

Chemical Analysis Report

NE-DIST-2023-01-06-01

Florida DEP Laboratory
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DOH Accreditation E31780

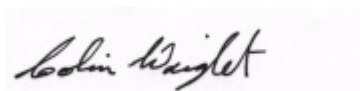
Event Description: **LSJR Main**
Request ID: **RQ-2023-01-02-41**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 25-JAN-2023 12:10

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink rectangular 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: Hogan Creek at 1st St.

Collection Date/Time: 01/05/2023 11:00

Field ID: 20030692

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378465	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P424244	
	SM 2320 B-2011	Total Alkalinity	123		mg CaCO3/L	P424600	
	SM 2540 D-2015	TSS	4	I	mg/L	P424520	
	SM 4500-F- C-2011	Fluoride	0.40		mg F/L	P424472	
2378466	EPA 350.1 Rev. 2.0	Ammonia-N	0.095		mg N/L	P424563	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37		mg N/L	P424264	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P424517	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P424376	
	SM 5310 B-2011	Organic Carbon	5.3		mg C/L	P424321	
2378476	EPA 8270E	Aldrin	0.67	U	ng/L	P424179	
		Alpha-BHC	0.10	U	ng/L	P424179	
		Alpha-Chlordane	0.21	U	ng/L	P424179	
		PCB-1016	2.1	U	ng/L	P424179	
		Beta-BHC	0.27	I	ng/L	P424179	
		PCB-1221	2.1	U	ng/L	P424179	
		Beta-Cyfluthrin	1.3	U	ng/L	P424179	
		PCB-1232	2.1	U	ng/L	P424179	
		Bifenthrin	0.52	U	ng/L	P424179	
		PCB-1242	2.1	U	ng/L	P424179	
		PCB-1248	2.1	U	ng/L	P424179	
		Chlorothalonil	3.7	U	ng/L	P424179	
		PCB-1254	2.1	U	ng/L	P424179	
		Cis-Nonachlor	0.21	U	ng/L	P424179	
		PCB-1260	2.1	U	ng/L	P424179	
		Cypermethrin	1.5	U	ng/L	P424179	
		Dacthal	0.15	U	ng/L	P424179	
		DDD-p,p'	0.26	U	ng/L	P424179	
		DDE-p,p'	0.21	U	ng/L	P424179	
		DDT-p,p'	0.26	U	ng/L	P424179	
		Delta-BHC	0.55	I	ng/L	P424179	
		Deltamethrin	1.3	U	ng/L	P424179	
		Dichlobenil	0.26	U	ng/L	P424179	
		Dicofol	1.3	U	ng/L	P424179	
		Dieldrin	1.8	I	ng/L	P424179	
		Endosulfan I	0.41	U	ng/L	P424179	
		Endosulfan II	0.41	U	ng/L	P424179	
		Endosulfan Sulfate	0.31	U	ng/L	P424179	
		Endrin	0.41	U	ng/L	P424179	
		Endrin Aldehyde	0.77	U	ng/L	P424179	
		Endrin Ketone	0.41	U	ng/L	P424179	
		Esfenvalerate	0.77	U	ng/L	P424179	
		Ethalfuralin	0.15	U	ng/L	P424179	
		Fenpropathrin	0.26	U	ng/L	P424179	
		Gamma-BHC	0.13	U	ng/L	P424179	

Field ID: 20030692

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378476	EPA 8270E	Gamma-Chlordane	0.21	U	ng/L	P424179	MS
		Heptachlor	0.21	U	ng/L	P424179	
		Heptachlor Epoxide	0.53	I	ng/L	P424179	
		Hexachlorobenzene**	1.0	U	ng/L	P424179	
		Kepone	5.2	U	ng/L	P424179	
		Lambda-Cyhalothrin	0.77	U	ng/L	P424179	
		Methoprene	0.77	U	ng/L	P424179	
		Methoxychlor	0.31	U	ng/L	P424179	
		MGK-264	0.21	U	ng/L	P424179	
		Mirex	0.36	U	ng/L	P424179	
		Oxychlordane	0.31	U	ng/L	P424179	
		Permethrin	1.6	U	ng/L	P424179	
		Phenothrin	0.93	U	ng/L	P424179	
		Piperonyl Butoxide	1.2		ng/L	P424179	
		Prallethrin	2.1	U	ng/L	P424179	MS
		Tau-Fluvalinate	0.26	U	ng/L	P424179	
		Tetramethrin	0.77	U	ng/L	P424179	MS
		Trans-Nonachlor	0.21	U	ng/L	P424179	
		Triclosan Methyl	0.15	U	ng/L	P424179	MS
		Trifluralin	0.21	U	ng/L	P424179	
	EPA 8276	Chlordane	2.1	U	ng/L	P424179	
		Toxaphene	15	U	ng/L	P424179	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Deer CR @ Talleyrand Ave.

Collection Date/Time: 01/05/2023 11:25

Field ID: 20030792

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378480	EPA 8321B	2,4-D	0.028		ug/L	P424181	
		Acesulfame K	0.11	I	ug/L	P424152	
		2,4,5-T	0.0040	U	ug/L	P424181	
		AMPA	0.47		ug/L	P424152	
		Acetaminophen	0.080		ug/L	P424181	
		Acetamiprid	0.0020	U	ug/L	P424181	
		Endothall	0.25	U	ug/L	P424152	
		Glufosinate	0.10	U	ug/L	P424152	
		Glyphosate	0.43		ug/L	P424152	
		Afidopyropen	0.0020	U	ug/L	P424181	
		Bentazon	0.0070		ug/L	P424181	
		Sucralose	0.11		ug/L	P424152	
		Benzovindiflupyr	0.0020	U	ug/L	P424181	
		Carbamazepine	8.0E-04	U	ug/L	P424181	
		Clothianidin	0.0020	U	ug/L	P424181	
		Dinotefuran	0.0020	U	ug/L	P424181	
		Diuron	0.0052	I	ug/L	P424181	
		Fenuron	0.032	U	ug/L	P424181	
		Fluridone	8.0E-04	U	ug/L	P424181	
		Imazapyr	0.087		ug/L	P424181	
		Hydrocodone	0.0020	U	ug/L	P424181	
		Ibuprofen	0.20	U	ug/L	P424181	
		Imidacloprid	0.0052	I	ug/L	P424181	
		Linuron	0.0040	U	ug/L	P424181	
		Mandestrobin	0.0020	U	ug/L	P424181	
		MCPP	0.0040	U	ug/L	P424181	
		Naproxen	0.0080	U	ug/L	P424181	
		Primidone	0.0040	U	ug/L	P424181	
		Pyraclostrobin	0.0020	U	ug/L	P424181	
		Silvex	0.0040	U	ug/L	P424181	
		Thiamethoxam	0.0020	U	ug/L	P424181	
		Tolfenpyrad	0.0020	U	ug/L	P424181	
		Triclopyr	0.0040	U	ug/L	P424181	

Sample Location: Little Pottsburg Creek at Emerson

Collection Date/Time: 01/05/2023 11:45

Field ID: 20030070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378463	DEP SOP: NU-094-1	Color (true)	36	A	PCU	P424232	
	EPA 180.1 Rev. 2.0	Turbidity	5.4	A	NTU	P424244	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P424532	
		Sulfate	43		mg SO4/L	P424535	
	SM 2320 B-2011	Total Alkalinity	138		mg CaCO3/L	P424600	
	SM 2540 C-2015	TDS	294	A	mg/L	P424662	
	SM 2540 D-2015	TSS	5	IA	mg/L	P424518	
	SM 4500-F- C-2011	Fluoride	0.19		mg F/L	P424472	
2378464	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P424563	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P424264	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P424517	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P424376	
	SM 5310 B-2011	Organic Carbon	9.9		mg C/L	P424320	
2378483	EPA 200.7 Rev. 4.4	Calcium	60.3		mg/L	P424285	
		Iron	1.01E+03		ug/L	P424285	
		Magnesium	9.17		mg/L	P424285	
		Potassium	2.9		mg/L	P424285	
		Sodium	18.8		mg/L	P424285	
		Strontium	697		ug/L	P424285	
		Tin	3.0	U	ug/L	P424285	
		Titanium	1.8	I	ug/L	P424285	
	EPA 200.8 Rev. 5.4	Vanadium	2.0	U	ug/L	P424285	
		Zinc	5.3	I	ug/L	P424285	
		Aluminum	29		ug/L	P424285	
		Antimony	0.29		ug/L	P424285	
		Arsenic	0.83		ug/L	P424285	
		Barium	39.0		ug/L	P424285	
		Beryllium	0.010	U	ug/L	P424285	
		Boron	41.8		ug/L	P424285	
		Cadmium	0.020	U	ug/L	P424285	
		Chromium	0.40	U	ug/L	P424285	
		Cobalt	0.130		ug/L	P424285	
		Copper	1.70		ug/L	P424285	
		Lead	0.29	I	ug/L	P424285	
		Manganese	60.8		ug/L	P424285	
		Molybdenum	1.08		ug/L	P424285	
		Nickel	0.87	I	ug/L	P424285	
		Selenium	0.20	U	ug/L	P424285	
		Silver	0.010	U	ug/L	P424285	
		Thallium	0.10	U	ug/L	P424285	
	SM 2340 B-2011	Hardness	188		mg/L	P424285	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Miramar at San Jose

Collection Date/Time: 01/05/2023 12:10

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378477	EPA 8270E	Aldrin	0.68	U	ng/L	P424179	
		Alpha-BHC	0.10	U	ng/L	P424179	
		Alpha-Chlordane	0.99	I	ng/L	P424179	
		PCB-1016	2.1	U	ng/L	P424179	
		Beta-BHC	0.50	I	ng/L	P424179	
		PCB-1221	2.1	U	ng/L	P424179	
		Beta-Cyfluthrin	1.3	U	ng/L	P424179	
		PCB-1232	2.1	U	ng/L	P424179	
		Bifenthrin	0.52	U	ng/L	P424179	
		PCB-1242	2.1	U	ng/L	P424179	
		PCB-1248	2.1	U	ng/L	P424179	
		Chlorothalonil	3.7	U	ng/L	P424179	
		PCB-1254	2.1	U	ng/L	P424179	
		Cis-Nonachlor	0.21	U	ng/L	P424179	
		PCB-1260	2.1	U	ng/L	P424179	
		Cypermethrin	1.6	U	ng/L	P424179	
		Dacthal	0.16	U	ng/L	P424179	
		DDD-p,p'	0.26	U	ng/L	P424179	
		DDE-p,p'	0.21	U	ng/L	P424179	
		DDT-p,p'	0.26	U	ng/L	P424179	
		Delta-BHC	1.2	I	ng/L	P424179	
		Deltamethrin	1.3	U	ng/L	P424179	
		Dichlobenil	1.3		ng/L	P424179	
		Dicofol	1.3	U	ng/L	P424179	
		Dieldrin	14		ng/L	P424179	
		Endosulfan I	0.42	U	ng/L	P424179	
		Endosulfan II	0.44	I	ng/L	P424179	
		Endosulfan Sulfate	0.31	U	ng/L	P424179	
		Endrin	0.42	U	ng/L	P424179	
		Endrin Aldehyde	0.78	U	ng/L	P424179	
		Endrin Ketone	0.42	U	ng/L	P424179	
		Esfenvalerate	0.78	U	ng/L	P424179	
		Ethalfuralin	0.16	U	ng/L	P424179	
		Fenpropathrin	0.26	U	ng/L	P424179	
		Gamma-BHC	0.13	U	ng/L	P424179	
		Gamma-Chlordane	0.45	I	ng/L	P424179	MS
		Heptachlor	0.21	U	ng/L	P424179	
		Heptachlor Epoxide	3.0		ng/L	P424179	
		Hexachlorobenzene**	1.0	U	ng/L	P424179	
		Kepone	5.2	U	ng/L	P424179	
		Lambda-Cyhalothrin	0.78	U	ng/L	P424179	
		Methoprene	0.78	U	ng/L	P424179	
		Methoxychlor	0.31	U	ng/L	P424179	
		MGK-264	0.21	U	ng/L	P424179	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2378477	EPA 8270E	Mirex	0.36	U	ng/L	P424179	
		Oxychlordane	0.31	U	ng/L	P424179	
		Permethrin	1.7	U	ng/L	P424179	
		Phenothrin	0.94	U	ng/L	P424179	
		Piperonyl Butoxide	0.78		ng/L	P424179	
		Prallethrin	2.1	U	ng/L	P424179	MS
		Tau-Fluvalinate	0.26	U	ng/L	P424179	
		Tetramethrin	0.78	U	ng/L	P424179	MS
		Trans-Nonachlor	0.21	U	ng/L	P424179	
		Triclosan Methyl	0.16	U	ng/L	P424179	MS
		Trifluralin	0.21	U	ng/L	P424179	
	EPA 8276	Chlordane	4.0	I	ng/L	P424179	
		Toxaphene	16	U	ng/L	P424179	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P424232

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424244

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424285

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: P424285

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: P424532

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: P424535

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424563

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424264

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424517

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424376

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

Reference Method: EPA 8270E
Batch ID: P424179

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
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P424179

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P424179

Component	Result	Code	Units
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: P424179

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B

Batch ID: P424152

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P424152

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

Reference Method: EPA 8321B

Batch ID: P424181

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	0.20	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: P424600

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

Reference Method: SM 2540 C-2015

Batch ID: P424662

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P424518

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P424520

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P424472

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P424320

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

Reference Method: SM 5310 B-2011
Batch ID: P424321

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: P424232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.5		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424244

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	104		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	99.8		P	85 - 115
Sodium	101		P	85 - 115
Strontium	102		P	85 - 115
Tin	100		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	99.1		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.3		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	103		P	85 - 115
Barium	103		P	85 - 115
Beryllium	96.6		P	85 - 115
Boron	98.2		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	98.8		P	85 - 115
Cobalt	97.3		P	85 - 115
Copper	99.2		P	85 - 115
Lead	94.6		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	99.1		P	85 - 115
Nickel	99.6		P	85 - 115
Selenium	101		P	85 - 115
Silver	102		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424532

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424535

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424563

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424264

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424517

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424376

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

Reference Method: EPA 8270E
Batch ID: P424179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	59.9		P	10 - 92.0
Alpha-BHC	102		P	75 - 107
Alpha-Chlordane	98.2		P	50 - 108
Beta-BHC	131		P	36 - 138
Beta-Cyfluthrin	107		P	20 - 161
Bifenthrin	86.0		P	10 - 119
Chlorothalonil	146		P	26 - 186
Cis-Nonachlor	98.9		P	42 - 119
Cypermethrin	132		P	22 - 150
Dacthal	105		P	72 - 119
DDD-p,p'	97.0		P	45 - 107
DDE-p,p'	104		P	48 - 106
DDT-p,p'	67.3		P	48 - 110
Delta-BHC	134		P	54 - 140
Deltamethrin	101		P	22 - 189
Dichlobenil	114		P	36 - 117
Dicofol	92.3		P	46 - 155
Dieldrin	108		P	54 - 110
Endosulfan I	103		P	59 - 105
Endosulfan II	113		P	51 - 118
Endosulfan Sulfate	114		P	57 - 121
Endrin	93.6		P	10 - 120

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P424179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin Aldehyde	86.3		P	34 - 118
Endrin Ketone	94.2		P	69 - 177
Esfenvalerate	112		P	23 - 168
Ethalfuralin	85.7		P	49 - 99.0
Fenpropathrin	113		P	34 - 117
Gamma-BHC	96.1		P	72 - 117
Gamma-Chlordane	87.8		P	43 - 106
Heptachlor	87.2		P	41 - 98.0
Heptachlor Epoxide	98.9		P	57 - 106
Hexachlorobenzene	78.9		P	36 - 99.0
Kepone	143		P	16 - 215
Lambda-Cyhalothrin	115		P	21 - 177
Methoprene	90.4		P	10 - 119
Methoxychlor	74.5		P	60 - 112
MGK-264	97.3		P	26 - 122
Mirex	94.2		P	10 - 169
Oxychlordane	92.5		P	43 - 105
PCB-1016	72.4		P	48 - 112
PCB-1260	62.8		P	44 - 118
Permethrin	113		P	24 - 148
Phenothrin	53.0		P	10 - 106
Piperonyl Butoxide	95.1		P	10 - 139
Prallethrin	105		P	17 - 109
Tau-Fluvalinate	81.1		P	13 - 131
Tetramethrin	103		P	10 - 132
Trans-Nonachlor	102		P	44 - 106
Triclosan Methyl	87.9		P	59 - 109
Trifluralin	96.6		P	44 - 101

Reference Method: EPA 8276

Batch ID: P424179

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	66.8		P	61 - 116
Toxaphene	69.5		P	48 - 124

Reference Method: EPA 8321B

Batch ID: P424152

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	107		P	40 - 150
AMPA	88.3		P	40 - 150
Endothall	100		P	40 - 150
Glufosinate	84.1		P	40 - 150
Glyphosate	81.2		P	40 - 150
Sucralose	124		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P424181

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	103		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P424181

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	74.4		P	40 - 150
Acetaminophen	82.6		P	30 - 150
Acetamiprid	74.0		P	40 - 150
Afidopyropen	59.2		P	30 - 150
Bentazon	86.8		P	30 - 150
Benzovindiflupyr	72.3		P	40 - 150
Carbamazepine	69.8		P	40 - 150
Clothianidin	90.3		P	40 - 150
Dinotefuran	85.2		P	40 - 150
Diuron	62.1		P	40 - 150
Fenuron	88.9		P	40 - 150
Fluridone	80.0		P	40 - 150
Hydrocodone	76.9		P	40 - 150
Ibuprofen	91.1		P	40 - 150
Imazapyr	81.4		P	40 - 150
Imidacloprid	77.8		P	40 - 150
Linuron	62.4		P	40 - 150
Mandestrobin	81.3		P	40 - 150
MCPP	94.2		P	40 - 150
Naproxen	82.5		P	40 - 150
Primidone	85.0		P	40 - 150
Pyraclostrobin	67.1		P	40 - 150
Silvex	101		P	40 - 150
Thiamethoxam	80.6		P	40 - 150
Tolfenpyrad	34.5		P	30 - 150
Triclopyr	79.6		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P424600

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P424662

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

Reference Method: SM 2540 D-2015
Batch ID: P424518

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.1		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P424520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.0		P	85 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P424472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P424320

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.4		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P424321

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: P424285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378506	Calcium	106	103	P/P	80 - 120
2378506	Iron	103	102	P/P	80 - 120
2378506	Magnesium	107	105	P/P	80 - 120
2378506	Potassium	96.6	95.1	P/P	80 - 120
2378506	Sodium	101		P	80 - 120
2378506	Strontium	101	101	P/P	80 - 120
2378506	Tin	98.9	97.5	P/P	80 - 120
2378506	Titanium	104	101	P/P	80 - 120
2378506	Vanadium	101	100	P/P	80 - 120
2378506	Zinc	100	99.2	P/P	80 - 120
2378651	Calcium	102		P	80 - 120
2378651	Iron	103		P	80 - 120
2378651	Magnesium	104		P	80 - 120
2378651	Potassium	94.6		P	80 - 120
2378651	Sodium	100		P	80 - 120
2378651	Strontium	101		P	80 - 120
2378651	Tin	97.6		P	80 - 120
2378651	Titanium	100		P	80 - 120
2378651	Vanadium	98.1		P	80 - 120
2378651	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P424285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378506	Aluminum	98.7	99.2	P/P	80 - 120
2378506	Antimony	103	103	P/P	80 - 120
2378506	Arsenic	103	104	P/P	80 - 120
2378506	Barium	101	102	P/P	80 - 120
2378506	Beryllium	94.9	94.6	P/P	80 - 120
2378506	Boron	100	99.7	P/P	80 - 120
2378506	Cadmium	103	104	P/P	80 - 120
2378506	Chromium	97.6	97.4	P/P	80 - 120
2378506	Cobalt	97.7	98.3	P/P	80 - 120
2378506	Copper	98.9	99.8	P/P	80 - 120
2378506	Lead	94.0	94.2	P/P	80 - 120
2378506	Manganese	99.5	100	P/P	80 - 120
2378506	Molybdenum	100	100	P/P	80 - 120
2378506	Nickel	100	100	P/P	80 - 120
2378506	Selenium	97.7	98.7	P/P	80 - 120
2378506	Silver	102	101	P/P	80 - 120
2378506	Thallium	102	102	P/P	80 - 120
2378651	Aluminum	99.2		P	80 - 120
2378651	Antimony	103		P	80 - 120
2378651	Arsenic	105		P	80 - 120
2378651	Barium	103		P	80 - 120
2378651	Beryllium	96.5		P	80 - 120
2378651	Boron	101		P	80 - 120
2378651	Cadmium	104		P	80 - 120
2378651	Chromium	98.2		P	80 - 120
2378651	Cobalt	102		P	80 - 120
2378651	Copper	103		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378651	Lead	94.5		P	80 - 120
2378651	Manganese	101		P	80 - 120
2378651	Molybdenum	99.3		P	80 - 120
2378651	Nickel	103		P	80 - 120
2378651	Selenium	102		P	80 - 120
2378651	Silver	101		P	80 - 120
2378651	Thallium	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378425	Chloride	99.6		P	90 - 110
2378490	Chloride	94.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378425	Sulfate	101		P	90 - 110
2378490	Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378763	Ammonia-N	99.2	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424264

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378464	Kjeldahl Nitrogen	95.6	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378461	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424376

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378428	Total-P	105	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P424179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378252	Aldrin	51.4	64.6	P/P	20 - 82.0
2378252	Alpha-BHC	101	93.0	P/P	71 - 109

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P424179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378252	Alpha-Chlordane	72.7	69.0	P/P	42 - 106
2378252	Beta-BHC	114	121	P/P	69 - 180
2378252	Beta-Cyfluthrin	87.0	89.2	P/P	18 - 175
2378252	Bifenthrin	68.1	76.1	P/P	21 - 128
2378252	Chlorothalonil	95.5	77.2	P/P	10 - 300
2378252	Cis-Nonachlor	43.3	49.4	P/P	34 - 106
2378252	Cypermethrin	97.1	115	P/P	22 - 158
2378252	Dacthal	90.4	103	P/P	54 - 116
2378252	DDD-p,p'	55.6	67.8	P/P	34 - 107
2378252	DDE-p,p'	98.7	91.8	P/P	33 - 110
2378252	DDT-p,p'	69.8	65.4	P/P	50 - 122
2378252	Delta-BHC	128	128	P/P	77 - 193
2378252	Deltamethrin	97.0	102	P/P	10 - 195
2378252	Dichlobenil	95.6	90.7	P/P	25 - 113
2378252	Dicofol	59.7	57.3	P/P	38 - 247
2378252	Dieldrin	104	97.3	P/P	45 - 118
2378252	Endosulfan I	82.2	90.0	P/P	51 - 106
2378252	Endosulfan II	89.8	107	P/P	37 - 122
2378252	Endosulfan Sulfate	101	86.3	P/P	43 - 132
2378252	Endrin	97.3	94.0	P/P	29 - 101
2378252	Endrin Aldehyde	36.4	46.4	P/P	19 - 110
2378252	Endrin Ketone	61.4	82.1	P/P	60 - 140
2378252	Esfenvalerate	123	115	P/P	26 - 199
2378252	Ethalfuralin	79.1	81.7	P/P	45 - 99.0
2378252	Fenpropathrin	63.7	84.5	P/P	35 - 120
2378252	Gamma-BHC	104	114	P/P	63 - 128
2378252	Gamma-Chlordane	33.3	48.3	F/P	40 - 104
2378252	Heptachlor	83.7	91.5	P/P	36 - 97.0
2378252	Heptachlor Epoxide	77.4	91.5	P/P	49 - 184
2378252	Hexachlorobenzene	75.7	66.8	P/P	39 - 96.0
2378252	Kepone	62.6	77.8	P/P	10 - 217
2378252	Lambda-Cyhalothrin	80.1	80.3	P/P	21 - 193
2378252	Methoprene	97.3	90.8	P/P	20 - 106
2378252	Methoxychlor	91.3	96.4	P/P	53 - 118
2378252	MGK-264	103	112	P/P	40 - 118
2378252	Mirex	68.8	68.2	P/P	26 - 92.0
2378252	Oxychlordane	68.0	77.6	P/P	44 - 99.0
2378252	Permethrin	94.4	86.3	P/P	33 - 182
2378252	Phenothrin	43.4	44.3	P/P	10 - 129
2378252	Piperonyl Butoxide	131	138	P/P	10 - 211
2378252	Prallethrin	106	114	P/F	24 - 113
2378252	Tau-Fluvalinate	90.1	75.8	P/P	14 - 149
2378252	Tetramethrin	161	171	F/F	17 - 151
2378252	Trans-Nonachlor	68.8	82.3	P/P	42 - 102
2378252	Triclosan Methyl	43.2	49.2	F/P	48 - 108
2378252	Trifluralin	76.4	84.0	P/P	47 - 96.0
2378476	PCB-1016	76.6	82.0	P/P	46 - 111
2378476	PCB-1260	65.9	68.3	P/P	45 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P424179

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378476	Chlordane	66.6	71.7	P/P	53 - 126
2378476	Toxaphene	62.1	78.4	P/P	56 - 211

Reference Method: EPA 8321B
Batch ID: P424152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378136	Acesulfame K	115	116	P/P	40 - 150
2378136	AMPA	81.7	80.4	P/P	40 - 150
2378136	Endothall	110	110	P/P	40 - 150
2378136	Glufosinate	99.6	87.3	P/P	40 - 150
2378136	Glyphosate	87.6	87.6	P/P	40 - 150
2378136	Sucralose	118	113	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P424181

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378240	2,4-D	110	127	P/P	40 - 150
2378240	2,4,5-T	86.5	100	P/P	40 - 150
2378240	Acetaminophen	102	109	P/P	30 - 150
2378240	Acetamiprid	106	116	P/P	40 - 150
2378240	Afidopyropen	82.4	87.7	P/P	30 - 150
2378240	Bentazon	72.5	69.9	P/P	30 - 150
2378240	Benzovindiflupyr	76.6	83.7	P/P	40 - 150
2378240	Carbamazepine	72.7	78.5	P/P	40 - 150
2378240	Clothianidin	110	125	P/P	40 - 150
2378240	Dinotefuran	105	115	P/P	40 - 150
2378240	Diuron	57.2	59.6	P/P	40 - 150
2378240	Fenuron	92.2	94.3	P/P	40 - 150
2378240	Fluridone	74.4	87.7	P/P	40 - 150
2378240	Hydrocodone	103	104	P/P	40 - 150
2378240	Ibuprofen	81.5	101	P/P	40 - 150
2378240	Imazapyr	104	121	P/P	40 - 150
2378240	Imidacloprid	116	142	P/P	40 - 150
2378240	Linuron	71.2	69.3	P/P	40 - 150
2378240	Mandestrobin	90.5	97.5	P/P	40 - 150
2378240	MCPP	109	118	P/P	40 - 150
2378240	Naproxen	98.9	80.8	P/P	40 - 150
2378240	Primidone	95.6	106	P/P	40 - 150
2378240	Pyraclostrobin	71.9	80.9	P/P	40 - 150
2378240	Silvex	107	118	P/P	40 - 150
2378240	Thiamethoxam	101	111	P/P	40 - 150
2378240	Tolfenpyrad	43.5	43.9	P/P	30 - 150
2378240	Triclopyr	87.5	114	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P424472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378426	Fluoride	98.6	98.0	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P424320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378147	Organic Carbon	98.0	98.8	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P424321

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2378609	Organic Carbon	96.0	96.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P424232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378463	Color (true)	0.185	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P424244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378463	Turbidity	1.68	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P424285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378506	Calcium	1.32	Spike	P	0 - 20
2378506	Iron	0.920	Spike	P	0 - 20
2378506	Magnesium	1.29	Spike	P	0 - 20
2378506	Potassium	1.35	Spike	P	0 - 20
2378506	Sodium	0.946	Spike	P	0 - 20
2378506	Strontium	0.631	Spike	P	0 - 20
2378506	Tin	1.41	Spike	P	0 - 20
2378506	Titanium	2.20	Spike	P	0 - 20
2378506	Vanadium	0.790	Spike	P	0 - 20
2378506	Zinc	1.12	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P424285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378506	Aluminum	0.449	Spike	P	0 - 20
2378506	Antimony	0.276	Spike	P	0 - 20
2378506	Arsenic	0.647	Spike	P	0 - 20
2378506	Barium	0.680	Spike	P	0 - 20
2378506	Beryllium	0.209	Spike	P	0 - 20
2378506	Boron	0.204	Spike	P	0 - 20
2378506	Cadmium	1.75	Spike	P	0 - 20
2378506	Chromium	0.165	Spike	P	0 - 20
2378506	Cobalt	0.593	Spike	P	0 - 20
2378506	Copper	0.956	Spike	P	0 - 20
2378506	Lead	0.160	Spike	P	0 - 20
2378506	Manganese	0.456	Spike	P	0 - 20
2378506	Molybdenum	0.0713	Spike	P	0 - 20
2378506	Nickel	0.175	Spike	P	0 - 20
2378506	Selenium	0.926	Spike	P	0 - 20
2378506	Silver	0.471	Spike	P	0 - 20
2378506	Thallium	0.0271	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378425	Chloride	0.171	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P424535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378425	Sulfate	0.233	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P424563

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P424264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378464	Kjeldahl Nitrogen	2.08	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P424517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378461	NO2NO3-N	0.473	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P424376

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378428	Total-P	1.37	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P424179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378252	Aldrin	22.8	Spike	P	0 - 41
2378252	Alpha-BHC	8.65	Spike	P	0 - 25
2378252	Alpha-Chlordane	4.83	Spike	P	0 - 33
2378252	Beta-BHC	5.51	Spike	P	0 - 36
2378252	Beta-Cyfluthrin	2.47	Spike	P	0 - 42
2378252	Bifenthrin	11.1	Spike	P	0 - 53
2378252	Chlorothalonil	21.2	Spike	P	0 - 71
2378252	Cis-Nonachlor	13.2	Spike	P	0 - 29
2378252	Cypermethrin	16.7	Spike	P	0 - 40

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P424179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378252	Dacthal	12.7	Spike	P	0 - 26
2378252	DDD-p,p'	19.8	Spike	P	0 - 39
2378252	DDE-p,p'	7.31	Spike	P	0 - 33
2378252	DDT-p,p'	6.63	Spike	P	0 - 40
2378252	Delta-BHC	0.161	Spike	P	0 - 37
2378252	Deltamethrin	5.21	Spike	P	0 - 100
2378252	Dichlobenil	5.22	Spike	P	0 - 40
2378252	Dicofol	4.16	Spike	P	0 - 31
2378252	Dieldrin	6.53	Spike	P	0 - 27
2378252	Endosulfan I	9.09	Spike	P	0 - 23
2378252	Endosulfan II	17.5	Spike	P	0 - 28
2378252	Endosulfan Sulfate	15.5	Spike	P	0 - 38
2378252	Endrin	3.48	Spike	P	0 - 63
2378252	Endrin Aldehyde	24.2	Spike	P	0 - 60
2378252	Endrin Ketone	28.8	Spike	P	0 - 37
2378252	Esfenvalerate	6.93	Spike	P	0 - 52
2378252	Ethalfuralin	3.27	Spike	P	0 - 23
2378252	Fenpropathrin	28.1	Spike	P	0 - 32
2378252	Gamma-BHC	8.90	Spike	P	0 - 17
2378252	Gamma-Chlordane	36.9	Spike	P	0 - 40
2378252	Heptachlor	8.89	Spike	P	0 - 29
2378252	Heptachlor Epoxide	16.7	Spike	P	0 - 25
2378252	Hexachlorobenzene	12.4	Spike	P	0 - 36
2378252	Kepone	21.7	Spike	P	0 - 93
2378252	Lambda-Cyhalothrin	0.316	Spike	P	0 - 55
2378252	Methoprene	6.91	Spike	P	0 - 53
2378252	Methoxychlor	5.45	Spike	P	0 - 29
2378252	MGK-264	8.06	Spike	P	0 - 35
2378252	Mirex	0.882	Spike	P	0 - 46
2378252	Oxychlordane	13.1	Spike	P	0 - 29
2378252	Permethrin	7.45	Spike	P	0 - 44
2378252	Phenothrin	1.97	Spike	P	0 - 56
2378252	Piperonyl Butoxide	4.85	Spike	P	0 - 100
2378252	Prallethrin	7.03	Spike	P	0 - 42
2378252	Tau-Fluvalinate	17.2	Spike	P	0 - 54
2378252	Tetramethrin	6.07	Spike	P	0 - 51
2378252	Trans-Nonachlor	17.8	Spike	P	0 - 37
2378252	Triclosan Methyl	13.0	Spike	P	0 - 31
2378252	Trifluralin	9.49	Spike	P	0 - 30
2378476	PCB-1016	6.81	Spike	P	0 - 32
2378476	PCB-1260	3.64	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P424179

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378476	Chlordane	7.36	Spike	P	0 - 25
2378476	Toxaphene	23.2	Spike	P	0 - 26

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P424152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378136	Acesulfame K	0.746	Spike	P	0 - 30
2378136	AMPA	1.45	Spike	P	0 - 30
2378136	Endothall	0.207	Spike	P	0 - 30
2378136	Glufosinate	13.1	Spike	P	0 - 30
2378136	Glyphosate	0.0596	Spike	P	0 - 30
2378136	Sucralose	2.99	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P424181

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378240	2,4-D	13.8	Spike	P	0 - 30
2378240	2,4,5-T	14.9	Spike	P	0 - 30
2378240	Acetaminophen	6.27	Spike	P	0 - 30
2378240	Acetamiprid	8.87	Spike	P	0 - 30
2378240	Afidopyropen	6.25	Spike	P	0 - 30
2378240	Bentazon	2.47	Spike	P	0 - 30
2378240	Benzovindiflupyr	8.83	Spike	P	0 - 30
2378240	Carbamazepine	7.74	Spike	P	0 - 30
2378240	Clothianidin	12.8	Spike	P	0 - 30
2378240	Dinotefuran	8.73	Spike	P	0 - 30
2378240	Diuron	3.99	Spike	P	0 - 30
2378240	Fenuron	2.29	Spike	P	0 - 30
2378240	Fluridone	15.1	Spike	P	0 - 30
2378240	Hydrocodone	1.78	Spike	P	0 - 30
2378240	Ibuprofen	21.5	Spike	P	0 - 30
2378240	Imazapyr	10.4	Spike	P	0 - 30
2378240	Imidacloprid	20.0	Spike	P	0 - 30
2378240	Linuron	2.63	Spike	P	0 - 30
2378240	Mandestrobin	7.42	Spike	P	0 - 30
2378240	MCPP	7.82	Spike	P	0 - 30
2378240	Naproxen	20.2	Spike	P	0 - 30
2378240	Primidone	10.3	Spike	P	0 - 30
2378240	Pyraclostrobin	11.8	Spike	P	0 - 30
2378240	Silvex	9.93	Spike	P	0 - 30
2378240	Thiamethoxam	9.46	Spike	P	0 - 30
2378240	Tolfenpyrad	0.998	Spike	P	0 - 30
2378240	Triclopyr	26.1	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P424600

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378523	Total Alkalinity	0.307	Sample	P	0 - 3.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2015
Batch ID: P424662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378463	TDS	4.76	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P424472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378426	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P424320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378147	Organic Carbon	0.541	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P424321

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2378609	Organic Carbon	0.510	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2378476
Field Sample ID: 20030692

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	61.2	P	29 - 130
EPA 8270E	Decachlorobiphenyl	54.7	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	60.2	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	58.3	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	52.9	P	30 - 101
EPA 8276	PCNB	77.5	P	48 - 121

Lab Sample ID: 2378477
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	57.8	P	29 - 130
EPA 8270E	Decachlorobiphenyl	57.2	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	54.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	56.8	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	44.6	P	30 - 101
EPA 8276	PCNB	68.4	P	48 - 121

Lab Sample ID: 2378480
Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.3	P	30 - 160
EPA 8321B	Diuron-d6	46.9	P	30 - 160
EPA 8321B	Endothall-d6	99.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	89.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	70.1	P	30 - 160
EPA 8321B	Primidone-d5	112	P	30 - 160
EPA 8321B	Sucralose-d6	72.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A116778

Included Lab Sample IDs: 2378463

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.9	98.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A116783

Included Lab Sample IDs: 2378463, 2378465

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

Reference Method: EPA 8321B

Run ID: A116802

Included Lab Sample IDs: 2378480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	110	110	P/P	60 - 160
Sucralose	113	107	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A116820

Included Lab Sample IDs: 2378464, 2378466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	99.8	P/P	90 - 110
Organic Carbon	99.8	99.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A116821

Included Lab Sample IDs: 2378480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	117	97.2	P/P	60 - 160
Endothall	137		P	60 - 160
Glufosinate	142	97.3	P/P	60 - 160
Glyphosate	140	92.5	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116826

Included Lab Sample IDs: 2378464, 2378466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.4	95.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116833

Included Lab Sample IDs: 2378463

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A116846
Included Lab Sample IDs: 2378480

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	114	121	P/P	50 - 150
2,4,5-T	111	98.6	P/P	50 - 150
Acetaminophen	122	120	P/P	60 - 160
Acetamiprid	136	132	P/P	50 - 150
Afidopyropen	128	115	P/P	50 - 150
Bentazon	138	144	P/P	50 - 160
Benzovindiflupyr	104	117	P/P	50 - 150
Carbamazepine	110	122	P/P	60 - 150
Clothianidin	132	140	P/P	60 - 150
Dinotefuran	120	122	P/P	50 - 150
Diuron	120	132	P/P	60 - 160
Fenuron	118	119	P/P	60 - 150
Fluridone	123	126	P/P	60 - 160
Hydrocodone	119	125	P/P	60 - 150
Ibuprofen	126	145	P/P	50 - 160
Imazapyr	104	115	P/P	50 - 150
Imidacloprid	113	113	P/P	60 - 150
Linuron	119	119	P/P	60 - 150
Mandestrobin	125	122	P/P	50 - 150
MCPP	111	108	P/P	50 - 150
Naproxen	107	104	P/P	50 - 160
Primidone	117	109	P/P	60 - 150
Pyraclostrobin	112	113	P/P	60 - 150
Silvex	124	126	P/P	50 - 150
Thiamethoxam	127	122	P/P	50 - 150
Tolfenpyrad	101	106	P/P	60 - 150
Triclopyr	110	92.0	P/P	50 - 150

Reference Method: EPA 8270E
Run ID: A116853
Included Lab Sample IDs: 2378476, 2378477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.9		P	80 - 120
PCB-1260	95.8		P	80 - 120

Reference Method: SM 4500-F- C-2011
Run ID: A116866
Included Lab Sample IDs: 2378463, 2378465

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A116870
Included Lab Sample IDs: 2378464, 2378466

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A116871
Included Lab Sample IDs: 2378476

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120
Alpha-BHC	90.8		P	80 - 120
Alpha-Chlordane	108		P	80 - 120
Beta-BHC	95.6		P	80 - 120
Beta-Cyfluthrin	101		P	80 - 120
Bifenthrin	96.9		P	80 - 120
Chlorothalonil	108		P	80 - 120
Cis-Nonachlor	104		P	80 - 120
Cypermethrin	96.1		P	80 - 120
Dacthal	108		P	80 - 120
DDD-p,p'	100		P	80 - 120
DDE-p,p'	111		P	80 - 120
DDT-p,p'	99.9		P	80 - 120
Delta-BHC	105		P	80 - 120
Deltamethrin	96.2		P	80 - 120
Dichlobenil	96.8		P	80 - 120
Dicofol	104		P	80 - 120
Dieldrin	110		P	80 - 120
Endosulfan I	93.3		P	80 - 120
Endosulfan II	109		P	80 - 120
Endosulfan Sulfate	116		P	80 - 120
Endrin	119		P	80 - 120
Endrin Aldehyde	112		P	80 - 120
Endrin Ketone	91.5		P	80 - 120
Esfenvalerate	103		P	80 - 120
Ethalfuralin	105		P	80 - 120
Fenpropathrin	92.1		P	80 - 120
Gamma-BHC	93.7		P	80 - 120
Gamma-Chlordane	99.3		P	80 - 120
Heptachlor	113		P	80 - 120
Heptachlor Epoxide	97.6		P	80 - 120
Hexachlorobenzene	108		P	80 - 120
Kepone	82.2		P	80 - 120
Lambda-Cyhalothrin	89.4		P	80 - 120
Methoprene	107		P	80 - 120
Methoxychlor	104		P	80 - 120
MGK-264	100		P	80 - 120
Mirex	86.7		P	80 - 120
Oxychlordane	80.5		P	80 - 120
Permethrin	105		P	80 - 120
Phenothrin	87.6		P	80 - 120
Piperonyl Butoxide	84.0		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	107		P	80 - 120
Tetramethrin	106		P	80 - 120
Trans-Nonachlor	113		P	80 - 120
Triclosan Methyl	94.3		P	80 - 120
Trifluralin	97.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A116873
 Included Lab Sample IDs: 2378477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	104		P	80 - 120
Alpha-Chlordane	103		P	80 - 120
Beta-BHC	110		P	80 - 120
Beta-Cyfluthrin	87.3		P	80 - 120
Bifenthrin	101		P	80 - 120
Chlorothalonil	98.5		P	80 - 120
Cis-Nonachlor	86.6		P	80 - 120
Cypermethrin	93.7		P	80 - 120
Dacthal	97.0		P	80 - 120
DDD-p,p'	91.4		P	80 - 120
DDE-p,p'	92.4		P	80 - 120
DDT-p,p'	93.8		P	80 - 120
Delta-BHC	92.8		P	80 - 120
Deltamethrin	80.9		P	80 - 120
Dichlobenil	99.6		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	92.1		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	85.6		P	80 - 120
Endrin	97.4		P	80 - 120
Endrin Aldehyde	93.5		P	80 - 120
Endrin Ketone	96.8		P	80 - 120
Esfenvalerate	84.9		P	80 - 120
Ethalfuralin	99.4		P	80 - 120
Fenpropathrin	110		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	116		P	80 - 120
Heptachlor	94.9		P	80 - 120
Heptachlor Epoxide	106		P	80 - 120
Hexachlorobenzene	107		P	80 - 120
Kepone	84.1		P	80 - 120
Lambda-Cyhalothrin	104		P	80 - 120
Methoprene	103		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	113		P	80 - 120
Mirex	102		P	80 - 120
Oxychlordane	113		P	80 - 120
Permethrin	90.6		P	80 - 120
Phenothrin	99.4		P	80 - 120
Piperonyl Butoxide	95.0		P	80 - 120
Prallethrin	103		P	80 - 120
Tau-Fluvalinate	80.2		P	80 - 120
Tetramethrin	90.4		P	80 - 120
Trans-Nonachlor	103		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	98.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A116885

Included Lab Sample IDs: 2378464, 2378466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	105	P/P	90 - 110
NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116902

Included Lab Sample IDs: 2378464, 2378466

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	99.1	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116916

Included Lab Sample IDs: 2378463, 2378465

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.2	95.0	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A116927

Included Lab Sample IDs: 2378476, 2378477

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.9		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116999

Included Lab Sample IDs: 2378483

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.2	98.3	P/P	90 - 110
Antimony	103	103	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Barium	99.8	99.3	P/P	90 - 110
Beryllium	98.5	99.1	P/P	90 - 110
Boron	95.4	95.7	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Chromium	97.5	96.9	P/P	90 - 110
Cobalt	95.2	96.7	P/P	90 - 110
Copper	97.1	98.4	P/P	90 - 110
Lead	92.6	92.3	P/P	90 - 110
Manganese	99.3	99.5	P/P	90 - 110
Molybdenum	98.0	98.4	P/P	90 - 110
Nickel	97.5	98.7	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Thallium	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117038

Included Lab Sample IDs: 2378483

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.6	97.9	P/P	90 - 110
Iron	99.2	98.0	P/P	90 - 110
Magnesium	99.3	98.1	P/P	90 - 110
Potassium	98.7	97.4	P/P	90 - 110
Sodium	99.4	97.8	P/P	90 - 110
Strontium	99.5	103	P/P	90 - 110
Tin	100	101	P/P	90 - 110
Titanium	100	101	P/P	90 - 110
Vanadium	99.5	101	P/P	90 - 110
Zinc	98.1	101	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)	96.5					0.185	
EPA 180.1 Rev. 2.0	Turbidity	101					1.68	
EPA 200.7 Rev. 4.4	Calcium	104	106	103	102			1.32
	Iron	104	103	102	103			0.920
	Magnesium	107	107	105	104			1.29
	Potassium	99.8	96.6	95.1	94.6			1.35
	Sodium	101	101	100				0.946
	Strontium	102	101	101	101			0.631
	Tin	100	98.9	97.5	97.6			1.41
	Titanium	101	104	101	100			2.20
	Vanadium	99.1	101	100	98.1			0.790
	Zinc	100	100	99.2	102			1.12
EPA 200.8 Rev. 5.4	Aluminum	99.3	98.7	99.2	99.2			0.449
	Antimony	104	103	103	103			0.276
	Arsenic	103	103	104	105			0.647
	Barium	103	101	102	103			0.680
	Beryllium	96.6	94.9	94.6	96.5			0.209
	Boron	98.2	100	99.7	101			0.204
	Cadmium	103	103	104	104			1.75
	Chromium	98.8	97.6	97.4	98.2			0.165
	Cobalt	97.3	97.7	98.3	102			0.593
	Copper	99.2	98.9	99.8	103			0.956
	Lead	94.6	94.0	94.2	94.5			0.160
	Manganese	101	99.5	100	101			0.456
	Molybdenum	99.1	100	100	99.3			0.0713
	Nickel	99.6	100	100	103			0.175
	Selenium	101	97.7	98.7	102			0.926
	Silver	102	102	101	101			0.471
	Thallium	103	102	102	102			0.0271
EPA 300.0 Rev. 2.1	Chloride	99.0	99.6	94.4			0.171	
	Sulfate	100	101	98.7			0.233	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	99.2	99.2				0.0
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	95.6	98.3				2.08
EPA 353.2 Rev. 2.0	NO2NO3-N	105	106	106				0.473
EPA 365.1 Rev. 2.0	Total-P	102	105	103				1.37
EPA 8270E	Aldrin	59.9	51.4	64.6				22.8
	Alpha-BHC	102	101	93.0				8.65
	Alpha-Chlordane	98.2	72.7	69.0				4.83
	Beta-BHC	131	114	121				5.51
	Beta-Cyfluthrin	107	87.0	89.2				2.47
	Bifenthrin	86.0	68.1	76.1				11.1
	Chlorothalonil	146	95.5	77.2				21.2
	Cis-Nonachlor	98.9	43.3	49.4				13.2
	Cypermethrin	132	97.1	115				16.7
	Dacthal	105	90.4	103				12.7
	DDD-p,p'	97.0	55.6	67.8				19.8
	DDE-p,p'	104	98.7	91.8				7.31
	DDT-p,p'	67.3	69.8	65.4				6.63
	Delta-BHC	134	128	128				0.161
	Deltamethrin	101	97.0	102				5.21
	Dichlobenil	114	95.6	90.7				5.22
	Dicofol	92.3	59.7	57.3				4.16
	Dieldrin	108	104	97.3				6.53
	Endosulfan I	103	82.2	90.0				9.09

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Endosulfan II	113	89.8	107			17.5
	Endosulfan Sulfate	114	101	86.3			15.5
	Endrin	93.6	97.3	94.0			3.48
	Endrin Aldehyde	86.3	36.4	46.4			24.2
	Endrin Ketone	94.2	61.4	82.1			28.8
	Esfenvalerate	112	123	115			6.93
	Ethalfuralin	85.7	79.1	81.7			3.27
	Fenpropathrin	113	63.7	84.5			28.1
	Gamma-BHC	96.1	104	114			8.90
	Gamma-Chlordane	87.8	33.3	48.3			36.9
	Heptachlor	87.2	83.7	91.5			8.89
	Heptachlor Epoxide	98.9	77.4	91.5			16.7
	Hexachlorobenzene	78.9	75.7	66.8			12.4
	Kepone	143	62.6	77.8			21.7
	Lambda-Cyhalothrin	115	80.1	80.3			0.316
	Methoprene	90.4	97.3	90.8			6.91
	Methoxychlor	74.5	91.3	96.4			5.45
	MGK-264	97.3	103	112			8.06
	Mirex	94.2	68.8	68.2			0.882
	Oxychlordane	92.5	68.0	77.6			13.1
	PCB-1016	72.4	76.6	82.0			6.81
	PCB-1260	62.8	65.9	68.3			3.64
	Permethrin	113	94.4	86.3			7.45
	Phenothrin	53.0	43.4	44.3			1.97
	Piperonyl Butoxide	95.1	131	138			4.85
	Prallethrin	105	106	114			7.03
	Tau-Fluvalinate	81.1	90.1	75.8			17.2
	Tetramethrin	103	161	171			6.07
	Trans-Nonachlor	102	68.8	82.3			17.8
	Triclosan Methyl	87.9	43.2	49.2			13.0
	Trifluralin	96.6	76.4	84.0			9.49
EPA 8276	Chlordane	66.8	66.6	71.7			7.36
	Toxaphene	69.5	62.1	78.4			23.2
EPA 8321B	2,4-D	103	110	127			13.8
	2,4,5-T	74.4	86.5	100			14.9
	Acesulfame K	107	115	116			0.746
	Acetaminophen	82.6	102	109			6.27
	Acetamiprid	74.0	106	116			8.87
	Afidopyropen	59.2	82.4	87.7			6.25
	AMPA	88.3	81.7	80.4			1.45
	Bentazon	86.8	72.5	69.9			2.47
	Benzovindiflupyr	72.3	76.6	83.7			8.83
	Carbamazepine	69.8	72.7	78.5			7.74
	Clothianidin	90.3	110	125			12.8
	Dinotefuran	85.2	105	115			8.73
	Diuron	62.1	57.2	59.6			3.99
	Endothall	100	110	110			0.207
	Fenuron	88.9	92.2	94.3			2.29
	Fluridone	80.0	74.4	87.7			15.1
	Glufosinate	84.1	99.6	87.3			13.1
	Glyphosate	81.2	87.6	87.6			0.0596
	Hydrocodone	76.9	103	104			1.78
	Ibuprofen	91.1	81.5	101			21.5
	Imazapyr	81.4	104	121			10.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imidacloprid	77.8	116	142		20.0
	Linuron	62.4	71.2	69.3		2.63
	Mandestrobin	81.3	90.5	97.5		7.42
	MCP	94.2	109	118		7.82
	Naproxen	82.5	98.9	80.8		20.2
	Primidone	85.0	95.6	106		10.3
	Pyraclostrobin	67.1	71.9	80.9		11.8
	Silvex	101	107	118		9.93
	Sucralose	124	118	113		2.99
	Thiamethoxam	80.6	101	111		9.46
	Tolfenpyrad	34.5	43.5	43.9		0.998
	Triclopyr	79.6	87.5	114		26.1
SM 2320 B-2011	Total Alkalinity	96.8			0.307	
SM 2540 C-2015	TDS	102			4.76	
SM 2540 D-2015	TSS	91.1				
	TSS	94.0				
SM 4500-F- C-2011	Fluoride	98.3	98.6	98.0		0.480
SM 5310 B-2011	Organic Carbon	97.4	98.0	98.8		0.541
	Organic Carbon	97.0	96.0	96.8		0.510

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2378463
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2378463, 2378465
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2378483
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2378483
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2378463
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2378463
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2378464, 2378466
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2378464, 2378466
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2378464, 2378466
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2378464, 2378466
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2378476, 2378477
EPA 8270E	PCBs in water matrices by GC/MS/MS	2378476, 2378477
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2378476, 2378477
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2378480
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2378463, 2378465
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2378483
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2378463
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2378463, 2378465
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2378463, 2378465
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2378464, 2378466

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	01/06/2023			01/06/2023 13:56	Alexis Price	2378463
EPA 180.1 Rev. 2.0	01/06/2023			01/06/2023 13:19	Khloe J Berg	2378463
	01/06/2023			01/06/2023 13:21	Khloe J Berg	2378465
EPA 200.7 Rev. 4.4	01/06/2023	01/09/2023 11:50	George D Taylor	01/23/2023 14:48	McKinley C Carter	2378483
EPA 200.8 Rev. 5.4	01/06/2023	01/09/2023 11:50	George D Taylor	01/19/2023 22:10	Emily M Philpot	2378483
EPA 300.0 Rev. 2.1	01/06/2023			01/12/2023 18:00	Anna M. Plaviak	2378463
EPA 350.1 Rev. 2.0	01/06/2023			01/13/2023 12:45	Ping Hua	2378464
	01/06/2023			01/13/2023 12:49	Ping Hua	2378466
EPA 351.2 Rev. 2.0	01/06/2023	01/09/2023 13:30	Simonne.V. Calhoun	01/10/2023 13:24	Samantha L Bates	2378464
	01/06/2023	01/09/2023 13:30	Simonne.V. Calhoun	01/10/2023 13:32	Samantha L Bates	2378466
EPA 353.2 Rev. 2.0	01/06/2023			01/12/2023 10:33	Beverly Y. Sanders	2378466
	01/06/2023			01/12/2023 12:15	Beverly Y. Sanders	2378464
EPA 365.1 Rev. 2.0	01/06/2023	01/11/2023 13:40	Simonne.V. Calhoun	01/12/2023 11:36	Simonne.V. Calhoun	2378464
	01/06/2023	01/11/2023 13:40	Simonne.V. Calhoun	01/12/2023 11:38	Simonne.V. Calhoun	2378466
EPA 8270E	01/06/2023	01/09/2023 08:00	Fe-Val Siddell	01/10/2023 19:00	Vandana T. Nagar	2378476
	01/06/2023	01/09/2023 08:00	Fe-Val Siddell	01/10/2023 19:30	Vandana T. Nagar	2378477
	01/06/2023	01/09/2023 08:00	Fe-Val Siddell	01/11/2023 00:15	Julie Wi	2378476
	01/06/2023	01/09/2023 08:00	Fe-Val Siddell	01/11/2023 22:23	Julie Wi	2378477
EPA 8276	01/06/2023	01/09/2023 08:00	Fe-Val Siddell	01/13/2023 04:14	Lipi Saha	2378476
	01/06/2023	01/09/2023 08:00	Fe-Val Siddell	01/13/2023 07:06	Lipi Saha	2378477
EPA 8321B	01/06/2023	01/06/2023 12:50	June Rhew	01/06/2023 19:33	Manjita Shrestha	2378480
	01/06/2023	01/06/2023 12:50	June Rhew	01/09/2023 12:26	Manjita Shrestha	2378480
	01/06/2023	01/09/2023 09:30	June Rhew	01/09/2023 23:52	Juyoung Kim	2378480
SM 2320 B-2011	01/06/2023			01/14/2023 08:45	Dale L. Simmons	2378463
	01/06/2023			01/14/2023 08:56	Dale L. Simmons	2378465
SM 2340 B-2011	01/06/2023			01/23/2023 14:48	McKinley C Carter	2378483
SM 2540 C-2015	01/06/2023			01/09/2023 16:29	Yijie Li	2378463
SM 2540 D-2015	01/06/2023			01/09/2023 16:29	Yijie Li	2378463, 2378465
SM 4500-F- C-2011	01/06/2023			01/11/2023 19:56	Adam P Silver	2378463
	01/06/2023			01/11/2023 20:10	Adam P Silver	2378465
SM 5310 B-2011	01/06/2023			01/09/2023 23:19	Khloe J Berg	2378464
	01/06/2023			01/10/2023 01:32	Khloe J Berg	2378466