

Chemical Analysis Report

NW-DIST-2023-03-21-01

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

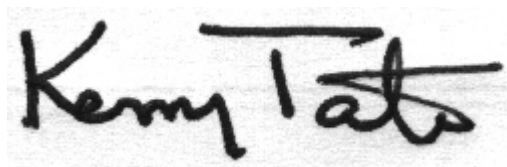
Event Description: **Navarre Run**
Request ID: **RQ-2023-03-20-15**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 17-APR-2023 14:14

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

NON-CONFORMANCE REPORT INCLUDED

Case Narrative

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

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

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

Collection Date/Time: 03/20/2023 10:45

Field ID: G4NW0211

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395166	DEP SOP: NU-094-1	Color (true)	84		PCU	P427412	
	EPA 180.1 Rev. 2.0	Turbidity	5.8		NTU	P427423	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P427856	
		Sulfate	7.3		mg SO4/L	P427859	
	SM 2320 B-2011	Total Alkalinity	25		mg CaCO3/L	P427558	
	SM 2540 C-2015	TDS	100		mg/L	P428162	
	SM 2540 D-2015	TSS	5	I	mg/L	P427911	
	SM 4500-F- C-2011	Fluoride	0.040	I	mg F/L	P427560	
2395167	EPA 350.1 Rev. 2.0	Ammonia-N	0.27		mg N/L	P427572	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P428403	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042		mg N/L	P427548	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P427533	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P427749	
2395217	EPA 8270E	Aldrin	0.72	U	ng/L	P427431	
		Alpha-BHC	0.11	U	ng/L	P427431	MS
		Alpha-Chlordane	0.22	U	ng/L	P427431	
		PCB-1016	2.1	UQ	ng/L	P428001	
		Beta-BHC	0.11	U	ng/L	P427431	
		PCB-1221	2.1	UQ	ng/L	P428001	
		Beta-Cyfluthrin	1.4	U	ng/L	P427431	
		PCB-1232	2.1	UQ	ng/L	P428001	
		Bifenthrin	0.55	U	ng/L	P427431	
		PCB-1242	2.1	UQ	ng/L	P428001	
		Carbophenothion	1.0	U	ng/L	P427431	
		PCB-1248	2.1	UQ	ng/L	P428001	
		Chlorothalonil	4.0	U	ng/L	P427431	
		PCB-1254	2.1	UQ	ng/L	P428001	
		Cis-Nonachlor	0.22	U	ng/L	P427431	
		PCB-1260	2.1	UQ	ng/L	P428001	
		Cypermethrin	1.7	U	ng/L	P427431	
		Dacthal	0.17	U	ng/L	P427431	
		DDD-p,p'	0.28	U	ng/L	P427431	
		DDE-p,p'	0.22	U	ng/L	P427431	
		DDT-p,p'	0.28	U	ng/L	P427431	
		Delta-BHC	0.44	U	ng/L	P427431	
		Deltamethrin	1.4	U	ng/L	P427431	
		Dichlobenil	0.28	U	ng/L	P427431	
		Dicofol	1.4	U	ng/L	P427431	
		Dieldrin	0.59	I	ng/L	P427431	
		Endosulfan I	0.44	U	ng/L	P427431	
		Endosulfan II	0.44	U	ng/L	P427431	
		Endosulfan Sulfate	0.33	U	ng/L	P427431	
		Endrin	0.44	U	ng/L	P427431	

Field ID: G4NW0211

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395217	EPA 8270E	Endrin Aldehyde	0.83	U	ng/L	P427431	
		Endrin Ketone	0.44	U	ng/L	P427431	
		Esfenvalerate	0.83	U	ng/L	P427431	
		Ethalfuralin	0.17	U	ng/L	P427431	
		Fenpropathrin	0.28	U	ng/L	P427431	
		Gamma-BHC	0.14	U	ng/L	P427431	
		Gamma-Chlordane	0.22	U	ng/L	P427431	
		Heptachlor	0.22	U	ng/L	P427431	
		Heptachlor Epoxide	0.28	U	ng/L	P427431	
		Hexachlorobenzene**	1.1	U	ng/L	P427431	
		Kepone	5.5	UJ	ng/L	P427431	CCV
		Lambda-Cyhalothrin	0.83	U	ng/L	P427431	
		Methoprene	0.83	U	ng/L	P427431	
		Methoxychlor	0.33	U	ng/L	P427431	
		MGK-264	0.22	U	ng/L	P427431	
		Mirex	0.39	U	ng/L	P427431	
		Oxychlordane	0.33	U	ng/L	P427431	
		Permethrin	1.8	U	ng/L	P427431	
		Phenothrin	1.0	U	ng/L	P427431	
		Piperonyl Butoxide	0.17	U	ng/L	P427431	
		Prallethrin	2.2	U	ng/L	P427431	
		Tau-Fluvalinate	0.28	U	ng/L	P427431	
		Tetramethrin	0.83	U	ng/L	P427431	
		Trans-Nonachlor	0.22	U	ng/L	P427431	
		Triclosan Methyl	0.17	U	ng/L	P427431	
		Trifluralin	0.22	U	ng/L	P427431	
	EPA 8276	Chlordane	2.2	U	ng/L	P427431	
		Toxaphene	17	U	ng/L	P427431	
2395220	EPA 200.7 Rev. 4.4	Calcium	7.82		mg/L	P427491	
		Iron	160		ug/L	P427491	
		Magnesium	2.87		mg/L	P427491	
		Potassium	2.6		mg/L	P427491	
		Sodium	13.1		mg/L	P427491	
		Strontium	28.3		ug/L	P427491	
		Tin	3.0	U	ug/L	P427491	
		Titanium	1.0	I	ug/L	P427491	
		Vanadium	2.0	U	ug/L	P427491	
		Zinc	5.0	U	ug/L	P427491	
	EPA 200.8 Rev. 5.4	Aluminum	243		ug/L	P427491	
		Antimony	0.054	I	ug/L	P427491	
		Arsenic	2.88		ug/L	P427491	
		Barium	5.05		ug/L	P427491	
		Beryllium	0.010	U	ug/L	P427491	
		Boron	61.7		ug/L	P427491	
		Cadmium	0.020	U	ug/L	P427491	

Field ID: G4NW0211

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395220	EPA 200.8 Rev. 5.4	Chromium	0.68	I	ug/L	P427491	
		Cobalt	0.073	I	ug/L	P427491	
		Copper	0.70	I	ug/L	P427491	
		Lead	0.20	U	ug/L	P427491	
		Manganese	7.15		ug/L	P427491	
		Molybdenum	0.16	I	ug/L	P427491	
		Nickel	0.52	I	ug/L	P427491	
		Selenium	0.22	I	ug/L	P427491	
		Silver	0.010	U	ug/L	P427491	
		Thallium	0.10	U	ug/L	P427491	
		Hardness	31.3		mg/L	P427491	
	SM 2340 B-2011						

Ref. Method and Comment:
 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.
 EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
 EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8270E: Insufficient sample available to perform matrix spikes. Sample expired for preparation due to need for re-extraction.

Sample Location: Tom King Creek South of Barefoot Creek Cir Collection Date/Time: 03/20/2023 11:22

Field ID: G4NW0019

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395218	EPA 8270E	Aldrin	0.69	U	ng/L	P427431	MS
		Alpha-BHC	0.11	U	ng/L	P427431	
		Alpha-Chlordane	0.21	U	ng/L	P427431	
		PCB-1016	2.2	UQ	ng/L	P428001	
		Beta-BHC	0.11	U	ng/L	P427431	
		PCB-1221	2.2	UQ	ng/L	P428001	
		Beta-Cyfluthrin	1.3	U	ng/L	P427431	
		PCB-1232	2.2	UQ	ng/L	P428001	
		Bifenthrin	0.53	U	ng/L	P427431	
		PCB-1242	2.2	UQ	ng/L	P428001	
		PCB-1248	2.2	UQ	ng/L	P428001	
		Chlorothalonil	3.8	U	ng/L	P427431	
		PCB-1254	2.2	UQ	ng/L	P428001	
		Cis-Nonachlor	0.21	U	ng/L	P427431	
		PCB-1260	2.2	UQ	ng/L	P428001	
		Cypermethrin	1.6	U	ng/L	P427431	
		Dacthal	0.16	U	ng/L	P427431	
		DDD-p,p'	0.27	U	ng/L	P427431	
		DDE-p,p'	0.21	U	ng/L	P427431	
		DDT-p,p'	0.27	U	ng/L	P427431	
		Delta-BHC	0.43	U	ng/L	P427431	
		Deltamethrin	1.3	U	ng/L	P427431	
		Dichlobenil	0.27	U	ng/L	P427431	
		Dicofol	1.3	U	ng/L	P427431	
		Dieldrin	0.43	U	ng/L	P427431	
		Endosulfan I	0.43	U	ng/L	P427431	
		Endosulfan II	0.43	U	ng/L	P427431	
		Endosulfan Sulfate	0.32	U	ng/L	P427431	
		Endrin	0.43	U	ng/L	P427431	
		Endrin Aldehyde	0.80	U	ng/L	P427431	
		Endrin Ketone	0.43	U	ng/L	P427431	
		Esfenvalerate	0.80	U	ng/L	P427431	
		Ethalfuralin	0.16	U	ng/L	P427431	
		Fenpropathrin	0.27	U	ng/L	P427431	
		Gamma-BHC	0.13	U	ng/L	P427431	
		Gamma-Chlordane	0.21	U	ng/L	P427431	
		Heptachlor	0.21	U	ng/L	P427431	
		Heptachlor Epoxide	0.27	U	ng/L	P427431	
		Hexachlorobenzene**	1.1	U	ng/L	P427431	
		Kepone	5.3	UJ	ng/L	P427431	CCV
		Lambda-Cyhalothrin	0.80	U	ng/L	P427431	
		Methoprene	0.80	U	ng/L	P427431	
		Methoxychlor	0.32	U	ng/L	P427431	
		MGK-264	0.21	U	ng/L	P427431	

Field ID: G4NW0019

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395218	EPA 8270E	Mirex	0.37	U	ng/L	P427431	
		Oxychlordane	0.32	U	ng/L	P427431	
		Permethrin	1.7	U	ng/L	P427431	
		Phenothrin	0.96	U	ng/L	P427431	
		Piperonyl Butoxide	0.16	U	ng/L	P427431	
		Prallethrin	2.1	U	ng/L	P427431	
		Tau-Fluvalinate	0.27	U	ng/L	P427431	
		Tetramethrin	0.80	U	ng/L	P427431	
		Trans-Nonachlor	0.21	U	ng/L	P427431	
		Triclosan Methyl	0.16	U	ng/L	P427431	
		Trifluralin	0.21	U	ng/L	P427431	
	EPA 8276	Chlordane	2.1	U	ng/L	P427431	
		Toxaphene	16	U	ng/L	P427431	

Ref. Method and Comment:
 EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
 EPA 8270E: Insufficient sample available to perform matrix spikes. Sample expired for preparation due to need for re-extraction.

Sample Location: Tributary to Tom King Creek downstream of Valley Rd

Collection Date/Time: 03/20/2023 11:37

Field ID: G4NW0020

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395219	EPA 8270E	Aldrin	0.71	U	ng/L	P427431	MS
		Alpha-BHC	0.11	U	ng/L	P427431	
		Alpha-Chlordane	0.22	U	ng/L	P427431	
		PCB-1016	2.1	UQ	ng/L	P428001	
		Beta-BHC	0.11	U	ng/L	P427431	
		PCB-1221	2.1	UQ	ng/L	P428001	
		Beta-Cyfluthrin	1.4	U	ng/L	P427431	
		PCB-1232	2.1	UQ	ng/L	P428001	
		Bifenthrin	0.54	U	ng/L	P427431	
		PCB-1242	2.1	UQ	ng/L	P428001	
		PCB-1248	2.1	UQ	ng/L	P428001	
		Chlorothalonil	3.9	U	ng/L	P427431	
		PCB-1254	2.1	UQ	ng/L	P428001	
		Cis-Nonachlor	0.22	U	ng/L	P427431	
		PCB-1260	2.1	UQ	ng/L	P428001	
		Cypermethrin	1.6	U	ng/L	P427431	
		Dacthal	0.16	U	ng/L	P427431	
		DDD-p,p'	0.27	U	ng/L	P427431	
		DDE-p,p'	0.22	U	ng/L	P427431	
		DDT-p,p'	0.27	U	ng/L	P427431	
		Delta-BHC	0.43	U	ng/L	P427431	
		Deltamethrin	1.4	U	ng/L	P427431	
		Dichlobenil	0.27	U	ng/L	P427431	
		Dicofol	1.4	U	ng/L	P427431	
		Dieldrin	0.43	U	ng/L	P427431	
		Endosulfan I	0.43	U	ng/L	P427431	
		Endosulfan II	0.43	U	ng/L	P427431	
		Endosulfan Sulfate	0.33	U	ng/L	P427431	
		Endrin	0.43	U	ng/L	P427431	
		Endrin Aldehyde	0.82	U	ng/L	P427431	
		Endrin Ketone	0.43	U	ng/L	P427431	
		Esfenvalerate	0.82	U	ng/L	P427431	
		Ethalfuralin	0.16	U	ng/L	P427431	
		Fenpropathrin	0.27	U	ng/L	P427431	
		Gamma-BHC	0.14	U	ng/L	P427431	
		Gamma-Chlordane	0.22	U	ng/L	P427431	
		Heptachlor	0.22	U	ng/L	P427431	
		Heptachlor Epoxide	0.27	U	ng/L	P427431	
		Hexachlorobenzene**	1.1	U	ng/L	P427431	
		Kepone	5.4	UJ	ng/L	P427431	CCV
		Lambda-Cyhalothrin	0.82	U	ng/L	P427431	
		Methoprene	0.82	U	ng/L	P427431	
		Methoxychlor	0.33	U	ng/L	P427431	

Field ID: G4NW0020

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395219	EPA 8270E	MGK-264	0.22	U	ng/L	P427431	
		Mirex	0.38	U	ng/L	P427431	
		Oxychlordane	0.33	U	ng/L	P427431	
		Permethrin	1.7	U	ng/L	P427431	
		Phenothrin	0.98	U	ng/L	P427431	
		Piperonyl Butoxide	0.16	U	ng/L	P427431	
		Prallethrin	2.2	U	ng/L	P427431	
		Tau-Fluvalinate	0.27	U	ng/L	P427431	
		Tetramethrin	0.82	U	ng/L	P427431	
		Trans-Nonachlor	0.22	U	ng/L	P427431	
		Triclosan Methyl	0.16	U	ng/L	P427431	
		Trifluralin	0.22	U	ng/L	P427431	
	EPA 8276	Chlordane	2.2	U	ng/L	P427431	
		Toxaphene	16	U	ng/L	P427431	

Ref. Method and Comment:

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

EPA 8270E: Insufficient sample available to perform matrix spikes. Sample expired for preparation due to need for re-extraction.

Sample Location: East Bay Riv Hwy 87 Brid

Collection Date/Time: 03/20/2023 12:00

Field ID: G4NW0015

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395221	EPA 200.7 Rev. 4.4	Calcium	1.39		mg/L	P427491	
		Iron	170		ug/L	P427491	
		Magnesium	1.73		mg/L	P427491	
		Potassium	0.63	I	mg/L	P427491	
		Sodium	12.5		mg/L	P427491	
		Strontium	13.3		ug/L	P427491	
		Tin	3.0	U	ug/L	P427491	
		Titanium	1.3	I	ug/L	P427491	
		Vanadium	2.0	U	ug/L	P427491	
		Zinc	5.0	U	ug/L	P427491	
	EPA 200.8 Rev. 5.4	Aluminum	148		ug/L	P427491	
		Antimony	0.050	U	ug/L	P427491	
		Arsenic	0.13	I	ug/L	P427491	
		Barium	6.50		ug/L	P427491	
		Beryllium	0.016	I	ug/L	P427491	
		Boron	16.4		ug/L	P427491	
		Cadmium	0.020	U	ug/L	P427491	
		Chromium	0.40	U	ug/L	P427491	
		Cobalt	0.090		ug/L	P427491	
		Copper	0.40	U	ug/L	P427491	
		Lead	0.20	U	ug/L	P427491	
		Manganese	4.96		ug/L	P427491	
		Molybdenum	0.15	U	ug/L	P427491	
		Nickel	0.50	U	ug/L	P427491	
		Selenium	0.20	U	ug/L	P427491	
		Silver	0.010	U	ug/L	P427491	
		Thallium	0.10	U	ug/L	P427491	
	SM 2340 B-2011	Hardness	10.6		mg/L	P427491	

Sample Location: Williams Creek upstream of Hwy 98

Collection Date/Time: 03/20/2023 12:22

Field ID: G4NW0531

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2395168	DEP SOP: NU-094-1	Color (true)	41		PCU	P427412	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P427423	
	EPA 300.0 Rev. 2.1	Chloride	140		mg Cl/L	P427856	
		Sulfate	23		mg SO4/L	P427859	
	SM 2320 B-2011	Total Alkalinity	8.7		mg CaCO3/L	P427558	
	SM 2540 C-2015	TDS	285		mg/L	P428162	
	SM 2540 D-2015	TSS	2	U	mg/L	P427911	
	SM 4500-F- C-2011	Fluoride	0.032	I	mg F/L	P427560	
2395169	EPA 350.1 Rev. 2.0	Ammonia-N	0.020	Y	mg N/L	P427572	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	Y	mg N/L	P428403	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29	Y	mg N/L	P427815	
	EPA 365.1 Rev. 2.0	Total-P	0.10	Y	mg P/L	P427534	
	SM 5310 B-2011	Organic Carbon	6.0	Y	mg C/L	P427749	

Ref. Method and Comment:

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.

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

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

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

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample. The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

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

Non-Conformance Report

NCR ID: 9797

Event(s)

NW-DIST-2023-03-21-01

Job(s)

TLH-2023-03-21-51

Sample(s)

2395169

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory.

H2SO4 Lot# SA2299040 | Expiration Date: 11/04/2023

Authorized by/Date: Kyle Klug 3/28/2023

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.

Please address questions to:

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

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P427412

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427423

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P427491

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: P427491

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: P427856

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: P427859

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427572

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428403

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427548

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427815

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427533

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427534

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

Reference Method: EPA 8270E
Batch ID: P427431

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P427431

Component	Result	Code	Units
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	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
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P427431

Component	Result	Code	Units
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
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 8270E

Batch ID: P428001

Component	Result	Code	Units
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P428001

Component	Result	Code	Units
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L

Reference Method: EPA 8276
Batch ID: P427431

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: SM 2320 B-2011
Batch ID: P427558

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

Reference Method: SM 2540 C-2015
Batch ID: P428162

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P427911

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P427560

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P427749

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: P427412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.7		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427423

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P427491

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	102		P	85 - 115
Sodium	99.4		P	85 - 115
Strontium	98.4		P	85 - 115
Tin	101		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	99.9		P	85 - 115
Zinc	98.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P427491

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	104		P	85 - 115
Barium	105		P	85 - 115
Beryllium	96.7		P	85 - 115
Boron	102		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	103		P	85 - 115
Cobalt	105		P	85 - 115
Copper	103		P	85 - 115
Lead	97.1		P	85 - 115
Manganese	102		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	105		P	85 - 115
Selenium	102		P	85 - 115
Silver	101		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427856

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: P427859

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427572

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428403

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427815

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427533

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427534

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

Reference Method: EPA 8270E
Batch ID: P427431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	40.1		P	10 - 92.0
Alpha-BHC	77.8		P	75 - 107
Alpha-Chlordane	66.8		P	50 - 108
Beta-BHC	85.8		P	36 - 138
Beta-Cyfluthrin	58.4		P	20 - 161
Bifenthrin	39.3		P	10 - 119
Carbophenothion	48.7		P	19 - 94.0
Chlorothalonil	76.0		P	26 - 186
Cis-Nonachlor	66.6		P	42 - 119
Cypermethrin	65.5		P	22 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P427431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dacthal	81.5		P	72 - 119
DDD-p,p'	79.6		P	45 - 107
DDE-p,p'	63.0		P	48 - 106
DDT-p,p'	58.8		P	48 - 110
Delta-BHC	93.7		P	54 - 140
Deltamethrin	50.6		P	22 - 189
Dichlobenil	78.2		P	36 - 117
Dicofol	69.7		P	46 - 155
Dieldrin	68.8		P	54 - 110
Endosulfan I	73.8		P	59 - 105
Endosulfan II	76.8		P	51 - 118
Endosulfan Sulfate	81.3		P	57 - 121
Endrin	69.0		P	10 - 120
Endrin Aldehyde	73.5		P	34 - 118
Endrin Ketone	93.6		P	69 - 177
Esfenvalerate	59.8		P	23 - 168
Ethalfuralin	60.8		P	49 - 99.0
Fenpropathrin	54.3		P	34 - 117
Gamma-BHC	77.6		P	72 - 117
Gamma-Chlordane	63.0		P	43 - 106
Heptachlor	55.5		P	41 - 98.0
Heptachlor Epoxide	71.8		P	57 - 106
Hexachlorobenzene	57.5		P	36 - 99.0
Kepone	85.9		P	16 - 215
Lambda-Cyhalothrin	47.2		P	21 - 177
Methoprene	32.2		P	10 - 119
Methoxychlor	72.1		P	60 - 112
MGK-264	74.1		P	26 - 122
Mirex	41.0		P	10 - 169
Oxychlordane	64.4		P	43 - 105
Permethrin	54.3		P	24 - 148
Phenothrin	30.3		P	10 - 106
Piperonyl Butoxide	88.9		P	10 - 139
Prallethrin	63.6		P	17 - 109
Tau-Fluvalinate	48.4		P	13 - 131
Tetramethrin	73.8		P	10 - 132
Trans-Nonachlor	59.4		P	44 - 106
Triclosan Methyl	77.1		P	59 - 109
Trifluralin	61.3		P	44 - 101

Reference Method: EPA 8270E
Batch ID: P428001

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
PCB-1016	82.3	80.4	P/P	48 - 112
PCB-1260	87.5	88.2	P/P	44 - 118

Reference Method: EPA 8276
Batch ID: P427431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	74.6		P	61 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P427431

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	91.2		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P427558

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P428162

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.6		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P427911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.9		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P427560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P427749

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P427491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395064	Calcium	96.8		P	80 - 120
2395064	Iron	103	103	P/P	80 - 120
2395064	Magnesium	102	101	P/P	80 - 120
2395064	Potassium	99.6	99.8	P/P	80 - 120
2395064	Sodium	95.9	96.9	P/P	80 - 120
2395064	Strontium	95.9	96.4	P/P	80 - 120
2395064	Tin	101	101	P/P	80 - 120
2395064	Titanium	101	100	P/P	80 - 120
2395064	Vanadium	99.0	98.2	P/P	80 - 120
2395064	Zinc	94.8	94.5	P/P	80 - 120
2395069	Calcium	97.1		P	80 - 120
2395069	Iron	103		P	80 - 120
2395069	Magnesium	101		P	80 - 120
2395069	Potassium	100		P	80 - 120
2395069	Sodium	92.9		P	80 - 120
2395069	Strontium	96.2		P	80 - 120
2395069	Tin	101		P	80 - 120
2395069	Titanium	98.3		P	80 - 120
2395069	Vanadium	97.4		P	80 - 120
2395069	Zinc	95.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P427491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395064	Aluminum	101	99.9	P/P	80 - 120
2395064	Antimony	105	105	P/P	80 - 120
2395064	Arsenic	103	103	P/P	80 - 120
2395064	Barium	104	103	P/P	80 - 120
2395064	Beryllium	96.7	95.7	P/P	80 - 120
2395064	Boron	101	102	P/P	80 - 120
2395064	Cadmium	105	105	P/P	80 - 120
2395064	Chromium	103	103	P/P	80 - 120
2395064	Cobalt	104	103	P/P	80 - 120
2395064	Copper	99.5	99.3	P/P	80 - 120
2395064	Lead	95.9	96.4	P/P	80 - 120
2395064	Manganese	103	102	P/P	80 - 120
2395064	Molybdenum	104	105	P/P	80 - 120
2395064	Nickel	104	102	P/P	80 - 120
2395064	Selenium	99.2	103	P/P	80 - 120
2395064	Silver	100	100	P/P	80 - 120
2395064	Thallium	102	104	P/P	80 - 120
2395069	Aluminum	101		P	80 - 120
2395069	Antimony	105		P	80 - 120
2395069	Arsenic	102		P	80 - 120
2395069	Barium	104		P	80 - 120
2395069	Beryllium	97.2		P	80 - 120
2395069	Boron	105		P	80 - 120
2395069	Cadmium	107		P	80 - 120
2395069	Chromium	105		P	80 - 120
2395069	Cobalt	102		P	80 - 120
2395069	Copper	98.5		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P427491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395069	Lead	96.5		P	80 - 120
2395069	Manganese	104		P	80 - 120
2395069	Molybdenum	103		P	80 - 120
2395069	Nickel	101		P	80 - 120
2395069	Selenium	101		P	80 - 120
2395069	Silver	102		P	80 - 120
2395069	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427856

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395048	Chloride	99.3		P	90 - 110
2395416	Chloride	99.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427859

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395048	Sulfate	98.4		P	90 - 110
2395416	Sulfate	94.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395080	Ammonia-N	101	98.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395054	NO2NO3-N	91.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427815

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395169	NO2NO3-N	96.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395051	Total-P	99.5	102	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P427431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395113	Aldrin	46.1	45.5	P/P	20 - 82.0
2395113	Alpha-BHC	72.4	67.2	P/F	71 - 109

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P427431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395113	Alpha-Chlordane	59.1	56.3	P/P	42 - 106
2395113	Beta-BHC	81.1	87.7	P/P	69 - 180
2395113	Beta-Cyfluthrin	79.5	82.7	P/P	18 - 175
2395113	Bifenthrin	44.9	36.7	P/P	21 - 128
2395113	Carbophenothion	61.3	58.2	P/P	10 - 126
2395113	Chlorothalonil	82.6	84.4	P/P	10 - 300
2395113	Cis-Nonachlor	66.7	65.8	P/P	34 - 106
2395113	Cypermethrin	82.4	89.2	P/P	22 - 158
2395113	Dacthal	69.1	73.0	P/P	54 - 116
2395113	DDD-p,p'	71.6	71.3	P/P	34 - 107
2395113	DDE-p,p'	54.7	54.0	P/P	33 - 110
2395113	DDT-p,p'	61.1	58.9	P/P	50 - 122
2395113	Delta-BHC	86.2	92.2	P/P	77 - 193
2395113	Deltamethrin	47.7	56.5	P/P	10 - 195
2395113	Dichlobenil	55.3	39.6	P/P	25 - 113
2395113	Dicofol	59.2	73.6	P/P	38 - 247
2395113	Dieldrin	61.0	60.3	P/P	45 - 118
2395113	Endosulfan I	61.6	61.0	P/P	51 - 106
2395113	Endosulfan II	65.6	66.6	P/P	37 - 122
2395113	Endosulfan Sulfate	57.9	63.8	P/P	43 - 132
2395113	Endrin	60.6	59.9	P/P	29 - 101
2395113	Endrin Aldehyde	55.6	57.6	P/P	19 - 110
2395113	Endrin Ketone	73.3	73.3	P/P	60 - 140
2395113	Esfenvalerate	78.8	94.4	P/P	26 - 199
2395113	Ethalfuralin	63.0	62.4	P/P	45 - 99.0
2395113	Fenpropathrin	68.4	70.8	P/P	35 - 120
2395113	Gamma-BHC	76.9	79.8	P/P	63 - 128
2395113	Gamma-Chlordane	60.3	60.0	P/P	40 - 104
2395113	Heptachlor	55.6	55.9	P/P	36 - 97.0
2395113	Heptachlor Epoxide	61.5	61.2	P/P	49 - 184
2395113	Hexachlorobenzene	55.4	50.3	P/P	39 - 96.0
2395113	Kepone	53.7	58.1	P/P	10 - 217
2395113	Lambda-Cyhalothrin	84.6	94.4	P/P	21 - 193
2395113	Methoprene	73.5	74.5	P/P	20 - 106
2395113	Methoxychlor	76.7	74.0	P/P	53 - 118
2395113	MGK-264	78.0	74.2	P/P	40 - 118
2395113	Mirex	48.3	51.7	P/P	26 - 92.0
2395113	Oxychlordane	59.9	50.8	P/P	44 - 99.0
2395113	Permethrin	80.0	84.8	P/P	33 - 182
2395113	Phenothrin	57.5	62.2	P/P	10 - 129
2395113	Piperonyl Butoxide	79.4	83.7	P/P	10 - 211
2395113	Prallethrin	64.0	79.9	P/P	24 - 113
2395113	Tau-Fluvalinate	67.9	80.9	P/P	14 - 149
2395113	Tetramethrin	98.3	82.4	P/P	17 - 151
2395113	Trans-Nonachlor	57.5	56.1	P/P	42 - 102
2395113	Triclosan Methyl	61.8	56.3	P/P	48 - 108
2395113	Trifluralin	64.4	63.6	P/P	47 - 96.0

Reference Method: EPA 8276

Batch ID: P427431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P427431

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395359	Chlordane	65.0	65.5	P/P	53 - 126
2395359	Toxaphene	86.9	87.5	P/P	56 - 211

Reference Method: SM 4500-F- C-2011

Batch ID: P427560

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395045	Fluoride	104	103	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P427749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2395049	Organic Carbon	94.9	97.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P427412

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395260	Color (true)	4.33	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P427423

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2394997	Turbidity	0.772	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P427491

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395064	Calcium	0.388	Spike	P	0 - 20
2395064	Iron	0.0746	Spike	P	0 - 20
2395064	Magnesium	0.266	Spike	P	0 - 20
2395064	Potassium	0.164	Spike	P	0 - 20
2395064	Sodium	0.649	Spike	P	0 - 20
2395064	Strontium	0.486	Spike	P	0 - 20
2395064	Tin	0.00955	Spike	P	0 - 20
2395064	Titanium	0.415	Spike	P	0 - 20
2395064	Vanadium	0.770	Spike	P	0 - 20
2395064	Zinc	0.320	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P427491

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395064	Aluminum	0.568	Spike	P	0 - 20
2395064	Antimony	0.279	Spike	P	0 - 20
2395064	Arsenic	0.0733	Spike	P	0 - 20
2395064	Barium	0.404	Spike	P	0 - 20
2395064	Beryllium	1.03	Spike	P	0 - 20
2395064	Boron	1.74	Spike	P	0 - 20
2395064	Cadmium	0.310	Spike	P	0 - 20
2395064	Chromium	0.755	Spike	P	0 - 20
2395064	Cobalt	1.15	Spike	P	0 - 20
2395064	Copper	0.197	Spike	P	0 - 20
2395064	Lead	0.545	Spike	P	0 - 20
2395064	Manganese	0.522	Spike	P	0 - 20
2395064	Molybdenum	1.03	Spike	P	0 - 20
2395064	Nickel	1.60	Spike	P	0 - 20
2395064	Selenium	3.28	Spike	P	0 - 20
2395064	Silver	0.434	Spike	P	0 - 20
2395064	Thallium	1.12	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P427856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395048	Chloride	1.81	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P427572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395080	Ammonia-N	1.57	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P428403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395167	Kjeldahl Nitrogen	0.551	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395054	NO2NO3-N	0.204	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P427815

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395169	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395051	Total-P	2.00	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P427534

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395265	Total-P	0.245	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P427431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395113	Aldrin	1.24	Spike	P	0 - 41
2395113	Alpha-BHC	7.38	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P427431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395113	Alpha-Chlordane	4.95	Spike	P	0 - 33
2395113	Beta-BHC	7.84	Spike	P	0 - 36
2395113	Beta-Cyfluthrin	3.89	Spike	P	0 - 42
2395113	Bifenthrin	11.0	Spike	P	0 - 53
2395113	Carbophenothion	5.26	Spike	P	0 - 49
2395113	Chlorothalonil	2.11	Spike	P	0 - 71
2395113	Cis-Nonachlor	1.36	Spike	P	0 - 29
2395113	Cypermethrin	8.00	Spike	P	0 - 40
2395113	Dacthal	5.37	Spike	P	0 - 26
2395113	DDD-p,p'	0.365	Spike	P	0 - 39
2395113	DDE-p,p'	1.24	Spike	P	0 - 33
2395113	DDT-p,p'	3.77	Spike	P	0 - 40
2395113	Delta-BHC	6.74	Spike	P	0 - 37
2395113	Deltamethrin	16.9	Spike	P	0 - 100
2395113	Dichlobenil	32.9	Spike	P	0 - 40
2395113	Dicofol	21.6	Spike	P	0 - 31
2395113	Dieldrin	1.16	Spike	P	0 - 27
2395113	Endosulfan I	1.07	Spike	P	0 - 23
2395113	Endosulfan II	1.54	Spike	P	0 - 28
2395113	Endosulfan Sulfate	9.68	Spike	P	0 - 38
2395113	Endrin	1.03	Spike	P	0 - 63
2395113	Endrin Aldehyde	3.58	Spike	P	0 - 60
2395113	Endrin Ketone	0.0224	Spike	P	0 - 37
2395113	Esfenvalerate	18.0	Spike	P	0 - 52
2395113	Ethalfuralin	1.10	Spike	P	0 - 23
2395113	Fenpropathrin	3.44	Spike	P	0 - 32
2395113	Gamma-BHC	3.69	Spike	P	0 - 17
2395113	Gamma-Chlordane	0.517	Spike	P	0 - 40
2395113	Heptachlor	0.491	Spike	P	0 - 29
2395113	Heptachlor Epoxide	0.425	Spike	P	0 - 25
2395113	Hexachlorobenzene	9.64	Spike	P	0 - 36
2395113	Kepone	7.77	Spike	P	0 - 93
2395113	Lambda-Cyhalothrin	11.0	Spike	P	0 - 55
2395113	Methoprene	1.34	Spike	P	0 - 53
2395113	Methoxychlor	3.57	Spike	P	0 - 29
2395113	MGK-264	4.97	Spike	P	0 - 35
2395113	Mirex	6.76	Spike	P	0 - 46
2395113	Oxychlordane	16.4	Spike	P	0 - 29
2395113	Permethrin	5.74	Spike	P	0 - 44
2395113	Phenothrin	7.81	Spike	P	0 - 56
2395113	Piperonyl Butoxide	5.30	Spike	P	0 - 100
2395113	Prallethrin	22.0	Spike	P	0 - 42
2395113	Tau-Fluvalinate	17.5	Spike	P	0 - 54
2395113	Tetramethrin	17.6	Spike	P	0 - 51
2395113	Trans-Nonachlor	2.58	Spike	P	0 - 37
2395113	Triclosan Methyl	9.23	Spike	P	0 - 31
2395113	Trifluralin	1.36	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P428001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	PCB-1016	2.37	LCS	P	0 - 24
LFB	PCB-1260	0.722	LCS	P	0 - 29

Reference Method: EPA 8276
Batch ID: P427431

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395359	Chlordane	0.690	Spike	P	0 - 25
2395359	Toxaphene	0.701	Spike	P	0 - 26

Reference Method: SM 2320 B-2011
Batch ID: P427558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395045	Total Alkalinity	1.45	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P428162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395010	TDS	5.68	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P427560

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395045	Fluoride	0.996	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P427749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2395049	Organic Carbon	2.38	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2395217
Field Sample ID: G4NW0211

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	91.8	P	29 - 130
EPA 8270E	Decachlorobiphenyl	83.1	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	88.9	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	48.0	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	59.9	P	30 - 101
EPA 8276	PCNB	84.5	P	48 - 121

Lab Sample ID: 2395218
Field Sample ID: G4NW0019

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	103	P	29 - 130
EPA 8270E	Decachlorobiphenyl	82.0	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	79.4	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	55.0	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	56.4	P	30 - 101
EPA 8276	PCNB	94.7	P	48 - 121

Lab Sample ID: 2395219
Field Sample ID: G4NW0020

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	87.6	P	29 - 130
EPA 8270E	Decachlorobiphenyl	70.3	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	45.2	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	50.6	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	51.5	P	30 - 101
EPA 8276	PCNB	89.6	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A118108

Included Lab Sample IDs: 2395166, 2395168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.5	95.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A118110

Included Lab Sample IDs: 2395166, 2395168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118155

Included Lab Sample IDs: 2395167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	96.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A118161

Included Lab Sample IDs: 2395166, 2395168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.5	92.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A118161

Included Lab Sample IDs: 2395166, 2395168

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A118162

Included Lab Sample IDs: 2395167, 2395169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.4	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A118172

Included Lab Sample IDs: 2395220, 2395221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	100	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Arsenic	98.3	98.7	P/P	90 - 110
Barium	99.0	98.4	P/P	90 - 110
Beryllium	96.5	96.4	P/P	90 - 110
Boron	103	103	P/P	90 - 110
Cadmium	101	99.9	P/P	90 - 110
Chromium	98.9	99.2	P/P	90 - 110
Cobalt	97.0	98.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A118172

Included Lab Sample IDs: 2395220, 2395221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	96.2	96.8	P/P	90 - 110
Lead	93.9	92.8	P/P	90 - 110
Manganese	99.8	100	P/P	90 - 110
Molybdenum	98.2	97.7	P/P	90 - 110
Nickel	96.6	97.3	P/P	90 - 110
Selenium	99.2	100	P/P	90 - 110
Silver	98.5	98.1	P/P	90 - 110
Thallium	99.2	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118180

Included Lab Sample IDs: 2395167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A118181

Included Lab Sample IDs: 2395169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A118229

Included Lab Sample IDs: 2395167, 2395169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.2	99.4	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A118247

Included Lab Sample IDs: 2395166, 2395168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	98.6	P/P	90 - 110
Sulfate	98.2	97.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A118262

Included Lab Sample IDs: 2395169

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

Reference Method: EPA 8276

Run ID: A118287

Included Lab Sample IDs: 2395217, 2395218, 2395219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A118287

Included Lab Sample IDs: 2395217, 2395218, 2395219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Toxaphene	95.3		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A118291

Included Lab Sample IDs: 2395220, 2395221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.2	98.8	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	99.6	100	P/P	90 - 110
Potassium	99.2	99.4	P/P	90 - 110
Sodium	92.8	92.8	P/P	90 - 110
Strontium	95.9	97.0	P/P	90 - 110
Tin	98.7	99.0	P/P	90 - 110
Titanium	98.9	99.4	P/P	90 - 110
Vanadium	98.0	98.5	P/P	90 - 110
Zinc	96.5	96.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A118310

Included Lab Sample IDs: 2395221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	104	P/P	95 - 105
Magnesium	104	106	P/P	95 - 105

Reference Method: EPA 8270E

Run ID: A118314

Included Lab Sample IDs: 2395217, 2395218, 2395219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	98.2		P	80 - 120
Alpha-Chlordane	99.2		P	80 - 120
Beta-BHC	104		P	80 - 120
Beta-Cyfluthrin	97.8		P	80 - 120
Bifenthrin	102		P	80 - 120
Carbophenothion	99.1		P	80 - 120
Chlorothalonil	99.4		P	80 - 120
Cis-Nonachlor	99.9		P	80 - 120
Cypermethrin	93.2		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	97.0		P	80 - 120
DDE-p,p'	96.7		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	101		P	80 - 120
Deltamethrin	96.1		P	80 - 120
Dichlobenil	112		P	80 - 120
Dicofol	108		P	80 - 120
Dieldrin	98.2		P	80 - 120
Endosulfan I	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A118314

Included Lab Sample IDs: 2395217, 2395218, 2395219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	98.0		P	80 - 120
Endrin	100		P	80 - 120
Endrin Aldehyde	101		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	100		P	80 - 120
Ethalfuralin	93.9		P	80 - 120
Fenpropathrin	103		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	99.4		P	80 - 120
Heptachlor Epoxide	99.1		P	80 - 120
Hexachlorobenzene	99.7		P	80 - 120
Kepone	72.7*		F	80 - 120
Lambda-Cyhalothrin	99.5		P	80 - 120
Methoprene	101		P	80 - 120
Methoxychlor	101		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	98.8		P	80 - 120
Oxychlordane	96.3		P	80 - 120
Permethrin	96.9		P	80 - 120
Phenothrin	100		P	80 - 120
Piperonyl Butoxide	99.8		P	80 - 120
Prallethrin	90.9		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	98.1		P	80 - 120
Trans-Nonachlor	103		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	104		P	80 - 120

Reference Method: EPA 8270E

Run ID: A118428

Included Lab Sample IDs: 2395217, 2395218, 2395219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.2		P	80 - 120
PCB-1260	96.2		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A118579

Included Lab Sample IDs: 2395167, 2395169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.1	P/P	90 - 110
Kjeldahl Nitrogen	97.9	92.1	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	97.7					4.33	
EPA 180.1 Rev. 2.0	Turbidity	101					0.772	
EPA 200.7 Rev. 4.4	Calcium	101	96.8	97.1				0.388
	Iron	105	103	103	103			0.0746
	Magnesium	105	102	101	101			0.266
	Potassium	102	99.6	99.8	100			0.164
	Sodium	99.4	95.9	96.9	92.9			0.649
	Strontium	98.4	95.9	96.4	96.2			0.486
	Tin	101	101	101	101			0.0095
	Titanium	102	101	100	98.3			0.415
	Vanadium	99.9	99.0	98.2	97.4			0.770
	Zinc	98.5	94.8	94.5	95.4			0.320
EPA 200.8 Rev. 5.4	Aluminum	103	101	99.9	101			0.568
	Antimony	104	105	105	105			0.279
	Arsenic	104	103	103	102			0.0733
	Barium	105	104	103	104			0.404
	Beryllium	96.7	96.7	95.7	97.2			1.03
	Boron	102	101	102	105			1.74
	Cadmium	102	105	105	107			0.310
	Chromium	103	103	103	105			0.755
	Cobalt	105	104	103	102			1.15
	Copper	103	99.5	99.3	98.5			0.197
	Lead	97.1	95.9	96.4	96.5			0.545
	Manganese	102	103	102	104			0.522
	Molybdenum	102	104	105	103			1.03
	Nickel	105	104	102	101			1.60
	Selenium	102	99.2	103	101			3.28
	Silver	101	100	100	102			0.434
	Thallium	102	102	104	104			1.12
EPA 300.0 Rev. 2.1	Chloride	100	99.3	99.2			1.81	
	Sulfate	99.2	98.4	94.4				
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	101	98.8				1.57
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104						0.551
EPA 353.2 Rev. 2.0	NO2NO3-N	96.5	91.0					0.204
	NO2NO3-N	103	96.5	96.5				0.0
EPA 365.1 Rev. 2.0	Total-P	101	99.5	102				2.00
	Total-P	104						0.245
EPA 8270E	Aldrin	40.1	46.1	45.5				1.24
	Alpha-BHC	77.8	72.4	67.2				7.38
	Alpha-Chlordane	66.8	59.1	56.3				4.95
	Beta-BHC	85.8	81.1	87.7				7.84
	Beta-Cyfluthrin	58.4	79.5	82.7				3.89
	Bifenthrin	39.3	44.9	36.7				11.0
	Carbophenothion	48.7	61.3	58.2				5.26
	Chlorothalonil	76.0	82.6	84.4				2.11
	Cis-Nonachlor	66.6	66.7	65.8				1.36
	Cypermethrin	65.5	82.4	89.2				8.00
	Dacthal	81.5	69.1	73.0				5.37
	DDD-p,p'	79.6	71.6	71.3				0.365
	DDE-p,p'	63.0	54.7	54.0				1.24
	DDT-p,p'	58.8	61.1	58.9				3.77
	Delta-BHC	93.7	86.2	92.2				6.74
	Deltamethrin	50.6	47.7	56.5				16.9
	Dichlobenil	78.2	55.3	39.6				32.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	SMP
EPA 8270E	Dicofol	69.7		59.2	73.6		
	Dieldrin	68.8		61.0	60.3		
	Endosulfan I	73.8		61.6	61.0		
	Endosulfan II	76.8		65.6	66.6		
	Endosulfan Sulfate	81.3		57.9	63.8		
	Endrin	69.0		60.6	59.9		
	Endrin Aldehyde	73.5		55.6	57.6		
	Endrin Ketone	93.6		73.3	73.3		
	Esfenvalerate	59.8		78.8	94.4		
	Ethalfuralin	60.8		63.0	62.4		
	Fenpropathrin	54.3		68.4	70.8		
	Gamma-BHC	77.6		76.9	79.8		
	Gamma-Chlordane	63.0		60.3	60.0		
	Heptachlor	55.5		55.6	55.9		
	Heptachlor Epoxide	71.8		61.5	61.2		
	Hexachlorobenzene	57.5		55.4	50.3		
	Kepone	85.9		53.7	58.1		
	Lambda-Cyhalothrin	47.2		84.6	94.4		
	Methoprene	32.2		73.5	74.5		
	Methoxychlor	72.1		76.7	74.0		
	MGK-264	74.1		78.0	74.2		
	Mirex	41.0		48.3	51.7		
	Oxychlordane	64.4		59.9	50.8		
	PCB-1016	82.3	80.4			2.37	
	PCB-1260	87.5	88.2			0.722	
	Permethrin	54.3		80.0	84.8		
	Phenothrin	30.3		57.5	62.2		
	Piperonyl Butoxide	88.9		79.4	83.7		
	Prallethrin	63.6		64.0	79.9		
	Tau-Fluvalinate	48.4		67.9	80.9		
	Tetramethrin	73.8		98.3	82.4		
	Trans-Nonachlor	59.4		57.5	56.1		
	Triclosan Methyl	77.1		61.8	56.3		
	Trifluralin	61.3		64.4	63.6		
EPA 8276	Chlordane	74.6		65.0	65.5		
	Toxaphene	91.2		86.9	87.5		
SM 2320 B-2011	Total Alkalinity	94.8					1.45
SM 2540 C-2015	TDS	98.6					5.68
SM 2540 D-2015	TSS	95.9					
SM 4500-F- C-2011	Fluoride	103		104	103		0.996
SM 5310 B-2011	Organic Carbon	96.8		94.9	97.3		2.38

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2395166, 2395168
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2395166, 2395168
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2395220, 2395221
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2395220, 2395221
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2395166, 2395168
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2395166, 2395168

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2395167, 2395169
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2395167, 2395169
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2395167, 2395169
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2395167, 2395169
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2395217, 2395218, 2395219
EPA 8270E	PCBs in water matrices by GC/MS/MS	2395217, 2395218, 2395219
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2395217, 2395218, 2395219
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2395166, 2395168
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2395220, 2395221
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2395166, 2395168
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2395166, 2395168
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2395166, 2395168
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2395167, 2395169

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	03/21/2023			03/21/2023 14:03	Alexis Price	2395166, 2395168
EPA 180.1 Rev. 2.0	03/21/2023			03/21/2023 13:44	Chandler E Cox	2395166
	03/21/2023			03/21/2023 13:45	Chandler E Cox	2395168
EPA 200.7 Rev. 4.4	03/21/2023	03/22/2023 12:15	George D Taylor	03/29/2023 20:15	McKinley C Carter	2395220
	03/21/2023	03/22/2023 12:15	George D Taylor	03/29/2023 20:22	McKinley C Carter	2395221
	03/21/2023	03/22/2023 12:15	George D Taylor	03/30/2023 14:36	McKinley C Carter	2395221
EPA 200.8 Rev. 5.4	03/21/2023	03/22/2023 12:15	George D Taylor	03/23/2023 18:05	Emily M Philpot	2395220
	03/21/2023	03/22/2023 12:15	George D Taylor	03/23/2023 18:15	Emily M Philpot	2395221
EPA 300.0 Rev. 2.1	03/21/2023			03/29/2023 20:58	Anna M. Plaviak	2395166
	03/21/2023			03/29/2023 21:13	Anna M. Plaviak	2395168
EPA 350.1 Rev. 2.0	03/21/2023			03/23/2023 13:04	Khloe J Berg	2395167
	03/21/2023			03/23/2023 13:06	Khloe J Berg	2395169
EPA 351.2 Rev. 2.0	03/21/2023	04/13/2023 11:22	Simonne.V. Calhoun	04/14/2023 11:22	Samantha L Bates	2395167
	03/21/2023	04/13/2023 11:22	Simonne.V. Calhoun	04/14/2023 12:32	Samantha L Bates	2395169
EPA 353.2 Rev. 2.0	03/21/2023			03/23/2023 09:43	Beverly Y. Sanders	2395167
	03/21/2023			03/29/2023 10:06	Beverly Y. Sanders	2395169
EPA 365.1 Rev. 2.0	03/21/2023	03/23/2023 14:00	Adam P Silver	03/24/2023 10:29	James L Waggeberby	2395167
	03/21/2023	03/23/2023 14:00	Adam P Silver	03/24/2023 11:47	James L Waggeberby	2395169
EPA 8270E	03/21/2023	03/24/2023 08:30	Rasheda Ghaffari	03/29/2023 21:01	Michael Poppell	2395217
	03/21/2023	03/24/2023 08:30	Rasheda Ghaffari	03/29/2023 21:31	Michael Poppell	2395218
	03/21/2023	03/24/2023 08:30	Rasheda Ghaffari	03/29/2023 22:00	Michael Poppell	2395219
	03/21/2023	04/04/2023 08:00	Rasheda Ghaffari	04/06/2023 19:06	Vandana T. Nagar	2395217
	03/21/2023	04/04/2023 08:00	Rasheda Ghaffari	04/06/2023 19:36	Vandana T. Nagar	2395218
	03/21/2023	04/04/2023 08:00	Rasheda Ghaffari	04/06/2023 20:06	Vandana T. Nagar	2395219
EPA 8276	03/21/2023	03/24/2023 08:30	Rasheda Ghaffari	03/28/2023 05:02	Lipi Saha	2395217
	03/21/2023	03/24/2023 08:30	Rasheda Ghaffari	03/28/2023 05:57	Lipi Saha	2395218
	03/21/2023	03/24/2023 08:30	Rasheda Ghaffari	03/28/2023 06:53	Lipi Saha	2395219
SM 2320 B-2011	03/21/2023			03/23/2023 00:48	Dale L. Simmons	2395166
	03/21/2023			03/23/2023 01:00	Dale L. Simmons	2395168
SM 2340 B-2011	03/21/2023			03/29/2023 20:15	McKinley C Carter	2395220
	03/21/2023			03/30/2023 14:36	McKinley C Carter	2395221
SM 2540 C-2015	03/21/2023			03/24/2023 15:34	Yijie Li	2395166, 2395168
SM 2540 D-2015	03/21/2023			03/24/2023 15:34	Yijie Li	2395166, 2395168
SM 4500-F- C-2011	03/21/2023			03/23/2023 00:48	Dale L. Simmons	2395166
	03/21/2023			03/23/2023 01:00	Dale L. Simmons	2395168
SM 5310 B-2011	03/21/2023			03/28/2023 01:10	Elise M. Gillis	2395167
	03/21/2023			03/28/2023 01:25	Elise M. Gillis	2395169