/08/2022 21:02	Megan Whitefoot	2352689
EPA 300.0 Rev. 2.1	08/26/2022			09/09/2022 20:40	Anna M. Plaviak	2352678
EPA 350.1 Rev. 2.0	08/26/2022			08/30/2022 15:41	Judith K. Clark	2352679
	08/26/2022			08/30/2022 15:42	Judith K. Clark	2352681
EPA 351.2 Rev. 2.0	08/26/2022	08/30/2022 14:31	Samantha L Bates	09/01/2022 11:28	Alexandra J Mattheus	2352681
	08/26/2022	08/31/2022 14:32	Samantha L Bates	09/01/2022 14:41	Alexandra J Mattheus	2352679
EPA 353.2 Rev. 2.0	08/26/2022			09/02/2022 09:55	Judith K. Clark	2352679
	08/26/2022			09/02/2022 09:56	Judith K. Clark	2352681
EPA 365.1 Rev. 2.0	08/26/2022	09/01/2022 15:55	Simonne.V. Calhoun	09/02/2022 10:17	Simonne.V. Calhoun	2352681
	08/26/2022	09/01/2022 15:55	Simonne.V. Calhoun	09/02/2022 15:13	James L Waggeberby	2352679
EPA 8270E	08/26/2022	08/30/2022 08:00	Rasheda Ghaffari	09/01/2022 23:18	Vandana T. Nagar	2352687
	08/26/2022	08/30/2022 08:00	Rasheda Ghaffari	09/02/2022 03:28	Vandana T. Nagar	2352687
EPA 8276	08/26/2022	08/30/2022 08:00	Rasheda Ghaffari	09/01/2022 15:36	Arthur Maknenko	2352687
EPA 8321B	08/26/2022	08/26/2022 13:00	Umesh Chiluwal	08/26/2022 15:08	Umesh Chiluwal	2352688
	08/26/2022	08/26/2022 13:00	Umesh Chiluwal	08/26/2022 23:56	Umesh Chiluwal	2352688
	08/26/2022	09/01/2022 09:00	June Rhew	09/08/2022 03:31	Juyoung Kim	2352688
SM 2320 B-2011	08/26/2022			09/01/2022 21:51	Dale L. Simmons	2352678
	08/26/2022			09/01/2022 22:00	Dale L. Simmons	2352680
SM 2340 B-2011	08/26/2022			09/15/2022 18:35	McKinley C Carter	2352689
SM 2540 C-2011	08/26/2022			08/30/2022 14:29	Yijie Li	2352678
SM 2540 D-2011	08/26/2022			08/30/2022 14:29	Yijie Li	2352678, 2352680
SM 4500-F- C-2011	08/26/2022			09/07/2022 21:42	Adam P Silver	2352678
	08/26/2022			09/07/2022 21:54	Adam P Silver	2352680
SM 5310 B-2011	08/26/2022			09/02/2022 22:42	Khloe J Berg	2352679
	08/26/2022			09/02/2022 23:26	Khloe J Berg	2352681