

Chemical Analysis Report

SE-DIST-2023-02-28-01

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

Event Description: **SMP - Highlands Recovery**
Request ID: **RQ-2023-02-20-40**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Andrew Luering

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 23-MAR-2023 11:18



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: Indian Prairie Canal upstream of SR 70

Collection Date/Time: 02/27/2023 10:10

Field ID: G4SE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2390310	EPA 8270E	Aldrin	0.67	U	ng/L	P426479	
		Alpha-BHC	0.10	U	ng/L	P426479	
		Alpha-Chlordane	0.21	U	ng/L	P426479	
		PCB-1016	2.1	U	ng/L	P426479	
		Beta-BHC	0.10	U	ng/L	P426479	
		PCB-1221	2.1	U	ng/L	P426479	
		Beta-Cyfluthrin	1.3	U	ng/L	P426479	
		PCB-1232	2.1	U	ng/L	P426479	
		Bifenthrin	0.51	U	ng/L	P426479	
		PCB-1242	2.1	U	ng/L	P426479	
		PCB-1248	2.1	U	ng/L	P426479	
		Chlorothalonil	3.7	U	ng/L	P426479	
		PCB-1254	2.1	U	ng/L	P426479	
		Cis-Nonachlor	0.21	U	ng/L	P426479	
		PCB-1260	2.1	U	ng/L	P426479	
		Cypermethrin	1.5	U	ng/L	P426479	
		Dacthal	0.15	U	ng/L	P426479	
		DDD-p,p'	0.26	U	ng/L	P426479	
		DDE-p,p'	0.21	U	ng/L	P426479	
		DDT-p,p'	0.26	U	ng/L	P426479	
		Delta-BHC	0.41	U	ng/L	P426479	
		Deltamethrin	1.3	U	ng/L	P426479	
		Dichlobenil	0.26	U	ng/L	P426479	
		Dicofol	1.3	U	ng/L	P426479	
		Dieldrin	0.41	U	ng/L	P426479	
		Endosulfan I	0.41	U	ng/L	P426479	
		Endosulfan II	0.41	U	ng/L	P426479	
		Endosulfan Sulfate	0.31	U	ng/L	P426479	
		Endrin	0.41	U	ng/L	P426479	
		Endrin Aldehyde	0.77	U	ng/L	P426479	
		Endrin Ketone	0.41	U	ng/L	P426479	
		Esfenvalerate	0.77	U	ng/L	P426479	
		Ethalfuralin	0.15	U	ng/L	P426479	
		Fenpropathrin	0.26	U	ng/L	P426479	
		Gamma-BHC	0.13	U	ng/L	P426479	
		Gamma-Chlordane	0.21	U	ng/L	P426479	
		Heptachlor	0.21	U	ng/L	P426479	
		Heptachlor Epoxide	0.26	U	ng/L	P426479	
		Hexachlorobenzene**	1.0	U	ng/L	P426479	
		Kepone	5.1	UJ	ng/L	P426479	CCV
		Lambda-Cyhalothrin	0.77	U	ng/L	P426479	
		Methoprene	0.77	U	ng/L	P426479	
		Methoxychlor	0.31	U	ng/L	P426479	
		MGK-264	0.21	U	ng/L	P426479	

Field ID: G4SE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2390310	EPA 8270E	Mirex	0.36	U	ng/L	P426479	
		Oxychlordane	0.31	U	ng/L	P426479	
		Permethrin	1.6	U	ng/L	P426479	
		Phenothrin	0.92	U	ng/L	P426479	
		Piperonyl Butoxide	0.15	U	ng/L	P426479	
		Prallethrin	2.1	U	ng/L	P426479	
		Tau-Fluvalinate	0.26	U	ng/L	P426479	
		Tetramethrin	0.77	UJ	ng/L	P426479	LCS
		Trans-Nonachlor	0.21	U	ng/L	P426479	
		Triclosan Methyl	0.15	U	ng/L	P426479	
		Trifluralin	0.21	U	ng/L	P426479	
		Chlordane	2.1	U	ng/L	P426479	
		Toxaphene	15	U	ng/L	P426479	
2390319	EPA 200.7 Rev. 4.4	Calcium	21.2		mg/L	P426508	
		Iron	300		ug/L	P426508	
		Magnesium	8.27		mg/L	P426508	
		Potassium	4.8		mg/L	P426508	
		Sodium	25.0		mg/L	P426508	
		Strontium	1.91E+03		ug/L	P426508	
		Tin	3.0	U	ug/L	P426508	
		Titanium	0.86	I	ug/L	P426508	
		Vanadium	2.0	U	ug/L	P426508	
		Zinc	5.0	U	ug/L	P426508	
	EPA 200.8 Rev. 5.4	Aluminum	102		ug/L	P426508	
		Antimony	0.056	I	ug/L	P426508	
		Arsenic	0.64		ug/L	P426508	
		Barium	26.5		ug/L	P426508	
		Beryllium	0.021	I	ug/L	P426508	
		Boron	31.0		ug/L	P426508	
		Cadmium	0.020	U	ug/L	P426508	
		Chromium	0.40	U	ug/L	P426508	
		Cobalt	0.090		ug/L	P426508	
		Copper	0.74	I	ug/L	P426508	
		Lead	0.20	U	ug/L	P426508	
		Manganese	16.9		ug/L	P426508	
		Molybdenum	0.21	I	ug/L	P426508	
		Nickel	0.50	U	ug/L	P426508	
		Selenium	0.20	U	ug/L	P426508	
		Silver	0.010	U	ug/L	P426508	
		Thallium	0.10	U	ug/L	P426508	
	SM 2340 B-2011	Hardness	87.0		mg/L	P426508	

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

Sample Location: Jackson Creek north of SR 66

Collection Date/Time: 02/27/2023 11:30

Field ID: G4SE0151

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2390294	DEP SOP: NU-094-1	Color (true)	67	A	PCU	P426480	
	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P426494	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P426870	
		Sulfate	17		mg SO4/L	P426874	
	SM 2320 B-2011	Total Alkalinity	5.1		mg CaCO3/L	P426827	
	SM 2540 C-2015	TDS	87		mg/L	P426962	
	SM 2540 D-2015	TSS	11		mg/L	P426806	
	SM 4500-F- C-2011	Fluoride	0.037	I	mg F/L	P426976	
2390296	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P426603	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.75		mg N/L	P427154	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.2		mg N/L	P426659	
	EPA 365.1 Rev. 2.0	Total-P	0.057		mg P/L	P426628	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P426851	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Arbuckle Creek at US Hwy 98

Collection Date/Time: 02/27/2023 12:00

Field ID: G4SE0150

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2390295	DEP SOP: NU-094-1	Color (true)	140		PCU	P426480	
	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P426494	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P426870	
		Sulfate	25		mg SO4/L	P426874	
	SM 2320 B-2011	Total Alkalinity	15		mg CaCO3/L	P426827	
	SM 2540 C-2015	TDS	121		mg/L	P426962	
	SM 2540 D-2015	TSS	7	I	mg/L	P426806	
	SM 4500-F- C-2011	Fluoride	0.070	I	mg F/L	P426976	
2390297	EPA 350.1 Rev. 2.0	Ammonia-N	0.040		mg N/L	P426603	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P427154	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.48		mg N/L	P426659	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P426628	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P426851	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: Arbuckle Branch at Arbuckle Creek Rd.

Collection Date/Time: 02/27/2023 12:20

Field ID: G4SE0149

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2390298	DEP SOP: NU-094-1	Color (true)	63	A	PCU	P426481	
	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P426494	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P426870	
		Sulfate	36		mg SO4/L	P426874	
	SM 2320 B-2011	Total Alkalinity	8.6		mg CaCO3/L	P426827	
	SM 2540 C-2015	TDS	161		mg/L	P426962	
	SM 2540 D-2015	TSS	4	I	mg/L	P426806	
	SM 4500-F- C-2011	Fluoride	0.050	I	mg F/L	P426976	
2390299	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P426603	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P427154	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P426659	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P426628	
	SM 5310 B-2011	Organic Carbon	17		mg C/L	P426851	
2390312	EPA 8321B	2,4-D	0.0026	I	ug/L	P426469	
		Acesulfame K	0.10	U	ug/L	P426535	
		2,4,5-T	0.0040	U	ug/L	P426469	
		AMPA	0.10	U	ug/L	P426535	
		Acetaminophen	0.0092	I	ug/L	P426469	
		Acetamiprid	0.0020	U	ug/L	P426469	
		Endothall	0.25	U	ug/L	P426535	
		Glufosinate	0.10	U	ug/L	P426535	
		Glyphosate	0.10	U	ug/L	P426535	
		Afidopyropen	0.0020	U	ug/L	P426586	RPD
		Bentazon	0.0037		ug/L	P426469	
		Sucralose	0.067		ug/L	P426535	
		Benzovindiflupyr	0.0020	U	ug/L	P426469	
		Carbamazepine	8.0E-04	U	ug/L	P426469	
		Clothianidin	0.0020	U	ug/L	P426469	
		Dinotefuran	0.0020	U	ug/L	P426469	
		Diuron	0.0020	U	ug/L	P426469	
		Fenuron	0.032	U	ug/L	P426469	
		Fluridone	8.0E-04	U	ug/L	P426469	
		Imazapyr	0.0040	U	ug/L	P426469	
		Hydrocodone	0.0020	U	ug/L	P426469	
		Ibuprofen	0.080	U	ug/L	P426469	
		Imidacloprid	0.0020	U	ug/L	P426469	
		Linuron	0.0040	U	ug/L	P426469	
		Mandestrobin	0.0020	U	ug/L	P426469	
		MCPP	0.0020	U	ug/L	P426469	
		Naproxen	0.0080	U	ug/L	P426469	
		Primidone	0.0040	U	ug/L	P426469	
		Pyraclostrobin	0.0020	U	ug/L	P426469	
		Silvex	0.0040	U	ug/L	P426469	
		Thiamethoxam	0.0020	U	ug/L	P426469	

Field ID: G4SE0149

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2390312	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P426469	
		Triclopyr	0.0040	U	ug/L	P426469	

Ref. Method and Comment:
EPA 180.1 Rev. 2.0: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
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: P426480

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P426481

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426494

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426508

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: P426508

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426870

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426874

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426603

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427154

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426659

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426628

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

Reference Method: EPA 8270E
Batch ID: P426479

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P426479

Component	Result	Code	Units
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P426479

Component	Result	Code	Units
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P426479

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P426469

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
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
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P426535

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: P426586

Component	Result	Code	Units
Afidopyropen	0.0020	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P426827

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P426962

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P426806

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P426976

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P426851

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: P426480

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.3		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P426481

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P426494

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.1		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426508

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	108		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	104		P	85 - 115
Sodium	102		P	85 - 115
Strontium	97.8		P	85 - 115
Tin	101		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	103		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426508

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	80 - 120
Antimony	102		P	80 - 120
Arsenic	103		P	80 - 120
Barium	106		P	80 - 120
Beryllium	97.9		P	80 - 120
Boron	101		P	80 - 120
Cadmium	103		P	80 - 120
Chromium	101		P	80 - 120
Cobalt	101		P	80 - 120
Copper	102		P	80 - 120
Lead	99.6		P	80 - 120
Manganese	101		P	80 - 120
Molybdenum	100		P	80 - 120
Nickel	103		P	80 - 120
Selenium	102		P	80 - 120
Silver	100		P	80 - 120
Thallium	104		P	80 - 120

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426870

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426874

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426603

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: P427154

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	96.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426659

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426628

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

Reference Method: EPA 8270E
Batch ID: P426479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.7		P	10 - 92.0
Alpha-BHC	101		P	75 - 107
Alpha-Chlordane	66.4		P	50 - 108
Beta-BHC	107		P	36 - 138
Beta-Cyfluthrin	88.4		P	20 - 161
Bifenthrin	64.9		P	10 - 119
Chlorothalonil	112		P	26 - 186
Cis-Nonachlor	95.5		P	42 - 119
Cypermethrin	111		P	22 - 150
Dacthal	80.6		P	72 - 119
DDD-p,p'	101		P	45 - 107
DDE-p,p'	72.8		P	48 - 106
DDT-p,p'	67.1		P	48 - 110
Delta-BHC	132		P	54 - 140
Deltamethrin	60.8		P	22 - 189
Dichlobenil	71.5		P	36 - 117

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P426479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dicofol	53.8		P	46 - 155
Dieldrin	80.0		P	54 - 110
Endosulfan I	84.7		P	59 - 105
Endosulfan II	102		P	51 - 118
Endosulfan Sulfate	103		P	57 - 121
Endrin	78.2		P	10 - 120
Endrin Aldehyde	73.7		P	34 - 118
Endrin Ketone	140		P	69 - 177
Esfenvalerate	102		P	23 - 168
Ethalfuralin	66.2		P	49 - 99.0
Fenpropathrin	57.7		P	34 - 117
Gamma-BHC	93.5		P	72 - 117
Gamma-Chlordane	69.9		P	43 - 106
Heptachlor	84.2		P	41 - 98.0
Heptachlor Epoxide	83.0		P	57 - 106
Hexachlorobenzene	50.6		P	36 - 99.0
Kepone	129		P	16 - 215
Lambda-Cyhalothrin	65.3		P	21 - 177
Methoprene	63.3		P	10 - 119
Methoxychlor	68.0		P	60 - 112
MGK-264	120		P	26 - 122
Mirex	57.5		P	10 - 169
Oxychlordane	76.1		P	43 - 105
PCB-1016	80.5		P	48 - 112
PCB-1260	75.8		P	44 - 118
Permethrin	78.5		P	24 - 148
Phenothrin	75.1		P	10 - 106
Piperonyl Butoxide	133		P	10 - 139
Prallethrin	107		P	17 - 109
Tau-Fluvalinate	69.3		P	13 - 131
Tetramethrin	158		F	10 - 132
Trans-Nonachlor	88.5		P	44 - 106
Triclosan Methyl	80.3		P	59 - 109
Trifluralin	59.3		P	44 - 101

Reference Method: EPA 8276

Batch ID: P426479

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	97.0		P	53 - 126
Toxaphene	110		P	56 - 211

Reference Method: EPA 8321B

Batch ID: P426469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	122		P	40 - 150
2,4,5-T	91.9		P	40 - 150
Acetaminophen	113		P	30 - 150
Acetamiprid	88.1		P	40 - 150
Bentazon	122		P	30 - 150
Benzovindiflupyr	89.4		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P426469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Carbamazepine	85.4		P	40 - 150
Clothianidin	87.3		P	40 - 150
Dinotefuran	108		P	40 - 150
Diuron	81.4		P	40 - 150
Fenuron	91.3		P	40 - 150
Fluridone	77.6		P	40 - 150
Hydrocodone	86.6		P	40 - 150
Ibuprofen	81.5		P	40 - 150
Imazapyr	98.5		P	40 - 150
Imidacloprid	104		P	40 - 150
Linuron	74.9		P	40 - 150
Mandestrobin	85.5		P	40 - 150
MCPPP	107		P	40 - 150
Naproxen	110		P	40 - 150
Primidone	91.8		P	40 - 150
Pyraclostrobin	81.1		P	40 - 150
Silvex	106		P	40 - 150
Thiamethoxam	97.0		P	40 - 150
Tolfenpyrad	58.8		P	30 - 150
Triclopyr	106		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P426535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.8		P	40 - 150
AMPA	106		P	40 - 150
Endothall	96.7		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	95.9		P	40 - 150
Sucralose	98.4		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P426586

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Afidopyropen	60.2		P	30 - 150

Reference Method: SM 2320 B-2011

Batch ID: P426827

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	94 - 106

Reference Method: SM 2540 C-2015

Batch ID: P426962

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	95.1		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 D-2015
Batch ID: P426806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.8		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P426976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426851

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P426508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390150	Calcium	102		P	80 - 120
2390150	Iron	107	104	P/P	80 - 120
2390150	Magnesium	103		P	80 - 120
2390150	Potassium	103	103	P/P	80 - 120
2390150	Sodium	101	99.7	P/P	80 - 120
2390150	Strontium	95.8	98.2	P/P	80 - 120
2390150	Tin	100	98.2	P/P	80 - 120
2390150	Titanium	103	100	P/P	80 - 120
2390150	Vanadium	103	100	P/P	80 - 120
2390150	Zinc	100	97.7	P/P	80 - 120
2390625	Calcium	107		P	80 - 120
2390625	Iron	108		P	80 - 120
2390625	Magnesium	106		P	80 - 120
2390625	Potassium	112		P	80 - 120
2390625	Sodium	102		P	80 - 120
2390625	Strontium	99.2		P	80 - 120
2390625	Tin	102		P	80 - 120
2390625	Titanium	103		P	80 - 120
2390625	Vanadium	103		P	80 - 120
2390625	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390150	Aluminum	102	101	P/P	80 - 120
2390150	Antimony	102	103	P/P	80 - 120
2390150	Arsenic	101	102	P/P	80 - 120
2390150	Barium	103	105	P/P	80 - 120
2390150	Beryllium	99.2	97.3	P/P	80 - 120
2390150	Boron	102	102	P/P	80 - 120
2390150	Cadmium	103	103	P/P	80 - 120
2390150	Chromium	102	102	P/P	80 - 120
2390150	Cobalt	97.9	98.2	P/P	80 - 120
2390150	Copper	97.6	98.6	P/P	80 - 120
2390150	Lead	99.4	99.9	P/P	80 - 120
2390150	Manganese	102	103	P/P	80 - 120
2390150	Molybdenum	101	103	P/P	80 - 120
2390150	Nickel	99.4	99.9	P/P	80 - 120
2390150	Selenium	99.7	101	P/P	80 - 120
2390150	Silver	99.0	100	P/P	80 - 120
2390150	Thallium	104	106	P/P	80 - 120
2390625	Aluminum	100		P	80 - 120
2390625	Antimony	104		P	80 - 120
2390625	Arsenic	101		P	80 - 120
2390625	Barium	104		P	80 - 120
2390625	Beryllium	97.7		P	80 - 120
2390625	Boron	103		P	80 - 120
2390625	Cadmium	106		P	80 - 120
2390625	Chromium	98.3		P	80 - 120
2390625	Cobalt	96.8		P	80 - 120
2390625	Copper	96.4		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390625	Lead	99.9		P	80 - 120
2390625	Manganese	101		P	80 - 120
2390625	Molybdenum	103		P	80 - 120
2390625	Nickel	100		P	80 - 120
2390625	Selenium	98.8		P	80 - 120
2390625	Silver	101		P	80 - 120
2390625	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426870

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390223	Chloride	100		P	90 - 110
2390295	Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390223	Sulfate	104		P	90 - 110
2390295	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426603

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390224	Ammonia-N	103	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390476	Kjeldahl Nitrogen	104	88.3	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426659

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390145	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426628

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390384	Total-P	98.4	99.3	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P426479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390045	PCB-1016	69.4	66.5	P/P	46 - 111
2390045	PCB-1260	66.3	59.2	P/P	45 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P426479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390375	Aldrin	47.4	48.8	P/P	20 - 82.0
2390375	Alpha-BHC	96.7	81.9	P/P	71 - 109
2390375	Alpha-Chlordane	67.0	58.3	P/P	42 - 106
2390375	Beta-BHC	88.5	85.9	P/P	69 - 180
2390375	Beta-Cyfluthrin	69.3	65.8	P/P	18 - 175
2390375	Bifenthrin	91.7	53.6	P/P	21 - 128
2390375	Chlorothalonil	70.4	68.5	P/P	10 - 300
2390375	Cis-Nonachlor	72.9	95.2	P/P	34 - 106
2390375	Cypermethrin	66.6	62.7	P/P	22 - 158
2390375	Dacthal	80.5	74.3	P/P	54 - 116
2390375	DDD-p,p'	82.8	106	P/P	34 - 107
2390375	DDE-p,p'	70.0	59.6	P/P	33 - 110
2390375	DDT-p,p'	57.4	55.3	P/P	50 - 122
2390375	Delta-BHC	78.4	81.1	P/P	77 - 193
2390375	Deltamethrin	56.8	56.5	P/P	10 - 195
2390375	Dichlobenil	60.3	49.2	P/P	25 - 113
2390375	Dicofol	55.2	45.9	P/P	38 - 247
2390375	Dieldrin	76.8	64.5	P/P	45 - 118
2390375	Endosulfan I	84.2	76.2	P/P	51 - 106
2390375	Endosulfan II	104	94.4	P/P	37 - 122
2390375	Endosulfan Sulfate	106	80.5	P/P	43 - 132
2390375	Endrin	66.7	59.2	P/P	29 - 101
2390375	Endrin Aldehyde	83.9	65.5	P/P	19 - 110
2390375	Endrin Ketone	122	106	P/P	60 - 140
2390375	Esfenvalerate	109	83.3	P/P	26 - 199
2390375	Ethalfuralin	61.2	54.6	P/P	45 - 99.0
2390375	Fenpropathrin	51.7	39.4	P/P	35 - 120
2390375	Gamma-BHC	85.6	82.2	P/P	63 - 128
2390375	Gamma-Chlordane	59.1	53.1	P/P	40 - 104
2390375	Heptachlor	71.8	60.3	P/P	36 - 97.0
2390375	Heptachlor Epoxide	62.9	58.8	P/P	49 - 184
2390375	Hexachlorobenzene	46.2	40.8	P/P	39 - 96.0
2390375	Kepone	114	140	P/P	10 - 217
2390375	Lambda-Cyhalothrin	60.8	47.9	P/P	21 - 193
2390375	Methoprene	65.3	48.2	P/P	20 - 106
2390375	Methoxychlor	62.2	69.4	P/P	53 - 118
2390375	MGK-264	79.3	75.8	P/P	40 - 118
2390375	Mirex	48.6	40.4	P/P	26 - 92.0
2390375	Oxychlordane	59.0	56.8	P/P	44 - 99.0
2390375	Permethrin	49.6	50.0	P/P	33 - 182
2390375	Phenothrin	91.0	54.6	P/P	10 - 129
2390375	Piperonyl Butoxide	126	142	P/P	10 - 211
2390375	Prallethrin	70.0	62.2	P/P	24 - 113
2390375	Tau-Fluvalinate	90.4	65.9	P/P	14 - 149
2390375	Tetramethrin	76.7	79.3	P/P	17 - 151
2390375	Trans-Nonachlor	82.3	69.8	P/P	42 - 102
2390375	Triclosan Methyl	78.6	74.9	P/P	48 - 108
2390375	Trifluralin	57.7	47.9	P/P	47 - 96.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P426479

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390045	Chlordane	83.7	76.7	P/P	53 - 126
2390045	Toxaphene	97.8	92.4	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P426469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390647	2,4-D	97.0	110	P/P	40 - 150
2390647	2,4,5-T	98.0	98.3	P/P	40 - 150
2390647	Acetaminophen	114	118	P/P	30 - 150
2390647	Acetamiprid	53.6	59.2	P/P	40 - 150
2390647	Bentazon	78.7	78.8	P/P	30 - 150
2390647	Benzovindiflupyr	75.4	76.0	P/P	40 - 150
2390647	Carbamazepine	58.2	60.3	P/P	40 - 150
2390647	Clothianidin	77.9	81.3	P/P	40 - 150
2390647	Dinotefuran	95.9	96.1	P/P	40 - 150
2390647	Diuron	49.0	48.0	P/P	40 - 150
2390647	Fenuron	56.5	58.0	P/P	40 - 150
2390647	Fluridone	55.8	51.4	P/P	40 - 150
2390647	Hydrocodone	73.8	74.6	P/P	40 - 150
2390647	Ibuprofen	72.2	88.4	P/P	40 - 150
2390647	Imazapyr	98.9	106	P/P	40 - 150
2390647	Imidacloprid	101	106	P/P	40 - 150
2390647	Linuron	62.1	61.3	P/P	40 - 150
2390647	Mandestrobin	68.3	77.1	P/P	40 - 150
2390647	MCPP	94.6	103	P/P	40 - 150
2390647	Naproxen	61.4	69.5	P/P	40 - 150
2390647	Primidone	78.9	79.3	P/P	40 - 150
2390647	Pyraclostrobin	70.8	71.2	P/P	40 - 150
2390647	Silvex	103	109	P/P	40 - 150
2390647	Thiamethoxam	84.1	81.4	P/P	40 - 150
2390647	Tolfenpyrad	52.6	51.0	P/P	30 - 150
2390647	Triclopyr	104	104	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P426535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390312	Acesulfame K	123	126	P/P	40 - 150
2390312	AMPA	88.2	89.8	P/P	40 - 150
2390312	Endothall	106	106	P/P	40 - 150
2390312	Glufosinate	102	100	P/P	40 - 150
2390312	Glyphosate	96.2	111	P/P	40 - 150
2390312	Sucralose	96.8	98.6	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P426586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2391073	Afidopyropen	73.1	39.7	P/P	30 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P426976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390237	Fluoride	97.2	97.2	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426851

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2390240	Organic Carbon	95.5	97.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P426480

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390294	Color (true)	0.245	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P426481

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390298	Color (true)	1.59	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426508

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390150	Calcium	1.71	Spike	P	0 - 20
2390150	Iron	3.18	Spike	P	0 - 20
2390150	Magnesium	3.70	Spike	P	0 - 20
2390150	Potassium	0.0623	Spike	P	0 - 20
2390150	Sodium	0.478	Spike	P	0 - 20
2390150	Strontium	2.35	Spike	P	0 - 20
2390150	Tin	1.77	Spike	P	0 - 20
2390150	Titanium	2.25	Spike	P	0 - 20
2390150	Vanadium	2.45	Spike	P	0 - 20
2390150	Zinc	2.45	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426508

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390150	Aluminum	1.10	Spike	P	0 - 20
2390150	Antimony	0.985	Spike	P	0 - 20
2390150	Arsenic	1.80	Spike	P	0 - 20
2390150	Barium	1.09	Spike	P	0 - 20
2390150	Beryllium	1.99	Spike	P	0 - 20
2390150	Boron	0.319	Spike	P	0 - 20
2390150	Cadmium	0.407	Spike	P	0 - 20
2390150	Chromium	0.0243	Spike	P	0 - 20
2390150	Cobalt	0.315	Spike	P	0 - 20
2390150	Copper	1.04	Spike	P	0 - 20
2390150	Lead	0.501	Spike	P	0 - 20
2390150	Manganese	0.825	Spike	P	0 - 20
2390150	Molybdenum	1.33	Spike	P	0 - 20
2390150	Nickel	0.524	Spike	P	0 - 20
2390150	Selenium	1.74	Spike	P	0 - 20
2390150	Silver	1.29	Spike	P	0 - 20
2390150	Thallium	1.67	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426870

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390223	Chloride	0.910	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426603

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390224	Ammonia-N	0.163	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P427154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390476	Kjeldahl Nitrogen	9.67	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426659

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390145	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426628

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390384	Total-P	0.851	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P426479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390045	PCB-1016	4.34	Spike	P	0 - 32
2390045	PCB-1260	11.2	Spike	P	0 - 31
2390375	Aldrin	2.76	Spike	P	0 - 41
2390375	Alpha-BHC	16.6	Spike	P	0 - 25
2390375	Alpha-Chlordane	13.8	Spike	P	0 - 33
2390375	Beta-BHC	2.88	Spike	P	0 - 36
2390375	Beta-Cyfluthrin	5.27	Spike	P	0 - 42
2390375	Bifenthrin	52.4	Spike	P	0 - 53
2390375	Chlorothalonil	2.76	Spike	P	0 - 71
2390375	Cis-Nonachlor	26.6	Spike	P	0 - 29
2390375	Cypermethrin	6.02	Spike	P	0 - 40
2390375	Dacthal	7.98	Spike	P	0 - 26
2390375	DDD-p,p'	24.9	Spike	P	0 - 39
2390375	DDE-p,p'	16.0	Spike	P	0 - 33
2390375	DDT-p,p'	3.65	Spike	P	0 - 40
2390375	Delta-BHC	3.40	Spike	P	0 - 37

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P426479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390375	Deltamethrin	0.483	Spike	P	0 - 100
2390375	Dichlobenil	20.2	Spike	P	0 - 40
2390375	Dicofol	18.4	Spike	P	0 - 31
2390375	Dieldrin	17.5	Spike	P	0 - 27
2390375	Endosulfan I	9.99	Spike	P	0 - 23
2390375	Endosulfan II	9.52	Spike	P	0 - 28
2390375	Endosulfan Sulfate	27.5	Spike	P	0 - 38
2390375	Endrin	11.9	Spike	P	0 - 63
2390375	Endrin Aldehyde	24.6	Spike	P	0 - 60
2390375	Endrin Ketone	14.2	Spike	P	0 - 37
2390375	Esfenvalerate	26.4	Spike	P	0 - 52
2390375	Ethalfuralin	11.4	Spike	P	0 - 23
2390375	Fenpropathrin	27.0	Spike	P	0 - 32
2390375	Gamma-BHC	4.10	Spike	P	0 - 17
2390375	Gamma-Chlordane	10.7	Spike	P	0 - 40
2390375	Heptachlor	17.5	Spike	P	0 - 29
2390375	Heptachlor Epoxide	6.75	Spike	P	0 - 25
2390375	Hexachlorobenzene	12.3	Spike	P	0 - 36
2390375	Kepone	20.0	Spike	P	0 - 93
2390375	Lambda-Cyhalothrin	23.8	Spike	P	0 - 55
2390375	Methoprene	30.0	Spike	P	0 - 53
2390375	Methoxychlor	10.9	Spike	P	0 - 29
2390375	MGK-264	4.52	Spike	P	0 - 35
2390375	Mirex	18.4	Spike	P	0 - 46
2390375	Oxychlordane	3.86	Spike	P	0 - 29
2390375	Permethrin	0.902	Spike	P	0 - 44
2390375	Phenothrin	50.0	Spike	P	0 - 56
2390375	Piperonyl Butoxide	11.7	Spike	P	0 - 100
2390375	Prallethrin	11.7	Spike	P	0 - 42
2390375	Tau-Fluvalinate	31.4	Spike	P	0 - 54
2390375	Tetramethrin	3.41	Spike	P	0 - 51
2390375	Trans-Nonachlor	16.4	Spike	P	0 - 37
2390375	Triclosan Methyl	4.76	Spike	P	0 - 31
2390375	Trifluralin	18.6	Spike	P	0 - 30

Reference Method: EPA 8276

Batch ID: P426479

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390045	Chlordane	8.69	Spike	P	0 - 25
2390045	Toxaphene	5.66	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P426469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390647	2,4-D	12.5	Spike	P	0 - 30
2390647	2,4,5-T	0.264	Spike	P	0 - 30
2390647	Acetaminophen	3.77	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P426469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390647	Acetamiprid	9.88	Spike	P	0 - 30
2390647	Bentazon	0.234	Spike	P	0 - 30
2390647	Benzovindiflupyr	0.827	Spike	P	0 - 30
2390647	Carbamazepine	3.60	Spike	P	0 - 30
2390647	Clothianidin	4.19	Spike	P	0 - 30
2390647	Dinotefuran	0.234	Spike	P	0 - 30
2390647	Diuron	2.07	Spike	P	0 - 30
2390647	Fenuron	2.70	Spike	P	0 - 30
2390647	Fluridone	8.10	Spike	P	0 - 30
2390647	Hydrocodone	1.12	Spike	P	0 - 30
2390647	Ibuprofen	20.2	Spike	P	0 - 30
2390647	Imazapyr	6.28	Spike	P	0 - 30
2390647	Imidacloprid	5.33	Spike	P	0 - 30
2390647	Linuron	1.28	Spike	P	0 - 30
2390647	Mandestrobin	12.1	Spike	P	0 - 30
2390647	MCCP	8.21	Spike	P	0 - 30
2390647	Naproxen	12.4	Spike	P	0 - 30
2390647	Primidone	0.572	Spike	P	0 - 30
2390647	Pyraclostrobin	0.485	Spike	P	0 - 30
2390647	Silvex	4.93	Spike	P	0 - 30
2390647	Thiamethoxam	3.22	Spike	P	0 - 30
2390647	Tolfenpyrad	3.12	Spike	P	0 - 30
2390647	Triclopyr	0.455	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P426535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390312	Acesulfame K	2.32	Spike	P	0 - 30
2390312	AMPA	1.89	Spike	P	0 - 30
2390312	Endothall	0.705	Spike	P	0 - 30
2390312	Glufosinate	1.67	Spike	P	0 - 30
2390312	Glyphosate	14.3	Spike	P	0 - 30
2390312	Sucralose	1.75	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P426586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2391073	Afidopyropen	59.2	Spike	F	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P426827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390783	Total Alkalinity	0.447	Sample	P	0 - 3.8

Quality Assurance Report
Precision

Reference Method: SM 2540 C-2015
Batch ID: P426962

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390237	TDS	4.56	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P426976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390237	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P426851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2390240	Organic Carbon	1.92	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2390310
Field Sample ID: G4SE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	88.1	P	29 - 130
EPA 8270E	Decachlorobiphenyl	103	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	53.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	38.1	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	62.5	P	30 - 101
EPA 8276	PCNB	83.9	P	48 - 121

Lab Sample ID: 2390312
Field Sample ID: G4SE0149

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.5	P	30 - 160
EPA 8321B	Diuron-d6	43.2	P	30 - 160
EPA 8321B	Endothall-d6	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.6	P	30 - 160
EPA 8321B	Primidone-d5	70.6	P	30 - 160
EPA 8321B	Sucralose-d6	96.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117707

Included Lab Sample IDs: 2390294, 2390295, 2390298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.2	98.8	P/P	90 - 110
Color (true)	99.2	99.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117712

Included Lab Sample IDs: 2390294, 2390295, 2390298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117760

Included Lab Sample IDs: 2390296, 2390297, 2390299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117773

Included Lab Sample IDs: 2390319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	102	P/P	90 - 110
Antimony	99.9	101	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Barium	102	101	P/P	90 - 110
Beryllium	99.8	98.2	P/P	90 - 110
Boron	99.1	102	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Chromium	99.3	97.5	P/P	90 - 110
Cobalt	97.9	95.8	P/P	90 - 110
Copper	98.6	97.3	P/P	90 - 110
Lead	97.9	98.3	P/P	90 - 110
Manganese	102	101	P/P	90 - 110
Molybdenum	98.8	99.9	P/P	90 - 110
Nickel	99.9	97.5	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Silver	99.4	99.6	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117781

Included Lab Sample IDs: 2390296, 2390297, 2390299

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117801

Included Lab Sample IDs: 2390296, 2390297

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.7	99.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117818

Included Lab Sample IDs: 2390312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	104	P/P	60 - 160
Sucralose	102	103	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117822

Included Lab Sample IDs: 2390312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.8	109	P/P	60 - 160
Endothall	105	103	P/P	60 - 160
Glufosinate	96.0	94.0	P/P	60 - 160
Glyphosate	97.8	91.4	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117829

Included Lab Sample IDs: 2390299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	98.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117831

Included Lab Sample IDs: 2390310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	88.4		P	80 - 120
Alpha-BHC	92.0		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	112		P	80 - 120
Beta-Cyfluthrin	119		P	80 - 120
Bifenthrin	95.9		P	80 - 120
Chlorothalonil	111		P	80 - 120
Cis-Nonachlor	82.7		P	80 - 120
Cypermethrin	112		P	80 - 120
Dacthal	116		P	80 - 120
DDD-p,p'	82.0		P	80 - 120
DDE-p,p'	91.7		P	80 - 120
DDT-p,p'	98.4		P	80 - 120
Delta-BHC	104		P	80 - 120
Deltamethrin	94.8		P	80 - 120
Dichlobenil	113		P	80 - 120
Dicofol	90.0		P	80 - 120
Dieldrin	92.4		P	80 - 120
Endosulfan I	109		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117831
Included Lab Sample IDs: 2390310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan II	111		P	80 - 120
Endosulfan Sulfate	111		P	80 - 120
Endrin	96.2		P	80 - 120
Endrin Aldehyde	95.0		P	80 - 120
Endrin Ketone	92.8		P	80 - 120
Esfenvalerate	106		P	80 - 120
Ethalfuralin	88.2		P	80 - 120
Fenpropathrin	99.6		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	108		P	80 - 120
Heptachlor	111		P	80 - 120
Heptachlor Epoxide	108		P	80 - 120
Hexachlorobenzene	113		P	80 - 120
Kepone	59.0*		F	80 - 120
Lambda-Cyhalothrin	112		P	80 - 120
Methoprene	105		P	80 - 120
Methoxychlor	88.9		P	80 - 120
MGK-264	118		P	80 - 120
Mirex	107		P	80 - 120
Oxychlordane	111		P	80 - 120
Permethrin	93.8		P	80 - 120
Phenothrin	110		P	80 - 120
Piperonyl Butoxide	83.1		P	80 - 120
Prallethrin	107		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	111		P	80 - 120
Trans-Nonachlor	103		P	80 - 120
Triclosan Methyl	106		P	80 - 120
Trifluralin	107		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A117833
Included Lab Sample IDs: 2390294, 2390295, 2390298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	98.4	P/P	90 - 110
Chloride	98.9	98.8	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A117849
Included Lab Sample IDs: 2390312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.1	112	P/P	50 - 150
2,4,5-T	99.8	86.2	P/P	50 - 150
Acetaminophen	126	116	P/P	60 - 160
Acetamiprid	99.0	114	P/P	50 - 150
Bentazon	113	119	P/P	50 - 160
Benzovindiflupyr	104	109	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A117849
Included Lab Sample IDs: 2390312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	103	110	P/P	60 - 150
Clothianidin	100	103	P/P	60 - 150
Dinotefuran	114	120	P/P	50 - 150
Diuron	114	111	P/P	60 - 160
Fenuron	104	104	P/P	60 - 150
Fluridone	114	111	P/P	60 - 160
Hydrocodone	101	114	P/P	60 - 150
Ibuprofen	60.3	93.8	P/P	50 - 160
Imazapyr	94.8	102	P/P	50 - 150
Imidacloprid	94.5	105	P/P	60 - 150
Linuron	108	103	P/P	60 - 150
Mandestrobin	91.5	99.7	P/P	50 - 150
MCPP	103	96.7	P/P	50 - 150
Naproxen	127	107	P/P	50 - 160
Primidone	86.5	108	P/P	60 - 150
Pyraclostrobin	105	101	P/P	60 - 150
Silvex	88.5	87.4	P/P	50 - 150
Thiamethoxam	105	109	P/P	50 - 150
Tolfenpyrad	99.1	93.5	P/P	60 - 150
Triclopyr	90.7	90.9	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A117850
Included Lab Sample IDs: 2390312

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Afidopyropen	112	96.3	P/P	50 - 150

Reference Method: SM 2320 B-2011
Run ID: A117858
Included Lab Sample IDs: 2390294, 2390295, 2390298

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.5	97.2	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A117865
Included Lab Sample IDs: 2390296, 2390297, 2390299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.6	97.8	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A117871
Included Lab Sample IDs: 2390310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.7		P	80 - 120
Toxaphene	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A117889
Included Lab Sample IDs: 2390310

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	100		P	80 - 120
PCB-1260	98.3		P	80 - 120

Reference Method: SM 4500-F- C-2011
Run ID: A117917
Included Lab Sample IDs: 2390294, 2390295, 2390298

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A117956
Included Lab Sample IDs: 2390319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	100	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	102	100	P/P	90 - 110
Potassium	101	99.2	P/P	90 - 110
Sodium	95.8	93.5	P/P	90 - 110
Tin	91.9	103	P/P	90 - 110
Titanium	91.4	100	P/P	90 - 110
Vanadium	91.7	103	P/P	90 - 110
Zinc	94.1	105	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A117977
Included Lab Sample IDs: 2390319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Strontium	95.4	96.6	P/P	95 - 105

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A118067
Included Lab Sample IDs: 2390296, 2390297, 2390299

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.7	95.6	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			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	98.3				0.245	
	Color (true)	98.6				1.59	
EPA 180.1 Rev. 2.0	Turbidity	99.1					
EPA 200.7 Rev. 4.4	Calcium	104	102	107			1.71
	Iron	108	107	104	108		3.18
	Magnesium	104	103	106			3.70
	Potassium	104	103	103	112		0.0623
	Sodium	102	101	99.7	102		0.478
	Strontium	97.8	95.8	98.2	99.2		2.35
	Tin	101	100	98.2	102		1.77
	Titanium	103	103	100	103		2.25
	Vanadium	103	103	100	103		2.45
	Zinc	106	100	97.7	102		2.45
EPA 200.8 Rev. 5.4	Aluminum	103	102	101	100		1.10
	Antimony	102	103	104	102		0.985
	Arsenic	103	101	102	101		1.80
	Barium	106	103	105	104		1.09
	Beryllium	97.9	99.2	97.3	97.7		1.99
	Boron	101	102	102	103		0.319
	Cadmium	103	103	103	106		0.407
	Chromium	101	102	102	98.3		0.0243
	Cobalt	101	97.9	98.2	96.8		0.315
	Copper	102	97.6	98.6	96.4		1.04
	Lead	99.6	99.4	99.9	99.9		0.501
	Manganese	101	102	103	101		0.825
	Molybdenum	100	101	103	103		1.33
	Nickel	103	99.4	99.9	100		0.524
	Selenium	102	99.7	101	98.8		1.74
	Silver	100	99.0	100	101		1.29
	Thallium	104	104	106	105		1.67
EPA 300.0 Rev. 2.1	Chloride	100	100	98.9		0.910	
	Sulfate	104	104	102			
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	103	103			0.163
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.8	104	88.3			9.67
EPA 353.2 Rev. 2.0	NO2NO3-N	102	103	103			0.0
EPA 365.1 Rev. 2.0	Total-P	99.5	98.4	99.3			0.851
EPA 8270E	Aldrin	62.7	47.4	48.8			2.76
	Alpha-BHC	101	96.7	81.9			16.6
	Alpha-Chlordane	66.4	67.0	58.3			13.8
	Beta-BHC	107	88.5	85.9			2.88
	Beta-Cyfluthrin	88.4	69.3	65.8			5.27
	Bifenthrin	64.9	91.7	53.6			52.4
	Chlorothalonil	112	70.4	68.5			2.76
	Cis-Nonachlor	95.5	72.9	95.2			26.6
	Cypermethrin	111	66.6	62.7			6.02
	Dacthal	80.6	80.5	74.3			7.98
	DDD-p,p'	101	82.8	106			24.9
	DDE-p,p'	72.8	70.0	59.6			16.0
	DDT-p,p'	67.1	57.4	55.3			3.65
	Delta-BHC	132	78.4	81.1			3.40
	Deltamethrin	60.8	56.8	56.5			0.483
	Dichlobenil	71.5	60.3	49.2			20.2
	Dicofol	53.8	55.2	45.9			18.4
	Dieldrin	80.0	76.8	64.5			17.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Endosulfan I	84.7	84.2	76.2			9.99
	Endosulfan II	102	104	94.4			9.52
	Endosulfan Sulfate	103	106	80.5			27.5
	Endrin	78.2	66.7	59.2			11.9
	Endrin Aldehyde	73.7	83.9	65.5			24.6
	Endrin Ketone	140	122	106			14.2
	Esfenvalerate	102	109	83.3			26.4
	Ethalfuralin	66.2	61.2	54.6			11.4
	Fenpropathrin	57.7	51.7	39.4			27.0
	Gamma-BHC	93.5	85.6	82.2			4.10
	Gamma-Chlordane	69.9	59.1	53.1			10.7
	Heptachlor	84.2	71.8	60.3			17.5
	Heptachlor Epoxide	83.0	62.9	58.8			6.75
	Hexachlorobenzene	50.6	46.2	40.8			12.3
	Kepone	129	114	140			20.0
	Lambda-Cyhalothrin	65.3	60.8	47.9			23.8
	Methoprene	63.3	65.3	48.2			30.0
	Methoxychlor	68.0	62.2	69.4			10.9
	MGK-264	120	79.3	75.8			4.52
	Mirex	57.5	48.6	40.4			18.4
	Oxychlordane	76.1	59.0	56.8			3.86
	PCB-1016	80.5	69.4	66.5			4.34
	PCB-1260	75.8	66.3	59.2			11.2
	Permethrin	78.5	49.6	50.0			0.902
	Phenothrin	75.1	91.0	54.6			50.0
	Piperonyl Butoxide	133	126	142			11.7
	Prallethrin	107	70.0	62.2			11.7
	Tau-Fluvalinate	69.3	90.4	65.9			31.4
	Tetramethrin	158	76.7	79.3			3.41
	Trans-Nonachlor	88.5	82.3	69.8			16.4
	Triclosan Methyl	80.3	78.6	74.9			4.76
	Trifluralin	59.3	57.7	47.9			18.6
EPA 8276	Chlordane	97.0	83.7	76.7			8.69
	Toxaphene	110	97.8	92.4			5.66
EPA 8321B	2,4-D	122	97.0	110			12.5
	2,4,5-T	91.9	98.0	98.3			0.264
	Acesulfame K	97.8	123	126			2.32
	Acetaminophen	113	114	118			3.77
	Acetamiprid	88.1	53.6	59.2			9.88
	Afidopyropen	60.2	73.1	39.7			59.2
	AMPA	106	88.2	89.8			1.89
	Bentazon	122	78.7	78.8			0.234
	Benzovindiflupyr	89.4	75.4	76.0			0.827
	Carbamazepine	85.4	58.2	60.3			3.60
	Clothianidin	87.3	77.9	81.3			4.19
	Dinotefuran	108	95.9	96.1			0.234
	Diuron	81.4	49.0	48.0			2.07
	Endothall	96.7	106	106			0.705
	Fenuron	91.3	56.5	58.0			2.70
	Fluridone	77.6	55.8	51.4			8.10
	Glufosinate	105	102	100			1.67
	Glyphosate	95.9	96.2	111			14.3
	Hydrocodone	86.6	73.8	74.6			1.12
	Ibuprofen	81.5	72.2	88.4			20.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Imazapyr	98.5	98.9	106		6.28
	Imidacloprid	104	101	106		5.33
	Linuron	74.9	62.1	61.3		1.28
	Mandestrobin	85.5	68.3	77.1		12.1
	MCCP	107	94.6	103		8.21
	Naproxen	110	61.4	69.5		12.4
	Primidone	91.8	78.9	79.3		0.572
	Pyraclostrobin	81.1	70.8	71.2		0.485
	Silvex	106	103	109		4.93
	Sucralose	98.4	96.8	98.6		1.75
	Thiamethoxam	97.0	84.1	81.4		3.22
	Tolfenpyrad	58.8	52.6	51.0		3.12
	Triclopyr	106	104	104		0.455
SM 2320 B-2011	Total Alkalinity	100			0.447	
SM 2540 C-2015	TDS	95.1			4.56	
SM 2540 D-2015	TSS	93.8				
SM 4500-F- C-2011	Fluoride	99.0	97.2	97.2		0.0
SM 5310 B-2011	Organic Carbon	96.0	95.5	97.4		1.92

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2390294, 2390295, 2390298
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2390294, 2390295, 2390298
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2390319
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2390319
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2390294, 2390295, 2390298
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2390294, 2390295, 2390298
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2390296, 2390297, 2390299
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2390296, 2390297, 2390299
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2390296, 2390297, 2390299
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2390296, 2390297, 2390299
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2390310
EPA 8270E	PCBs in water matrices by GC/MS/MS	2390310
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2390310
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2390312
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2390294, 2390295, 2390298
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2390319
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2390294, 2390295, 2390298
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2390294, 2390295, 2390298
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2390294, 2390295, 2390298
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2390296, 2390297, 2390299

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	02/28/2023			02/28/2023 13:57	Alexis Price	2390294, 2390295
	02/28/2023			02/28/2023 14:00	Alexis Price	2390298
EPA 180.1 Rev. 2.0	02/28/2023			02/28/2023 14:40	Khloe J Berg	2390294, 2390295
	02/28/2023			02/28/2023 14:48	Khloe J Berg	2390298
EPA 200.7 Rev. 4.4	02/28/2023	03/01/2023 11:15	Vijayalakshmi Reddy	03/10/2023 20:54	McKinley C Carter	2390319
	02/28/2023	03/01/2023 11:15	Vijayalakshmi Reddy	03/14/2023 12:06	Chase Roberts	2390319
EPA 200.8 Rev. 5.4	02/28/2023	03/01/2023 11:15	Vijayalakshmi Reddy	03/02/2023 16:19	Conrad Hartmann	2390319
EPA 300.0 Rev. 2.1	02/28/2023			03/08/2023 03:46	Judith K. Clark	2390295
	02/28/2023			03/08/2023 08:01	Judith K. Clark	2390294
	02/28/2023			03/08/2023 08:16	Judith K. Clark	2390298
EPA 350.1 Rev. 2.0	02/28/2023			03/02/2023 12:21	Khloe J Berg	2390296
	02/28/2023			03/02/2023 12:22	Khloe J Berg	2390297
	02/28/2023			03/02/2023 12:24	Khloe J Berg	2390299
EPA 351.2 Rev. 2.0	02/28/2023	03/15/2023 13:00	Simonne.V. Calhoun	03/17/2023 17:55	Judith K. Clark	2390296
	02/28/2023	03/15/2023 13:00	Simonne.V. Calhoun	03/17/2023 17:57	Judith K. Clark	2390297
	02/28/2023	03/15/2023 13:00	Simonne.V. Calhoun	03/17/2023 17:58	Judith K. Clark	2390299
EPA 353.2 Rev. 2.0	02/28/2023			03/02/2023 11:05	Beverly Y. Sanders	2390299
	02/28/2023			03/02/2023 11:45	Beverly Y. Sanders	2390296
	02/28/2023			03/02/2023 11:49	Beverly Y. Sanders	2390297
EPA 365.1 Rev. 2.0	02/28/2023	03/02/2023 15:47	Adam P Silver	03/04/2023 14:28	James L Waggeberby	2390296
	02/28/2023	03/02/2023 15:47	Adam P Silver	03/04/2023 14:29	James L Waggeberby	2390297
	02/28/2023	03/02/2023 15:47	Adam P Silver	03/06/2023 15:42	James L Waggeberby	2390299
EPA 8270E	02/28/2023	03/02/2023 08:00	Fe-Val Siddell	03/04/2023 02:22	Julie Wi	2390310
	02/28/2023	03/02/2023 08:00	Fe-Val Siddell	03/09/2023 00:47	Julie Wi	2390310
EPA 8276	02/28/2023	03/02/2023 08:00	Fe-Val Siddell	03/07/2023 09:01	Lipi Saha	2390310
EPA 8321B	02/28/2023	03/01/2023 09:00	Hoor Shaik	03/01/2023 20:17	Juyoung Kim	2390312
	02/28/2023	03/03/2023 08:00	Manjita Shrestha	03/03/2023 11:37	Manjita Shrestha	2390312
	02/28/2023	03/03/2023 08:00	Manjita Shrestha	03/03/2023 22:09	Manjita Shrestha	2390312
	02/28/2023	03/03/2023 09:00	Hoor Shaik	03/04/2023 02:27	Juyoung Kim	2390312
SM 2320 B-2011	02/28/2023			03/07/2023 20:17	Chandler E Cox	2390294
	02/28/2023			03/07/2023 20:30	Chandler E Cox	2390295
	02/28/2023			03/07/2023 20:42	Chandler E Cox	2390298
SM 2340 B-2011	02/28/2023			03/10/2023 20:54	McKinley C Carter	2390319
SM 2540 C-2015	02/28/2023			03/01/2023 16:46	Yijie Li	2390294, 2390295, 2390298
SM 2540 D-2015	02/28/2023			03/01/2023 16:46	Yijie Li	2390294, 2390295, 2390298
SM 4500-F- C-2011	02/28/2023			03/10/2023 03:53	Dale L. Simmons	2390294
	02/28/2023			03/10/2023 03:59	Dale L. Simmons	2390295
	02/28/2023			03/10/2023 04:04	Dale L. Simmons	2390298
SM 5310 B-2011	02/28/2023			03/08/2023 01:01	Elise M. Gillis	2390296
	02/28/2023			03/08/2023 01:17	Elise M. Gillis	2390297

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	02/28/2023			03/08/2023 01:32	Elise M. Gillis	2390299