

Chemical Analysis Report

NE-DIST-2023-04-12-01

Florida DEP Laboratory
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DOH Accreditation E31780

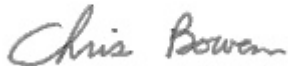
Event Description: **LSJR Main**
Request ID: **RQ-2023-04-03-30**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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8800 Baymeadows Way West
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 04-MAY-2023 15:10



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: 04/11/2023 11:00

Field ID: 20030692

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2399830	EPA 180.1 Rev. 2.0	Turbidity	7.2		NTU	P428399	
	SM 2320 B-2011	Total Alkalinity	103		mg CaCO3/L	P428507	
	SM 2540 D-2015	TSS	5	I	mg/L	P428823	
	SM 4500-F- C-2011	Fluoride	0.25		mg F/L	P428928	
2399831	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P428521	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P428473	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.089		mg N/L	P428860	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P428550	
	SM 5310 B-2011	Organic Carbon	7.3		mg C/L	P428606	
2399839	EPA 8270E	Aldrin	0.67	U	ng/L	P428300	
		Alpha-BHC	0.10	U	ng/L	P428300	
		Alpha-Chlordane	0.21	I	ng/L	P428300	
		PCB-1016	2.1	U	ng/L	P428300	
		Beta-BHC	0.50	I	ng/L	P428300	
		PCB-1221	2.1	U	ng/L	P428300	
		Beta-Cyfluthrin	1.3	U	ng/L	P428300	
		PCB-1232	2.1	U	ng/L	P428300	
		Bifenthrin	0.51	U	ng/L	P428300	
		PCB-1242	2.1	U	ng/L	P428300	
		PCB-1248	2.1	U	ng/L	P428300	
		Chlorothalonil	3.7	U	ng/L	P428300	
		PCB-1254	2.1	U	ng/L	P428300	
		Cis-Nonachlor	0.21	U	ng/L	P428300	
		PCB-1260	2.1	U	ng/L	P428300	
		Cypermethrin	1.5	U	ng/L	P428300	
		Dacthal	0.15	U	ng/L	P428300	
		DDD-p,p'	0.26	U	ng/L	P428300	
		DDE-p,p'	0.21	U	ng/L	P428300	
		DDT-p,p'	0.26	U	ng/L	P428300	
		Delta-BHC	0.90	I	ng/L	P428300	
		Deltamethrin	1.3	U	ng/L	P428300	
		Dichlobenil	0.26	U	ng/L	P428300	
		Dicofol	1.3	U	ng/L	P428300	
		Dieldrin	1.3	I	ng/L	P428300	
		Endosulfan I	0.41	U	ng/L	P428300	
		Endosulfan II	0.41	U	ng/L	P428300	
		Endosulfan Sulfate	0.31	U	ng/L	P428300	
		Endrin	0.41	U	ng/L	P428300	
		Endrin Aldehyde	0.77	U	ng/L	P428300	
		Endrin Ketone	0.41	U	ng/L	P428300	
		Esfenvalerate	0.77	U	ng/L	P428300	
		Ethalfuralin	0.15	U	ng/L	P428300	
		Fenpropathrin	0.26	U	ng/L	P428300	
		Gamma-BHC	0.20	I	ng/L	P428300	

Field ID: 20030692

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2399839	EPA 8270E	Gamma-Chlordane	0.67	I	ng/L	P428300	
		Heptachlor	0.21	U	ng/L	P428300	
		Heptachlor Epoxide	0.62	I	ng/L	P428300	
		Hexachlorobenzene**	1.0	U	ng/L	P428300	RPD
		Kepone	5.1	U	ng/L	P428300	MS
		Lambda-Cyhalothrin	0.77	U	ng/L	P428300	
		Methoprene	0.77	U	ng/L	P428300	
		Methoxychlor	0.31	U	ng/L	P428300	
		MGK-264	0.21	U	ng/L	P428300	
		Mirex	0.36	U	ng/L	P428300	
		Oxychlordane	0.31	U	ng/L	P428300	
		Permethrin	1.6	U	ng/L	P428300	
		Phenothrin	0.92	U	ng/L	P428300	
		Piperonyl Butoxide	2.1		ng/L	P428300	
		Prallethrin	2.1	U	ng/L	P428300	
		Tau-Fluvalinate	0.26	U	ng/L	P428300	
		Tetramethrin	0.77	U	ng/L	P428300	
		Trans-Nonachlor	0.21	U	ng/L	P428300	
		Triclosan Methyl	0.15	U	ng/L	P428300	
		Trifluralin	0.21	U	ng/L	P428300	
	EPA 8276	Chlordane	2.1	U	ng/L	P428300	
		Toxaphene	15	U	ng/L	P428300	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: DEER CR AT TALLEYRAND AVE

Collection Date/Time: 04/11/2023 11:30

Field ID: 20030792

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2399849	EPA 8321B	2,4-D	0.051		ug/L	P428433	
		Acesulfame K	0.10	U	ug/L	P428312	
		2,4,5-T	0.0040	U	ug/L	P428433	
		AMPA	0.10	I	ug/L	P428312	
		Acetaminophen	0.0080	U	ug/L	P428433	
		Acetamiprid	0.0020	U	ug/L	P428433	
		Endothall	0.25	U	ug/L	P428312	
		Glufosinate	0.10	U	ug/L	P428312	
		Glyphosate	0.10	U	ug/L	P428312	
		Afidopyropen	0.0020	U	ug/L	P428433	
		Bentazon	0.010		ug/L	P428433	
		Sucralose	0.15		ug/L	P428312	
		Benzovindiflupyr	0.0020	U	ug/L	P428433	
		Carbamazepine	8.0E-04	U	ug/L	P428433	
		Clothianidin	0.0020	U	ug/L	P428433	
		Dinotefuran	0.0020	U	ug/L	P428433	
		Diuron	0.0036	I	ug/L	P428433	
		Fenuron	0.032	U	ug/L	P428433	MS
		Fluridone	8.0E-04	U	ug/L	P428433	
		Imazapyr	0.064		ug/L	P428433	
		Hydrocodone	0.0020	U	ug/L	P428433	
		Ibuprofen	0.080	U	ug/L	P428433	
		Imidacloprid	0.0020	U	ug/L	P428433	
		Linuron	0.0040	U	ug/L	P428433	
		Mandestrobin	0.0020	U	ug/L	P428433	
		MCPP	0.0020	U	ug/L	P428433	
		Naproxen	0.0080	U	ug/L	P428433	
		Primidone	0.0040	U	ug/L	P428433	
		Pyraclostrobin	0.0020	U	ug/L	P428433	
		Silvex	0.0040	U	ug/L	P428433	
		Thiamethoxam	0.0020	U	ug/L	P428433	
		Tolfenpyrad	0.0020	U	ug/L	P428433	
		Triclopyr	0.0040	U	ug/L	P428433	

Ref. Method and Comment:

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

Sample Location: MIRAMAR AT SAN JOSE

Collection Date/Time: 04/11/2023 12:15

Field ID: G2NE1164

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2399840	EPA 8270E	Aldrin	0.66	U	ng/L	P428300	
		Alpha-BHC	0.10	U	ng/L	P428300	
		Alpha-Chlordane	0.30	I	ng/L	P428300	
		PCB-1016	2.0	U	ng/L	P428300	
		Beta-BHC	0.19	I	ng/L	P428300	
		PCB-1221	2.0	U	ng/L	P428300	
		Beta-Cyfluthrin	1.3	U	ng/L	P428300	
		PCB-1232	2.0	U	ng/L	P428300	
		Bifenthrin	0.51	U	ng/L	P428300	
		PCB-1242	2.0	U	ng/L	P428300	
		PCB-1248	2.0	U	ng/L	P428300	
		Chlorothalonil	3.6	U	ng/L	P428300	
		PCB-1254	2.0	U	ng/L	P428300	
		Cis-Nonachlor	0.20	U	ng/L	P428300	
		PCB-1260	2.0	U	ng/L	P428300	
		Cypermethrin	1.5	U	ng/L	P428300	
		Dacthal	0.15	U	ng/L	P428300	
		DDD-p,p'	0.25	U	ng/L	P428300	
		DDE-p,p'	0.20	U	ng/L	P428300	
		DDT-p,p'	0.25	U	ng/L	P428300	
		Delta-BHC	0.40	U	ng/L	P428300	
		Deltamethrin	1.3	U	ng/L	P428300	
		Dichlobenil	0.90	I	ng/L	P428300	
		Dicofol	1.3	U	ng/L	P428300	
		Dieldrin	4.3		ng/L	P428300	
		Endosulfan I	0.40	U	ng/L	P428300	
		Endosulfan II	0.40	U	ng/L	P428300	
		Endosulfan Sulfate	0.30	U	ng/L	P428300	
		Endrin	0.40	U	ng/L	P428300	
		Endrin Aldehyde	0.76	U	ng/L	P428300	
		Endrin Ketone	0.40	U	ng/L	P428300	
		Esfenvalerate	0.76	U	ng/L	P428300	
		Ethalfuralin	0.15	U	ng/L	P428300	
		Fenpropathrin	0.25	U	ng/L	P428300	
		Gamma-BHC	0.13	U	ng/L	P428300	
		Gamma-Chlordane	0.41	I	ng/L	P428300	
		Heptachlor	0.20	U	ng/L	P428300	
		Heptachlor Epoxide	1.1	I	ng/L	P428300	
		Hexachlorobenzene**	1.0	U	ng/L	P428300	RPD
		Kepone	5.1	U	ng/L	P428300	MS
		Lambda-Cyhalothrin	0.76	U	ng/L	P428300	
		Methoprene	0.76	U	ng/L	P428300	
		Methoxychlor	0.30	U	ng/L	P428300	
		MGK-264	0.20	U	ng/L	P428300	

Field ID: G2NE1164

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2399840	EPA 8270E	Mirex	0.35	U	ng/L	P428300	
		Oxychlordane	0.30	U	ng/L	P428300	
		Permethrin	1.6	U	ng/L	P428300	
		Phenothrin	0.91	U	ng/L	P428300	
		Piperonyl Butoxide	0.84		ng/L	P428300	
		Prallethrin	2.0	U	ng/L	P428300	
		Tau-Fluvalinate	0.25	U	ng/L	P428300	
		Tetramethrin	0.76	U	ng/L	P428300	
		Trans-Nonachlor	0.20	U	ng/L	P428300	
		Triclosan Methyl	0.15	U	ng/L	P428300	
		Trifluralin	0.20	U	ng/L	P428300	
	EPA 8276	Chlordane	2.1	I	ng/L	P428300	
		Toxaphene	15	U	ng/L	P428300	

Sample Location: LITTLE POTTSBURG CREEK AT EMERSON

Collection Date/Time: 04/11/2023 11:50

Field ID: 20030070

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2399828	DEP SOP: NU-094-1	Color (true)	39		PCU	P428395	
	EPA 180.1 Rev. 2.0	Turbidity	5.6	A	NTU	P428399	
	EPA 300.0 Rev. 2.1	Chloride	160		mg Cl/L	P428765	
		Sulfate	50		mg SO4/L	P428768	
	SM 2320 B-2011	Total Alkalinity	102		mg CaCO3/L	P428510	
	SM 2540 C-2015	TDS	415		mg/L	P428904	
	SM 2540 D-2015	TSS	3	I	mg/L	P428821	
	SM 4500-F- C-2011	Fluoride	0.16		mg F/L	P428928	
2399829	EPA 350.1 Rev. 2.0	Ammonia-N	0.092		mg N/L	P428789	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P428475	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P428777	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P428484	
	SM 5310 B-2011	Organic Carbon	8.3		mg C/L	P428606	
2399850	EPA 200.7 Rev. 4.4	Calcium	50.1		mg/L	P428416	
		Iron	870		ug/L	P428416	
		Magnesium	16.4		mg/L	P428416	
		Potassium	4.8		mg/L	P428416	
		Sodium	91.7		mg/L	P428416	
		Strontium	617		ug/L	P428416	
		Tin	3.0	U	ug/L	P428416	
		Titanium	2.0	I	ug/L	P428416	
	EPA 200.8 Rev. 5.4	Vanadium	2.0	U	ug/L	P428416	
		Zinc	17	I	ug/L	P428416	
		Aluminum	58		ug/L	P428416	
		Antimony	0.46		ug/L	P428416	
		Arsenic	0.75		ug/L	P428416	
		Barium	33.4		ug/L	P428416	
		Beryllium	0.010	U	ug/L	P428416	
		Boron	66.3		ug/L	P428416	
		Cadmium	0.020	U	ug/L	P428416	
		Chromium	0.42	I	ug/L	P428416	
		Cobalt	0.098		ug/L	P428416	
		Copper	2.78		ug/L	P428416	
		Lead	0.52		ug/L	P428416	
		Manganese	30.0		ug/L	P428416	
		Molybdenum	0.98		ug/L	P428416	
		Nickel	0.68	I	ug/L	P428416	
		Selenium	0.20	U	ug/L	P428416	
		Silver	0.010	U	ug/L	P428416	
		Thallium	0.10	U	ug/L	P428416	
	SM 2340 B-2011	Hardness	193		mg/L	P428416	

Ref. Method and Comment:

SM 2540 D-2015: 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: P428395

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428399

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P428416

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: P428416

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: P428765

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: P428768

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428521

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428789

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428473

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428475

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428777

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428860

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428484

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428550

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P428300

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P428300

Component	Result	Code	Units
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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P428300

Component	Result	Code	Units
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: P428300

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: P428312

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: P428433

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P428433

Component	Result	Code	Units
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: P428507

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

Reference Method: SM 2320 B-2011
Batch ID: P428510

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

Reference Method: SM 2540 C-2015
Batch ID: P428904

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P428821

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P428823

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P428928

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P428606

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: P428395

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428399

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.3		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P428416

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	101		P	85 - 115
Barium	104		P	85 - 115
Beryllium	94.7		P	85 - 115
Boron	98.8		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	105		P	85 - 115
Copper	103		P	85 - 115
Lead	102		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	103		P	85 - 115
Selenium	99.7		P	85 - 115
Silver	103		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428765

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428768

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428521

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428789

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428473

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428475

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428777

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428860

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428484

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428550

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P428300

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	57.0		P	10 - 92.0
Alpha-BHC	98.2		P	75 - 107
Alpha-Chlordane	91.4		P	50 - 108
Beta-BHC	85.5		P	36 - 138
Beta-Cyfluthrin	81.9		P	20 - 161
Bifenthrin	46.4		P	10 - 119
Chlorothalonil	84.4		P	26 - 186
Cis-Nonachlor	88.3		P	42 - 119
Cypermethrin	69.6		P	22 - 150
Dacthal	94.7		P	72 - 119
DDD-p,p'	83.6		P	45 - 107
DDE-p,p'	83.7		P	48 - 106
DDT-p,p'	78.9		P	48 - 110
Delta-BHC	94.7		P	54 - 140
Deltamethrin	90.8		P	22 - 189
Dichlobenil	100		P	36 - 117
Dicofol	93.4		P	46 - 155
Dieldrin	85.9		P	54 - 110
Endosulfan I	90.2		P	59 - 105
Endosulfan II	115		P	51 - 118
Endosulfan Sulfate	88.0		P	57 - 121
Endrin	92.3		P	10 - 120
Endrin Aldehyde	83.5		P	34 - 118
Endrin Ketone	91.9		P	69 - 177
Esfenvalerate	76.1		P	23 - 168
Ethalfuralin	79.2		P	49 - 99.0
Fenpropathrin	92.6		P	34 - 117
Gamma-BHC	74.5		P	72 - 117
Gamma-Chlordane	94.6		P	43 - 106
Heptachlor	73.5		P	41 - 98.0
Heptachlor Epoxide	77.4		P	57 - 106
Hexachlorobenzene	70.5		P	36 - 99.0
Kepone	209		P	16 - 215
Lambda-Cyhalothrin	65.9		P	21 - 177
Methoprene	69.8		P	10 - 119
Methoxychlor	111		P	60 - 112
MGK-264	76.2		P	26 - 122
Mirex	63.2		P	10 - 169
Oxychlordane	87.2		P	43 - 105
PCB-1016	64.8		P	48 - 112
PCB-1260	67.2		P	44 - 118
Permethrin	75.6		P	24 - 148
Phenothrin	63.2		P	10 - 106
Piperonyl Butoxide	82.9		P	10 - 139
Prallethrin	97.9		P	17 - 109
Tau-Fluvalinate	67.1		P	13 - 131
Tetramethrin	77.4		P	10 - 132
Trans-Nonachlor	98.7		P	44 - 106
Triclosan Methyl	88.7		P	59 - 109
Trifluralin	83.7		P	44 - 101

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P428300

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.1		P	61 - 116
Toxaphene	85.9		P	48 - 124

Reference Method: EPA 8321B
Batch ID: P428312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	98.8		P	40 - 150
AMPA	118		P	40 - 150
Endothall	89.3		P	40 - 150
Glufosinate	98.7		P	40 - 150
Glyphosate	124		P	40 - 150
Sucralose	112		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P428433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	98.4		P	40 - 150
2,4,5-T	84.6		P	40 - 150
Acetaminophen	69.2		P	30 - 150
Acetamiprid	79.1		P	40 - 150
Afidopyropen	58.0		P	30 - 150
Bentazon	80.6		P	30 - 150
Benzovindiflupyr	81.4		P	40 - 150
Carbamazepine	78.5		P	40 - 150
Clothianidin	82.7		P	40 - 150
Dinotefuran	88.1		P	40 - 150
Diuron	99.6		P	40 - 150
Fenuron	79.1		P	40 - 150
Fluridone	64.9		P	40 - 150
Hydrocodone	83.7		P	40 - 150
Ibuprofen	59.7		P	40 - 150
Imazapyr	87.2		P	40 - 150
Imidacloprid	82.3		P	40 - 150
Linuron	70.3		P	40 - 150
Mandestrobin	83.2		P	40 - 150
MCPP	96.8		P	40 - 150
Naproxen	66.0		P	40 - 150
Primidone	83.8		P	40 - 150
Pyraclostrobin	74.4		P	40 - 150
Silvex	100		P	40 - 150
Thiamethoxam	80.2		P	40 - 150
Tolfenpyrad	53.0		P	30 - 150
Triclopyr	95.8		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P428507

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.2		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P428510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.5		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P428904

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

Reference Method: SM 2540 D-2015
Batch ID: P428821

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	99.0		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P428823

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	102		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P428928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P428606

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: P428416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399727	Calcium	105	104	P/P	80 - 120
2399727	Iron	106	104	P/P	80 - 120
2399727	Magnesium	109	106	P/P	80 - 120
2399727	Potassium	107	108	P/P	80 - 120
2399727	Sodium	105	105	P/P	80 - 120
2399727	Strontium	102	101	P/P	80 - 120
2399727	Tin	101	102	P/P	80 - 120
2399727	Titanium	101	101	P/P	80 - 120
2399727	Vanadium	103	102	P/P	80 - 120
2399727	Zinc	104	104	P/P	80 - 120
2399766	Calcium	103		P	80 - 120
2399766	Iron	105		P	80 - 120
2399766	Magnesium	106		P	80 - 120
2399766	Potassium	102		P	80 - 120
2399766	Sodium	103		P	80 - 120
2399766	Strontium	100		P	80 - 120
2399766	Tin	101		P	80 - 120
2399766	Titanium	102		P	80 - 120
2399766	Vanadium	102		P	80 - 120
2399766	Zinc	103		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P428416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399727	Aluminum	98.7	102	P/P	80 - 120
2399727	Antimony	103	104	P/P	80 - 120
2399727	Arsenic	99.6	100	P/P	80 - 120
2399727	Barium	102	103	P/P	80 - 120
2399727	Beryllium	91.3	94.2	P/P	80 - 120
2399727	Boron	102	102	P/P	80 - 120
2399727	Cadmium	104	102	P/P	80 - 120
2399727	Chromium	98.0	98.6	P/P	80 - 120
2399727	Cobalt	101	103	P/P	80 - 120
2399727	Copper	99.5	101	P/P	80 - 120
2399727	Lead	103	104	P/P	80 - 120
2399727	Manganese	100	101	P/P	80 - 120
2399727	Molybdenum	100	100	P/P	80 - 120
2399727	Nickel	101	102	P/P	80 - 120
2399727	Selenium	96.0	97.9	P/P	80 - 120
2399727	Silver	102	103	P/P	80 - 120
2399727	Thallium	101	102	P/P	80 - 120
2399766	Aluminum	100		P	80 - 120
2399766	Antimony	104		P	80 - 120
2399766	Arsenic	102		P	80 - 120
2399766	Barium	101		P	80 - 120
2399766	Beryllium	95.3		P	80 - 120
2399766	Boron	104		P	80 - 120
2399766	Cadmium	102		P	80 - 120
2399766	Chromium	98.5		P	80 - 120
2399766	Cobalt	102		P	80 - 120
2399766	Copper	99.7		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399766	Lead	104		P	80 - 120
2399766	Manganese	98.0		P	80 - 120
2399766	Molybdenum	102		P	80 - 120
2399766	Nickel	101		P	80 - 120
2399766	Selenium	97.6		P	80 - 120
2399766	Silver	101		P	80 - 120
2399766	Thallium	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428765

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399709	Chloride	102		P	90 - 110
2399822	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399709	Sulfate	102		P	90 - 110
2399822	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399823	Ammonia-N	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2398767	Kjeldahl Nitrogen	102	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428475

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399576	Kjeldahl Nitrogen	99.2	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399856	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399831	NO2NO3-N	100	99.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428484

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399829	Total-P	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399841	Total-P	94.5	94.6	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P428300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399489	PCB-1016	73.9	70.6	P/P	46 - 111
2399489	PCB-1260	68.8	70.2	P/P	45 - 114
2399580	Aldrin	66.0	53.0	P/P	20 - 82.0
2399580	Alpha-BHC	100	107	P/P	71 - 109
2399580	Alpha-Chlordane	88.6	77.6	P/P	42 - 106
2399580	Beta-BHC	95.5	109	P/P	69 - 180
2399580	Beta-Cyfluthrin	89.1	104	P/P	18 - 175
2399580	Bifenthrin	55.4	52.1	P/P	21 - 128
2399580	Chlorothalonil	105	128	P/P	10 - 300
2399580	Cis-Nonachlor	97.2	84.8	P/P	34 - 106
2399580	Cypermethrin	76.7	72.9	P/P	22 - 158
2399580	Dacthal	100	91.2	P/P	54 - 116
2399580	DDD-p,p'	90.8	74.5	P/P	34 - 107
2399580	DDE-p,p'	86.0	77.2	P/P	33 - 110
2399580	DDT-p,p'	82.6	82.8	P/P	50 - 122
2399580	Delta-BHC	105	140	P/P	77 - 193
2399580	Deltamethrin	113	91.2	P/P	10 - 195
2399580	Dichlobenil	74.5	73.5	P/P	25 - 113
2399580	Dicofol	83.8	84.4	P/P	38 - 247
2399580	Dieldrin	74.1	68.9	P/P	45 - 118
2399580	Endosulfan I	93.2	83.5	P/P	51 - 106
2399580	Endosulfan II	106	95.3	P/P	37 - 122
2399580	Endosulfan Sulfate	76.5	99.6	P/P	43 - 132
2399580	Endrin	88.8	78.5	P/P	29 - 101
2399580	Endrin Aldehyde	62.3	56.4	P/P	19 - 110
2399580	Endrin Ketone	75.4	89.0	P/P	60 - 140
2399580	Esfenvalerate	94.8	86.9	P/P	26 - 199
2399580	Ethalfuralin	83.6	97.5	P/P	45 - 99.0
2399580	Fenpropathrin	85.3	79.5	P/P	35 - 120
2399580	Gamma-BHC	83.5	98.6	P/P	63 - 128
2399580	Gamma-Chlordane	87.8	74.2	P/P	40 - 104
2399580	Heptachlor	85.8	64.4	P/P	36 - 97.0
2399580	Heptachlor Epoxide	68.8	79.1	P/P	49 - 184
2399580	Hexachlorobenzene	81.6	49.1	P/P	39 - 96.0
2399580	Kepone	172	278	P/F	10 - 217
2399580	Lambda-Cyhalothrin	86.5	82.8	P/P	21 - 193
2399580	Methoprene	85.3	57.5	P/P	20 - 106
2399580	Methoxychlor	104	114	P/P	53 - 118
2399580	MGK-264	91.9	88.1	P/P	40 - 118
2399580	Mirex	67.7	50.6	P/P	26 - 92.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P428300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399580	Oxychlordane	86.8	80.9	P/P	44 - 99.0
2399580	Permethrin	88.2	91.2	P/P	33 - 182
2399580	Phenothrin	72.1	95.9	P/P	10 - 129
2399580	Piperonyl Butoxide	97.0	85.3	P/P	10 - 211
2399580	Prallethrin	112	105	P/P	24 - 113
2399580	Tau-Fluvalinate	96.0	102	P/P	14 - 149
2399580	Tetramethrin	93.0	80.0	P/P	17 - 151
2399580	Trans-Nonachlor	102	84.3	P/P	42 - 102
2399580	Triclosan Methyl	101	80.8	P/P	48 - 108
2399580	Trifluralin	85.6	79.7	P/P	47 - 96.0

Reference Method: EPA 8276

Batch ID: P428300

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399489	Chlordane	70.7	58.4	P/P	53 - 126
2399489	Toxaphene	73.4	66.6	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P428312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399392	Acesulfame K	93.0	93.7	P/P	40 - 150
2399392	AMPA	118	117	P/P	40 - 150
2399392	Endothall	96.7	98.9	P/P	40 - 150
2399392	Glufosinate	95.9	99.4	P/P	40 - 150
2399392	Glyphosate	110	107	P/P	40 - 150
2399392	Sucralose	97.5	93.3	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P428433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399997	2,4-D	89.5	92.4	P/P	40 - 150
2399997	2,4,5-T	103	108	P/P	40 - 150
2399997	Acetaminophen	94.4	95.1	P/P	30 - 150
2399997	Acetamiprid	49.8	44.5	P/P	40 - 150
2399997	Afidopyropen	72.9	79.0	P/P	30 - 150
2399997	Benzovindiflupyr	89.0	82.6	P/P	40 - 150
2399997	Carbamazepine	57.5	59.8	P/P	40 - 150
2399997	Clothianidin	73.2	74.9	P/P	40 - 150
2399997	Dinotefuran	49.4	49.6	P/P	40 - 150
2399997	Diuron	71.7	71.2	P/P	40 - 150
2399997	Fenuron	38.4	40.6	F/P	40 - 150
2399997	Fluridone	69.0	57.7	P/P	40 - 150
2399997	Hydrocodone	46.2	44.4	P/P	40 - 150
2399997	Ibuprofen	61.7	55.7	P/P	40 - 150
2399997	Imazapyr	71.1	68.9	P/P	40 - 150
2399997	Imidacloprid	99.4	102	P/P	40 - 150
2399997	Linuron	74.8	68.0	P/P	40 - 150
2399997	Mandestrobin	89.1	83.9	P/P	40 - 150
2399997	MCPP	104	121	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P428433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399997	Naproxen	66.7	59.6	P/P	40 - 150
2399997	Primidone	69.6	78.0	P/P	40 - 150
2399997	Pyraclostrobin	80.2	77.9	P/P	40 - 150
2399997	Silvex	114	106	P/P	40 - 150
2399997	Thiamethoxam	53.9	58.6	P/P	40 - 150
2399997	Tolfenpyrad	49.2	55.9	P/P	30 - 150
2399997	Triclopyr	123	117	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P428928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399662	Fluoride	99.1	99.8	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P428606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2399831	Organic Carbon	92.2	92.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P428395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399759	Color (true)	1.62	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P428399

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399828	Turbidity	2.16	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P428416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399727	Calcium	0.336	Spike	P	0 - 20
2399727	Iron	2.09	Spike	P	0 - 20
2399727	Magnesium	1.96	Spike	P	0 - 20
2399727	Potassium	0.0936	Spike	P	0 - 20
2399727	Sodium	0.528	Spike	P	0 - 20
2399727	Strontium	0.522	Spike	P	0 - 20
2399727	Tin	0.662	Spike	P	0 - 20
2399727	Titanium	0.0241	Spike	P	0 - 20
2399727	Vanadium	0.566	Spike	P	0 - 20
2399727	Zinc	0.0493	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P428416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399727	Aluminum	2.66	Spike	P	0 - 20
2399727	Antimony	0.777	Spike	P	0 - 20
2399727	Arsenic	0.522	Spike	P	0 - 20
2399727	Barium	0.419	Spike	P	0 - 20
2399727	Beryllium	2.98	Spike	P	0 - 20
2399727	Boron	0.362	Spike	P	0 - 20
2399727	Cadmium	1.11	Spike	P	0 - 20
2399727	Chromium	0.535	Spike	P	0 - 20
2399727	Cobalt	1.52	Spike	P	0 - 20
2399727	Copper	1.53	Spike	P	0 - 20
2399727	Lead	0.638	Spike	P	0 - 20
2399727	Manganese	0.380	Spike	P	0 - 20
2399727	Molybdenum	0.361	Spike	P	0 - 20
2399727	Nickel	0.996	Spike	P	0 - 20
2399727	Selenium	1.94	Spike	P	0 - 20
2399727	Silver	0.688	Spike	P	0 - 20
2399727	Thallium	1.16	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428765

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399709	Chloride	0.280	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P428768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399709	Sulfate	0.755	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399578	Ammonia-N	0.253	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P428789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399823	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2398767	Kjeldahl Nitrogen	1.80	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399576	Kjeldahl Nitrogen	1.40	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399856	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P428860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399831	NO2NO3-N	0.693	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428484

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399829	Total-P	0.0583	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P428550

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399841	Total-P	0.123	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P428300

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399489	PCB-1016	4.53	Spike	P	0 - 32
2399489	PCB-1260	1.97	Spike	P	0 - 31
2399580	Aldrin	21.9	Spike	P	0 - 41
2399580	Alpha-BHC	6.43	Spike	P	0 - 25
2399580	Alpha-Chlordane	13.3	Spike	P	0 - 33
2399580	Beta-BHC	12.8	Spike	P	0 - 36
2399580	Beta-Cyfluthrin	15.6	Spike	P	0 - 42
2399580	Bifenthrin	6.20	Spike	P	0 - 53
2399580	Chlorothalonil	20.3	Spike	P	0 - 71
2399580	Cis-Nonachlor	13.6	Spike	P	0 - 29
2399580	Cypermethrin	5.08	Spike	P	0 - 40
2399580	Dacthal	9.53	Spike	P	0 - 26
2399580	DDD-p,p'	19.7	Spike	P	0 - 39
2399580	DDE-p,p'	10.8	Spike	P	0 - 33
2399580	DDT-p,p'	0.299	Spike	P	0 - 40
2399580	Delta-BHC	28.7	Spike	P	0 - 37
2399580	Deltamethrin	21.0	Spike	P	0 - 100
2399580	Dichlobenil	1.25	Spike	P	0 - 40
2399580	Dicofol	0.682	Spike	P	0 - 31
2399580	Dieldrin	6.23	Spike	P	0 - 27
2399580	Endosulfan I	10.9	Spike	P	0 - 23
2399580	Endosulfan II	10.4	Spike	P	0 - 28
2399580	Endosulfan Sulfate	26.3	Spike	P	0 - 38
2399580	Endrin	12.3	Spike	P	0 - 63
2399580	Endrin Aldehyde	9.93	Spike	P	0 - 60
2399580	Endrin Ketone	16.5	Spike	P	0 - 37
2399580	Esfenvalerate	8.72	Spike	P	0 - 52
2399580	Ethalfuralin	13.8	Spike	P	0 - 23
2399580	Fenpropathrin	7.07	Spike	P	0 - 32
2399580	Gamma-BHC	16.6	Spike	P	0 - 17
2399580	Gamma-Chlordane	15.4	Spike	P	0 - 40
2399580	Heptachlor	28.5	Spike	P	0 - 29
2399580	Heptachlor Epoxide	11.6	Spike	P	0 - 25
2399580	Hexachlorobenzene	49.8	Spike	F	0 - 36
2399580	Kepone	47.3	Spike	P	0 - 93
2399580	Lambda-Cyhalothrin	4.46	Spike	P	0 - 55
2399580	Methoprene	38.9	Spike	P	0 - 53

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P428300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399580	Methoxychlor	8.96	Spike	P	0 - 29
2399580	MGK-264	4.25	Spike	P	0 - 35
2399580	Mirex	28.9	Spike	P	0 - 46
2399580	Oxychlordane	7.10	Spike	P	0 - 29
2399580	Permethrin	3.44	Spike	P	0 - 44
2399580	Phenothrin	28.3	Spike	P	0 - 56
2399580	Piperonyl Butoxide	12.9	Spike	P	0 - 100
2399580	Prallethrin	6.71	Spike	P	0 - 42
2399580	Tau-Fluvalinate	5.72	Spike	P	0 - 54
2399580	Tetramethrin	15.0	Spike	P	0 - 51
2399580	Trans-Nonachlor	18.7	Spike	P	0 - 37
2399580	Triclosan Methyl	22.0	Spike	P	0 - 31
2399580	Trifluralin	7.11	Spike	P	0 - 30

Reference Method: EPA 8276
Batch ID: P428300

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399489	Chlordane	19.1	Spike	P	0 - 25
2399489	Toxaphene	9.67	Spike	P	0 - 26

Reference Method: EPA 8321B
Batch ID: P428312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399392	Acesulfame K	0.734	Spike	P	0 - 30
2399392	AMPA	0.933	Spike	P	0 - 30
2399392	Endothall	2.21	Spike	P	0 - 30
2399392	Glufosinate	3.67	Spike	P	0 - 30
2399392	Glyphosate	2.04	Spike	P	0 - 30
2399392	Sucralose	3.51	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P428433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399997	2,4-D	3.19	Spike	P	0 - 30
2399997	2,4,5-T	4.27	Spike	P	0 - 30
2399997	Acetaminophen	0.756	Spike	P	0 - 30
2399997	Acetamiprid	11.2	Spike	P	0 - 30
2399997	Afidopyropen	8.09	Spike	P	0 - 30
2399997	Bentazon	15.7	Spike	P	0 - 30
2399997	Benzovindiflupyr	7.52	Spike	P	0 - 30
2399997	Carbamazepine	3.77	Spike	P	0 - 30
2399997	Clothianidin	2.22	Spike	P	0 - 30
2399997	Dinotefuran	0.350	Spike	P	0 - 30
2399997	Diuron	0.710	Spike	P	0 - 30
2399997	Fenuron	5.54	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P428433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399997	Fluridone	17.7	Spike	P	0 - 30
2399997	Hydrocodone	4.08	Spike	P	0 - 30
2399997	Ibuprofen	10.2	Spike	P	0 - 30
2399997	Imazapyr	1.33	Spike	P	0 - 30
2399997	Imidacloprid	2.33	Spike	P	0 - 30
2399997	Linuron	9.50	Spike	P	0 - 30
2399997	Mandestrobin	5.91	Spike	P	0 - 30
2399997	MCP	15.0	Spike	P	0 - 30
2399997	Naproxen	11.3	Spike	P	0 - 30
2399997	Primidone	11.3	Spike	P	0 - 30
2399997	Pyraclostrobin	2.87	Spike	P	0 - 30
2399997	Silvex	6.71	Spike	P	0 - 30
2399997	Thiamethoxam	8.31	Spike	P	0 - 30
2399997	Tolfenpyrad	12.8	Spike	P	0 - 30
2399997	Triclopyr	5.12	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P428507

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399381	Total Alkalinity	1.47	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P428510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399660	Total Alkalinity	0.0847	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P428904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399464	TDS	5.71	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P428928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399662	Fluoride	0.470	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P428606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2399831	Organic Carbon	0.427	Spike	P	0 - 20

Quality Assurance Report Precision

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

Quality Assurance Report Surrogates

Lab Sample ID: 2399839
Field Sample ID: 20030692

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	82.8	P	29 - 130
EPA 8270E	Decachlorobiphenyl	76.6	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	55.7	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	73.5	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	70.3	P	30 - 101
EPA 8276	PCNB	95.6	P	48 - 121

Lab Sample ID: 2399840
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.0	P	29 - 130
EPA 8270E	Decachlorobiphenyl	67.2	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	50.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	50.4	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	50.4	P	30 - 101
EPA 8276	PCNB	86.5	P	48 - 121

Lab Sample ID: 2399849
Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.1	P	30 - 160
EPA 8321B	Diuron-d6	73.0	P	30 - 160
EPA 8321B	Endothall-d6	97.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	78.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	54.3	P	30 - 160
EPA 8321B	Primidone-d5	97.3	P	30 - 160
EPA 8321B	Sucralose-d6	92.7	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A118536

Included Lab Sample IDs: 2399828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118537

Included Lab Sample IDs: 2399828, 2399830

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

Reference Method: SM 2320 B-2011

Run ID: A118577

Included Lab Sample IDs: 2399828, 2399830

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.1	94.6	P/P	90 - 110
Total Alkalinity	94.8	95.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118584

Included Lab Sample IDs: 2399831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	96.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A118594

Included Lab Sample IDs: 2399850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.0	99.6	P/P	90 - 110
Antimony	102	102	P/P	90 - 110
Arsenic	98.5	98.5	P/P	90 - 110
Barium	98.6	99.9	P/P	90 - 110
Beryllium	96.4	94.3	P/P	90 - 110
Boron	96.4	98.9	P/P	90 - 110
Cadmium	99.1	99.6	P/P	90 - 110
Chromium	97.7	96.6	P/P	90 - 110
Cobalt	99.6	98.3	P/P	90 - 110
Copper	96.3	97.2	P/P	90 - 110
Lead	100	99.6	P/P	90 - 110
Manganese	97.8	96.6	P/P	90 - 110
Molybdenum	97.1	97.8	P/P	90 - 110
Nickel	97.7	97.5	P/P	90 - 110
Selenium	100	99.5	P/P	90 - 110
Silver	99.8	99.6	P/P	90 - 110
Thallium	99.5	99.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A118595

Included Lab Sample IDs: 2399839, 2399840

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	104		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	112		P	80 - 120
Bifenthrin	98.5		P	80 - 120
Chlorothalonil	106		P	80 - 120
Cis-Nonachlor	117		P	80 - 120
Cypermethrin	95.6		P	80 - 120
Dacthal	116		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	91.4		P	80 - 120
DDT-p,p'	103		P	80 - 120
Delta-BHC	103		P	80 - 120
Deltamethrin	107		P	80 - 120
Dichlobenil	118		P	80 - 120
Dicofol	105		P	80 - 120
Dieldrin	91.4		P	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	113		P	80 - 120
Endosulfan Sulfate	107		P	80 - 120
Endrin	107		P	80 - 120
Endrin Aldehyde	96.2		P	80 - 120
Endrin Ketone	100		P	80 - 120
Esfenvalerate	99.1		P	80 - 120
Ethalfuralin	94.4		P	80 - 120
Fenpropathrin	106		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	103		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	103		P	80 - 120
Hexachlorobenzene	103		P	80 - 120
Kepone	104		P	80 - 120
Lambda-Cyhalothrin	106		P	80 - 120
Methoprene	107		P	80 - 120
Methoxychlor	106		P	80 - 120
MGK-264	96.3		P	80 - 120
Mirex	106		P	80 - 120
Oxychlordane	107		P	80 - 120
Permethrin	111		P	80 - 120
Phenothrin	108		P	80 - 120
Piperonyl Butoxide	98.2		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	91.5		P	80 - 120
Trans-Nonachlor	116		P	80 - 120
Triclosan Methyl	104		P	80 - 120
Trifluralin	83.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A118606
Included Lab Sample IDs: 2399849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.5	99.0	P/P	60 - 160
Sucralose	90.3	98.6	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A118607
Included Lab Sample IDs: 2399829

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

Reference Method: EPA 8270E
Run ID: A118624
Included Lab Sample IDs: 2399839, 2399840

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.6		P	80 - 120
PCB-1260	99.3		P	80 - 120

Reference Method: EPA 8321B
Run ID: A118625
Included Lab Sample IDs: 2399849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	120	113	P/P	60 - 160
Endothall	98.5	95.7	P/P	60 - 160
Glufosinate	106	98.4	P/P	60 - 160
Glyphosate	116	113	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A118626
Included Lab Sample IDs: 2399831

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

Reference Method: SM 5310 B-2011
Run ID: A118628
Included Lab Sample IDs: 2399829, 2399831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.7	98.8	P/P	90 - 110
Organic Carbon	98.8	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A118632
Included Lab Sample IDs: 2399829, 2399831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	105	P/P	90 - 110
Kjeldahl Nitrogen	107	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A118638

Included Lab Sample IDs: 2399839, 2399840

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.7		P	80 - 120
Toxaphene	88.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118641

Included Lab Sample IDs: 2399828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.6	97.9	P/P	90 - 110
Sulfate	99.4	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A118667

Included Lab Sample IDs: 2399850

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	103	P/P	90 - 110
Iron	105	105	P/P	90 - 110
Magnesium	105	105	P/P	90 - 110
Potassium	103	103	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Strontium	99.7	101	P/P	90 - 110
Tin	99.7	101	P/P	90 - 110
Titanium	97.6	100	P/P	90 - 110
Vanadium	99.7	100	P/P	90 - 110
Zinc	99.9	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118686

Included Lab Sample IDs: 2399829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118690

Included Lab Sample IDs: 2399829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.2	98.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118725

Included Lab Sample IDs: 2399831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A118753

Included Lab Sample IDs: 2399828, 2399830

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

Reference Method: EPA 8321B

Run ID: A118768

Included Lab Sample IDs: 2399849

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	92.9	92.0	P/P	50 - 150
2,4,5-T	96.6	83.4	P/P	50 - 150
Acetaminophen	86.9	90.7	P/P	60 - 160
Acetamiprid	111	115	P/P	50 - 150
Afidopyropen	127	87.6	P/P	50 - 150
Bentazon	112	102	P/P	50 - 160
Benzovindiflupyr	100	103	P/P	50 - 150
Carbamazepine	100	98.5	P/P	60 - 150
Clothianidin	97.7	94.4	P/P	60 - 150
Dinotefuran	93.7	98.2	P/P	50 - 150
Diuron	141	123	P/P	60 - 160
Fenuron	99.3	101	P/P	60 - 150
Fluridone	98.7	90.5	P/P	60 - 160
Hydrocodone	110	107	P/P	60 - 150
Ibuprofen	77.5	71.8	P/P	50 - 160
Imazapyr	107	106	P/P	50 - 150
Imidacloprid	102	96.8	P/P	60 - 150
Linuron	86.3	87.4	P/P	60 - 150
Mandestrobin	111	103	P/P	50 - 150
MCPP	94.8	102	P/P	50 - 150
Naproxen	134	64.4	P/P	50 - 160
Primidone	103	101	P/P	60 - 150
Pyraclostrobin	105	106	P/P	60 - 150
Silvex	96.4	106	P/P	50 - 150
Thiamethoxam	102	105	P/P	50 - 150
Tolfenpyrad	98.4	102	P/P	60 - 150
Triclopyr	83.3	93.2	P/P	50 - 150

* 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)	102					1.62	
EPA 180.1 Rev. 2.0	Turbidity	97.3					2.16	
EPA 200.7 Rev. 4.4	Calcium	104	105	104	103			0.336
	Iron	103	106	104	105			2.09
	Magnesium	105	109	106	106			1.96
	Potassium	103	107	108	102			0.0936
	Sodium	105	105	105	103			0.528
	Strontium	101	102	101	100			0.522
	Tin	105	101	102	101			0.662
	Titanium	102	101	101	102			0.0241
	Vanadium	104	103	102	102			0.566
	Zinc	106	104	104	103			0.0493
EPA 200.8 Rev. 5.4	Aluminum	101	98.7	102	100			2.66
	Antimony	104	103	104	104			0.777
	Arsenic	101	99.6	100	102			0.522
	Barium	104	102	103	101			0.419
	Beryllium	94.7	91.3	94.2	95.3			2.98
	Boron	98.8	102	102	104			0.362
	Cadmium	102	104	102	102			1.11
	Chromium	101	98.0	98.6	98.5			0.535
	Cobalt	105	101	103	102			1.52
	Copper	103	99.5	101	99.7			1.53
	Lead	102	103	104	104			0.638
	Manganese	99.2	100	101	98.0			0.380
	Molybdenum	100	100	100	102			0.361
	Nickel	103	101	102	101			0.996
	Selenium	99.7	96.0	97.9	97.6			1.94
	Silver	103	102	103	101			0.688
	Thallium	101	101	102	102			1.16
EPA 300.0 Rev. 2.1	Chloride	100	102	102			0.280	
	Sulfate	101	102	101			0.755	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0						0.253
	Ammonia-N	97.2	102	100				1.06
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	102	100				1.80
	Kjeldahl Nitrogen	105	99.2	101				1.40
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	102				0.0
	NO2NO3-N	104	100	99.5				0.693
EPA 365.1 Rev. 2.0	Total-P	102	103	103				0.0583
	Total-P	101	94.5	94.6				0.123
EPA 8270E	Aldrin	57.0	66.0	53.0				21.9
	Alpha-BHC	98.2	100	107				6.43
	Alpha-Chlordane	91.4	88.6	77.6				13.3
	Beta-BHC	85.5	95.5	109				12.8
	Beta-Cyfluthrin	81.9	89.1	104				15.6
	Bifenthrin	46.4	55.4	52.1				6.20
	Chlorothalonil	84.4	105	128				20.3
	Cis-Nonachlor	88.3	97.2	84.8				13.6
	Cypermethrin	69.6	76.7	72.9				5.08
	Dacthal	94.7	100	91.2				9.53
	DDD-p,p'	83.6	90.8	74.5				19.7
	DDE-p,p'	83.7	86.0	77.2				10.8
	DDT-p,p'	78.9	82.6	82.8				0.299
	Delta-BHC	94.7	105	140				28.7
	Deltamethrin	90.8	113	91.2				21.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Dichlobenil	100	74.5	73.5		1.25
	Dicofol	93.4	83.8	84.4		0.682
	Dieldrin	85.9	74.1	68.9		6.23
	Endosulfan I	90.2	93.2	83.5		10.9
	Endosulfan II	115	106	95.3		10.4
	Endosulfan Sulfate	88.0	76.5	99.6		26.3
	Endrin	92.3	88.8	78.5		12.3
	Endrin Aldehyde	83.5	62.3	56.4		9.93
	Endrin Ketone	91.9	75.4	89.0		16.5
	Esfenvalerate	76.1	94.8	86.9		8.72
	Ethalfuralin	79.2	83.6	97.5		13.8
	Fenpropathrin	92.6	85.3	79.5		7.07
	Gamma-BHC	74.5	83.5	98.6		16.6
	Gamma-Chlordane	94.6	87.8	74.2		15.4
	Heptachlor	73.5	85.8	64.4		28.5
	Heptachlor Epoxide	77.4	68.8	79.1		11.6
	Hexachlorobenzene	70.5	81.6	49.1		49.8
	Kepone	209	172	278		47.3
	Lambda-Cyhalothrin	65.9	86.5	82.8		4.46
	Methoprene	69.8	85.3	57.5		38.9
	Methoxychlor	111	104	114		8.96
	MGK-264	76.2	91.9	88.1		4.25
	Mirex	63.2	67.7	50.6		28.9
	Oxychlordane	87.2	86.8	80.9		7.10
	PCB-1016	64.8	73.9	70.6		4.53
	PCB-1260	67.2	68.8	70.2		1.97
	Permethrin	75.6	88.2	91.2		3.44
	Phenothrin	63.2	72.1	95.9		28.3
	Piperonyl Butoxide	82.9	97.0	85.3		12.9
	Prallethrin	97.9	112	105		6.71
	Tau-Fluvalinate	67.1	96.0	102		5.72
	Tetramethrin	77.4	93.0	80.0		15.0
	Trans-Nonachlor	98.7	102	84.3		18.7
	Triclosan Methyl	88.7	101	80.8		22.0
	Trifluralin	83.7	85.6	79.7		7.11
EPA 8276	Chlordane	76.1	70.7	58.4		19.1
	Toxaphene	85.9	73.4	66.6		9.67
EPA 8321B	2,4-D	98.4	89.5	92.4		3.19
	2,4,5-T	84.6	103	108		4.27
	Acesulfame K	98.8	93.0	93.7		0.734
	Acetaminophen	69.2	94.4	95.1		0.756
	Acetamiprid	79.1	49.8	44.5		11.2
	Afidopyropen	58.0	72.9	79.0		8.09
	AMPA	118	118	117		0.933
	Bentazon	80.6				15.7
	Benzovindiflupyr	81.4	89.0	82.6		7.52
	Carbamazepine	78.5	57.5	59.8		3.77
	Clothianidin	82.7	73.2	74.9		2.22
	Dinotefuran	88.1	49.4	49.6		0.350
	Diuron	99.6	71.7	71.2		0.710
	Endothall	89.3	96.7	98.9		2.21
	Fenuron	79.1	38.4	40.6		5.54
	Fluridone	64.9	69.0	57.7		17.7
	Glufosinate	98.7	95.9	99.4		3.67

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Glyphosate	124	110	107			2.04
	Hydrocodone	83.7	46.2	44.4			4.08
	Ibuprofen	59.7	61.7	55.7			10.2
	Imazapyr	87.2	71.1	68.9			1.33
	Imidacloprid	82.3	99.4	102			2.33
	Linuron	70.3	74.8	68.0			9.50
	Mandestrobin	83.2	89.1	83.9			5.91
	MCPP	96.8	104	121			15.0
	Naproxen	66.0	66.7	59.6			11.3
	Primidone	83.8	69.6	78.0			11.3
	Pyraclostrobin	74.4	80.2	77.9			2.87
	Silvex	100	114	106			6.71
	Sucralose	112	97.5	93.3			3.51
	Thiamethoxam	80.2	53.9	58.6			8.31
	Tolfenpyrad	53.0	49.2	55.9			12.8
	Triclopyr	95.8	123	117			5.12
SM 2320 B-2011	Total Alkalinity	96.2				1.47	
	Total Alkalinity	95.5				0.0847	
SM 2540 C-2015	TDS	103				5.71	
SM 2540 D-2015	TSS	99.0					
	TSS	102					
SM 4500-F- C-2011	Fluoride	99.8	99.1	99.8			0.470
SM 5310 B-2011	Organic Carbon	97.0	92.2	92.7			0.427

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2399828
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2399828, 2399830
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2399850
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2399850
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2399828
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2399828
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2399829, 2399831
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2399829, 2399831
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2399829, 2399831
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2399829, 2399831
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2399839, 2399840
EPA 8270E	PCBs in water matrices by GC/MS/MS	2399839, 2399840
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2399839, 2399840
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2399849
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2399828, 2399830
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2399850
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2399828
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2399828, 2399830
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2399828, 2399830
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2399829, 2399831

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	04/12/2023			04/12/2023 15:41	Alexis Price	2399828
EPA 180.1 Rev. 2.0	04/12/2023			04/12/2023 14:15	Khloe J Berg	2399828
	04/12/2023			04/12/2023 14:17	Khloe J Berg	2399830
EPA 200.7 Rev. 4.4	04/12/2023	04/13/2023 11:25	George D Taylor	04/19/2023 22:08	McKinley C Carter	2399850
EPA 200.8 Rev. 5.4	04/12/2023	04/13/2023 11:25	George D Taylor	04/14/2023 18:39	Conrad Hartmann	2399850
EPA 300.0 Rev. 2.1	04/12/2023			04/20/2023 00:06	James L Waggeberby	2399828
EPA 350.1 Rev. 2.0	04/12/2023			04/14/2023 13:51	Ping Hua	2399831
	04/12/2023			04/20/2023 12:00	Khloe J Berg	2399829
EPA 351.2 Rev. 2.0	04/12/2023	04/14/2023 11:34	Simonne.V. Calhoun	04/18/2023 10:15	Samantha L Bates	2399831
	04/12/2023	04/14/2023 11:34	Simonne.V. Calhoun	04/18/2023 11:07	Samantha L Bates	2399829
EPA 353.2 Rev. 2.0	04/12/2023			04/20/2023 11:19	Beverly Y. Sanders	2399829
	04/12/2023			04/21/2023 14:19	Anna M. Plaviak	2399831
EPA 365.1 Rev. 2.0	04/12/2023	04/14/2023 14:15	Alexis Price	04/17/2023 09:01	James L Waggeberby	2399829
	04/12/2023	04/17/2023 18:31	Adam P Silver	04/18/2023 09:46	James L Waggeberby	2399831
EPA 8270E	04/12/2023	04/12/2023 11:30	Fe-Val Siddell	04/14/2023 23:32	Michael Poppell	2399839
	04/12/2023	04/12/2023 11:30	Fe-Val Siddell	04/15/2023 00:01	Michael Poppell	2399840
	04/12/2023	04/12/2023 11:30	Fe-Val Siddell	04/15/2023 00:23	Julie Wi	2399839
	04/12/2023	04/12/2023 11:30	Fe-Val Siddell	04/15/2023 00:53	Julie Wi	2399840
EPA 8276	04/12/2023	04/12/2023 11:30	Fe-Val Siddell	04/15/2023 19:13	Lipi Saha	2399839
	04/12/2023	04/12/2023 11:30	Fe-Val Siddell	04/15/2023 20:10	Lipi Saha	2399840
EPA 8321B	04/12/2023	04/14/2023 09:00	Hoor Shaik	04/18/2023 11:03	Juyoung Kim	2399849
	04/12/2023	04/14/2023 10:00	Manjita Shrestha	04/14/2023 14:20	Manjita Shrestha	2399849
	04/12/2023	04/14/2023 10:00	Manjita Shrestha	04/15/2023 07:48	Manjita Shrestha	2399849
SM 2320 B-2011	04/12/2023			04/13/2023 19:33	Dale L. Simmons	2399830
	04/12/2023			04/14/2023 05:17	Dale L. Simmons	2399828
SM 2340 B-2011	04/12/2023			04/19/2023 22:08	McKinley C Carter	2399850
SM 2540 C-2015	04/12/2023			04/14/2023 15:46	Yijie Li	2399828
SM 2540 D-2015	04/12/2023			04/14/2023 15:46	Yijie Li	2399828, 2399830
SM 4500-F- C-2011	04/12/2023			04/24/2023 18:12	Dale L. Simmons	2399828
	04/12/2023			04/24/2023 18:28	Dale L. Simmons	2399830
SM 5310 B-2011	04/12/2023			04/17/2023 16:16	Elise M. Gillis	2399831
	04/12/2023			04/17/2023 19:27	Elise M. Gillis	2399829