

Chemical Analysis Report

NW-DIST-2023-02-16-01

Florida DEP Laboratory
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Tallahassee, FL 32399-2400
DOH Accreditation E31780

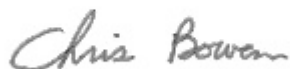
Event Description: **Pensacola Run**
Request ID: **RQ-2023-02-13-27**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 13-MAR-2023 11:26



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: Jackson Creek upstream of Prieto Drive

Collection Date/Time: 02/15/2023 10:35

Field ID: G4NW0505

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388009	EPA 8270E	Aldrin	0.78	U	ng/L	P426343	
		Alpha-BHC	0.12	U	ng/L	P426343	
		Alpha-Chlordane	1.9		ng/L	P426343	
		PCB-1016	2.4	U	ng/L	P426343	
		Beta-BHC	0.12	U	ng/L	P426343	
		PCB-1221	2.4	U	ng/L	P426343	
		Beta-Cyfluthrin	1.5	U	ng/L	P426343	
		PCB-1232	2.4	U	ng/L	P426343	
		Bifenthrin	0.60	U	ng/L	P426343	
		PCB-1242	2.4	U	ng/L	P426343	
		PCB-1248	2.4	U	ng/L	P426343	
		Chlorothalonil	4.3	U	ng/L	P426343	
		PCB-1254	2.4	U	ng/L	P426343	
		Cis-Nonachlor	0.24	U	ng/L	P426343	
		PCB-1260	2.4	U	ng/L	P426343	
		Cypermethrin	1.8	U	ng/L	P426343	
		Dacthal	0.18	U	ng/L	P426343	
		DDD-p,p'	0.30	U	ng/L	P426343	
		DDE-p,p'	0.24	U	ng/L	P426343	
		DDT-p,p'	0.30	U	ng/L	P426343	
		Delta-BHC	0.48	U	ng/L	P426343	
		Deltamethrin	1.5	U	ng/L	P426343	
		Dichlobenil	0.30	U	ng/L	P426343	
		Dicofol	1.5	U	ng/L	P426343	
		Dieldrin	18		ng/L	P426343	
		Endosulfan I	0.48	U	ng/L	P426343	
		Endosulfan II	0.48	U	ng/L	P426343	
		Endosulfan Sulfate	0.36	U	ng/L	P426343	
		Endrin	0.48	U	ng/L	P426343	
		Endrin Aldehyde	0.90	U	ng/L	P426343	
		Endrin Ketone	0.48	U	ng/L	P426343	
		Esfenvalerate	0.90	U	ng/L	P426343	
		Ethalfuralin	0.18	U	ng/L	P426343	
		Fenpropathrin	0.30	U	ng/L	P426343	
		Gamma-BHC	0.15	U	ng/L	P426343	
		Gamma-Chlordane	1.3		ng/L	P426343	
		Heptachlor	0.24	U	ng/L	P426343	
		Heptachlor Epoxide	12		ng/L	P426343	
		Hexachlorobenzene**	1.2	U	ng/L	P426343	
		Kepone	6.0	UJ	ng/L	P426343	CCV
		Lambda-Cyhalothrin	0.90	U	ng/L	P426343	
		Methoprene	0.90	U	ng/L	P426343	
		Methoxychlor	0.36	U	ng/L	P426343	
		MGK-264	0.24	I	ng/L	P426343	

Field ID: G4NW0505

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388009	EPA 8270E	Mirex	0.42	U	ng/L	P426343	
		Oxychlordane	0.36	U	ng/L	P426343	
		Permethrin	1.9	U	ng/L	P426343	
		Phenothrin	1.1	U	ng/L	P426343	
		Piperonyl Butoxide	0.18	U	ng/L	P426343	
		Prallethrin	2.4	U	ng/L	P426343	
		Tau-Fluvalinate	0.30	U	ng/L	P426343	
		Tetramethrin	0.90	U	ng/L	P426343	
		Trans-Nonachlor	0.35	I	ng/L	P426343	
		Triclosan Methyl	0.18	U	ng/L	P426343	
		Trifluralin	0.24	U	ng/L	P426343	
	EPA 8276	Chlordane	11		ng/L	P426343	
		Toxaphene	18	U	ng/L	P426343	

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

Sample Location: Marcus Creek @ Millview Road (SR173)

Collection Date/Time: 02/15/2023 12:30

Field ID: G5NW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387988	DEP SOP: NU-094-1	Color (true)	35		PCU	P425968	
	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P425972	
	EPA 300.0 Rev. 2.1	Chloride	8.4		mg Cl/L	P426519	
		Sulfate	4.2		mg SO4/L	P426521	
	SM 2320 B-2011	Total Alkalinity	13		mg CaCO3/L	P426392	
	SM 2540 C-2015	TDS	47		mg/L	P426485	
	SM 2540 D-2015	TSS	2	I	mg/L	P426376	
	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P426396	
2387990	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P426252	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21		mg N/L	P426716	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P426136	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P426348	
	SM 5310 B-2011	Organic Carbon	3.7		mg C/L	P426274	
2388006	EPA 8270E	Aldrin	0.74	UJ	ng/L	P426343	SUR
		Alpha-BHC	0.11	UJ	ng/L	P426343	SUR
		Alpha-Chlordane	0.23	UJ	ng/L	P426343	SUR
		PCB-1016	2.3	UJ	ng/L	P426343	SUR
		Beta-BHC	0.45	IJ	ng/L	P426343	SUR
		PCB-1221	2.3	UJ	ng/L	P426343	SUR
		Beta-Cyfluthrin	1.4	UJ	ng/L	P426343	SUR
		PCB-1232	2.3	UJ	ng/L	P426343	SUR
		Bifenthrin	0.57	UJ	ng/L	P426343	SUR
		PCB-1242	2.3	UJ	ng/L	P426343	SUR
		PCB-1248	2.3	UJ	ng/L	P426343	SUR
		Chlorothalonil	4.1	UJ	ng/L	P426343	SUR
		PCB-1254	2.3	UJ	ng/L	P426343	SUR
		Cis-Nonachlor	0.23	UJ	ng/L	P426343	SUR
		PCB-1260	2.3	UJ	ng/L	P426343	SUR
		Cypermethrin	1.7	UJ	ng/L	P426343	SUR
		Dacthal	0.17	UJ	ng/L	P426343	SUR
		DDD-p,p'	0.28	UJ	ng/L	P426343	SUR
		DDE-p,p'	0.23	UJ	ng/L	P426343	SUR
		DDT-p,p'	0.28	UJ	ng/L	P426343	SUR
		Delta-BHC	0.45	UJ	ng/L	P426343	SUR
		Deltamethrin	1.4	UJ	ng/L	P426343	SUR
		Dichlobenil	0.28	UJ	ng/L	P426343	SUR
		Dicofol	1.4	UJ	ng/L	P426343	SUR
		Diieldrin	1.1	IJ	ng/L	P426343	SUR
		Endosulfan I	0.45	UJ	ng/L	P426343	SUR
		Endosulfan II	0.45	UJ	ng/L	P426343	SUR
		Endosulfan Sulfate	0.34	UJ	ng/L	P426343	SUR
		Endrin	0.45	UJ	ng/L	P426343	SUR
		Endrin Aldehyde	0.85	UJ	ng/L	P426343	SUR
		Endrin Ketone	0.45	UJ	ng/L	P426343	SUR

Field ID: G5NW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388006	EPA 8270E	Esfenvalerate	0.85	UJ	ng/L	P426343	SUR
		Ethalfuralin	0.17	UJ	ng/L	P426343	SUR
		Fenpropathrin	0.28	UJ	ng/L	P426343	SUR
		Gamma-BHC	0.14	UJ	ng/L	P426343	SUR
		Gamma-Chlordane	0.23	UJ	ng/L	P426343	SUR
		Heptachlor	0.23	UJ	ng/L	P426343	SUR
		Heptachlor Epoxide	0.85	IJ	ng/L	P426343	SUR
		Hexachlorobenzene**	1.1	UJ	ng/L	P426343	SUR
		Kepone	5.7	UJ	ng/L	P426343	CCV, SUR
		Lambda-Cyhalothrin	0.85	UJ	ng/L	P426343	SUR
		Methoprene	0.85	UJ	ng/L	P426343	SUR
		Methoxychlor	0.34	UJ	ng/L	P426343	SUR
		MGK-264	0.23	UJ	ng/L	P426343	SUR
		Mirex	0.40	UJ	ng/L	P426343	SUR
		Oxychlordane	0.34	UJ	ng/L	P426343	SUR
		Permethrin	1.8	UJ	ng/L	P426343	SUR
		Phenothrin	1.0	UJ	ng/L	P426343	SUR
		Piperonyl Butoxide	0.17	UJ	ng/L	P426343	SUR
		Prallethrin	2.3	UJ	ng/L	P426343	SUR
		Tau-Fluvalinate	0.28	UJ	ng/L	P426343	SUR
		Tetramethrin	0.85	UJ	ng/L	P426343	SUR
		Trans-Nonachlor	0.23	UJ	ng/L	P426343	SUR
		Triclosan Methyl	0.17	UJ	ng/L	P426343	SUR
		Trifluralin	0.23	UJ	ng/L	P426343	SUR
	EPA 8276	Chlordane	2.3	UJ	ng/L	P426343	SUR
		Toxaphene	210	J	ng/L	P426343	SUR
2388013	EPA 200.7 Rev. 4.4	Calcium	5.41		mg/L	P426158	
		Iron	470		ug/L	P426158	
		Magnesium	1.65		mg/L	P426158	
		Potassium	1.1	I	mg/L	P426158	
		Sodium	5.3		mg/L	P426158	
		Strontium	23.6		ug/L	P426158	
		Tin	3.0	U	ug/L	P426158	
		Titanium	0.92	I	ug/L	P426158	
		Vanadium	2.0	U	ug/L	P426158	
		Zinc	5.0	U	ug/L	P426158	
	EPA 200.8 Rev. 5.4	Aluminum	64		ug/L	P426158	
		Antimony	0.065	I	ug/L	P426158	
		Arsenic	0.33		ug/L	P426158	
		Barium	19.7		ug/L	P426158	
		Beryllium	0.010	U	ug/L	P426158	
		Boron	29.1		ug/L	P426158	
		Cadmium	0.020	U	ug/L	P426158	
		Chromium	0.40	U	ug/L	P426158	
		Cobalt	0.121		ug/L	P426158	

Field ID: G5NW0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388013	EPA 200.8 Rev. 5.4	Copper	0.40	U	ug/L	P426158	
		Lead	0.38	I	ug/L	P426158	
		Manganese	20.3		ug/L	P426158	
		Molybdenum	0.15	U	ug/L	P426158	
		Nickel	0.50	U	ug/L	P426158	
		Selenium	0.20	U	ug/L	P426158	
		Silver	0.013	I	ug/L	P426328	
		Thallium	0.10	U	ug/L	P426158	
	SM 2340 B-2011	Hardness	20.3		mg/L	P426158	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: Surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed. Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8276: Surrogate failures were observed in both original extraction and re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: CARPENTERS CR DAVIS HIGHWAY BR

Collection Date/Time: 02/15/2023 15:00

Field ID: G4NW0036

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388010	EPA 8270E	Aldrin	0.74	UJ	ng/L	P426343	SUR
		Alpha-BHC	0.11	UJ	ng/L	P426343	SUR
		Alpha-Chlordane	0.23	UJ	ng/L	P426343	SUR
		PCB-1016	2.3	UJ	ng/L	P426343	SUR
		Beta-BHC	0.52	IJ	ng/L	P426343	SUR
		PCB-1221	2.3	UJ	ng/L	P426343	SUR
		Beta-Cyfluthrin	1.4	UJ	ng/L	P426343	SUR
		PCB-1232	2.3	UJ	ng/L	P426343	SUR
		Bifenthrin	0.57	UJ	ng/L	P426343	SUR
		PCB-1242	2.3	UJ	ng/L	P426343	SUR
		PCB-1248	2.3	UJ	ng/L	P426343	SUR
		Chlorothalonil	4.1	UJ	ng/L	P426343	SUR
		PCB-1254	2.3	UJ	ng/L	P426343	SUR
		Cis-Nonachlor	0.23	UJ	ng/L	P426343	SUR
		PCB-1260	2.3	UJ	ng/L	P426343	SUR
		Cypermethrin	1.7	UJ	ng/L	P426343	SUR
		Dacthal	0.17	UJ	ng/L	P426343	SUR
		DDD-p,p'	0.28	UJ	ng/L	P426343	SUR
		DDE-p,p'	0.23	UJ	ng/L	P426343	SUR
		DDT-p,p'	0.28	UJ	ng/L	P426343	SUR
		Delta-BHC	0.45	UJ	ng/L	P426343	SUR
		Deltamethrin	1.4	UJ	ng/L	P426343	SUR
		Dichlobenil	0.28	UJ	ng/L	P426343	SUR
		Dicofol	1.4	UJ	ng/L	P426343	SUR
		Dieldrin	0.68	IJ	ng/L	P426343	SUR
		Endosulfan I	0.45	UJ	ng/L	P426343	SUR
		Endosulfan II	0.45	UJ	ng/L	P426343	SUR
		Endosulfan Sulfate	0.34	UJ	ng/L	P426343	SUR
		Endrin	0.45	UJ	ng/L	P426343	SUR
		Endrin Aldehyde	0.85	UJ	ng/L	P426343	SUR
		Endrin Ketone	0.45	UJ	ng/L	P426343	SUR
		Esfenvalerate	0.85	UJ	ng/L	P426343	SUR
		Ethalfuralin	0.17	UJ	ng/L	P426343	SUR
		Fenpropathrin	0.28	UJ	ng/L	P426343	SUR
		Gamma-BHC	0.14	UJ	ng/L	P426343	SUR
		Gamma-Chlordane	0.23	UJ	ng/L	P426343	SUR
		Heptachlor	0.23	UJ	ng/L	P426343	SUR
		Heptachlor Epoxide	0.42	IJ	ng/L	P426343	SUR
		Hexachlorobenzene**	1.1	UJ	ng/L	P426343	SUR
		Kepone	5.7	UJ	ng/L	P426343	CCV, SUR
		Lambda-Cyhalothrin	0.85	UJ	ng/L	P426343	SUR
		Methoprene	0.85	UJ	ng/L	P426343	SUR
		Methoxychlor	0.34	UJ	ng/L	P426343	SUR
		MGK-264	0.23	UJ	ng/L	P426343	SUR

Field ID: G4NW0036

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388010	EPA 8270E	Mirex	0.40	UJ	ng/L	P426343	SUR
		Oxychlordane	0.34	UJ	ng/L	P426343	SUR
		Permethrin	1.8	UJ	ng/L	P426343	SUR
		Phenothrin	1.0	UJ	ng/L	P426343	SUR
		Piperonyl Butoxide	0.17	UJ	ng/L	P426343	SUR
		Prallethrin	2.3	UJ	ng/L	P426343	SUR
		Tau-Fluvalinate	0.28	UJ	ng/L	P426343	SUR
		Tetramethrin	0.85	UJ	ng/L	P426343	SUR
		Trans-Nonachlor	0.23	UJ	ng/L	P426343	SUR
		Triclosan Methyl	0.17	UJ	ng/L	P426343	SUR
		Trifluralin	0.23	UJ	ng/L	P426343	SUR
	EPA 8276	Chlordane	2.3	UJ	ng/L	P426343	SUR
		Toxaphene	79	J	ng/L	P426343	SUR

Ref. Method and Comment:

EPA 8270E: Surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8276: Surrogate failures were observed in both original extraction and re-extraction. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Carpenter Creek below Target Stormwater Pond

Collection Date/Time: 02/15/2023 14:25

Field ID: G4NW0244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388011	EPA 8270E	Aldrin	0.76	U	ng/L	P426343	
		Alpha-BHC	0.12	U	ng/L	P426343	
		Alpha-Chlordane	0.32	I	ng/L	P426343	
		PCB-1016	2.3	U	ng/L	P426343	
		Beta-BHC	0.12	U	ng/L	P426343	
		PCB-1221	2.3	U	ng/L	P426343	
		Beta-Cyfluthrin	1.5	U	ng/L	P426343	
		PCB-1232	2.3	U	ng/L	P426343	
		Bifenthrin	0.58	U	ng/L	P426343	
		PCB-1242	2.3	U	ng/L	P426343	
		PCB-1248	2.3	U	ng/L	P426343	
		Chlorothalonil	4.2	U	ng/L	P426343	
		PCB-1254	2.3	U	ng/L	P426343	
		Cis-Nonachlor	0.23	U	ng/L	P426343	
		PCB-1260	2.3	U	ng/L	P426343	
		Cypermethrin	1.8	U	ng/L	P426343	
		Dacthal	0.18	U	ng/L	P426343	
		DDD-p,p'	0.29	U	ng/L	P426343	
		DDE-p,p'	0.23	U	ng/L	P426343	
		DDT-p,p'	0.29	U	ng/L	P426343	
		Delta-BHC	0.47	U	ng/L	P426343	
		Deltamethrin	1.5	U	ng/L	P426343	
		Dichlobenil	0.29	U	ng/L	P426343	
		Dicofol	1.5	U	ng/L	P426343	
		Dieldrin	5.2		ng/L	P426343	
		Endosulfan I	0.47	U	ng/L	P426343	
		Endosulfan II	0.47	U	ng/L	P426343	
		Endosulfan Sulfate	0.35	U	ng/L	P426343	
		Endrin	0.47	U	ng/L	P426343	
		Endrin Aldehyde	0.88	U	ng/L	P426343	
		Endrin Ketone	0.47	U	ng/L	P426343	
		Esfenvalerate	0.88	U	ng/L	P426343	
		Ethalfuralin	0.18	U	ng/L	P426343	
		Fenpropathrin	0.29	U	ng/L	P426343	
		Gamma-BHC	0.15	U	ng/L	P426343	
		Gamma-Chlordane	0.25	I	ng/L	P426343	
		Heptachlor	0.23	U	ng/L	P426343	
		Heptachlor Epoxide	3.0		ng/L	P426343	
		Hexachlorobenzene**	1.2	U	ng/L	P426343	
		Kepone	5.8	UJ	ng/L	P426343	CCV
		Lambda-Cyhalothrin	0.88	U	ng/L	P426343	
		Methoprene	0.88	U	ng/L	P426343	
		Methoxychlor	0.35	U	ng/L	P426343	

Field ID: G4NW0244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388011	EPA 8270E	MGK-264	0.23	U	ng/L	P426343	
		Mirex	0.41	U	ng/L	P426343	
		Oxychlordane	0.35	U	ng/L	P426343	
		Permethrin	1.9	U	ng/L	P426343	
		Phenothrin	1.1	U	ng/L	P426343	
		Piperonyl Butoxide	0.18	U	ng/L	P426343	
		Prallethrin	2.3	U	ng/L	P426343	
		Tau-Fluvalinate	0.29	U	ng/L	P426343	
		Tetramethrin	0.88	U	ng/L	P426343	
		Trans-Nonachlor	0.23	U	ng/L	P426343	
		Triclosan Methyl	0.18	U	ng/L	P426343	
		Trifluralin	0.23	U	ng/L	P426343	
	EPA 8276	Chlordane	2.7	I	ng/L	P426343	
		Toxaphene	18	U	ng/L	P426343	

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

Sample Location: Marcus Creek upstream of Marcus Pointe Blvd Collection Date/Time: 02/15/2023 13:25

Field ID: G4NW0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387992	DEP SOP: NU-094-1	Color (true)	22		PCU	P425968	
	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P425972	
	EPA 300.0 Rev. 2.1	Chloride	7.2		mg Cl/L	P426519	
		Sulfate	3.8		mg SO4/L	P426521	
	SM 2320 B-2011	Total Alkalinity	51		mg CaCO3/L	P426392	
	SM 2540 C-2015	TDS	79		mg/L	P426485	
	SM 2540 D-2015	TSS	2	I	mg/L	P426376	
2387993	SM 4500-F- C-2011	Fluoride	0.026	I	mg F/L	P426396	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P426252	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P426716	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P426136	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P426348	
2388015	SM 5310 B-2011	Organic Carbon	3.3		mg C/L	P426274	
	EPA 200.7 Rev. 4.4	Calcium	14.9		mg/L	P426158	
		Iron	520		ug/L	P426158	
		Magnesium	3.06		mg/L	P426158	
		Potassium	3.8		mg/L	P426158	
		Sodium	5.3		mg/L	P426158	
		Strontium	59.4		ug/L	P426158	
		Tin	3.0	U	ug/L	P426158	
		Titanium	0.75	U	ug/L	P426158	
		Vanadium	2.0	U	ug/L	P426158	
		Zinc	5.0	U	ug/L	P426158	
	EPA 200.8 Rev. 5.4	Aluminum	18	I	ug/L	P426158	
		Antimony	0.050	U	ug/L	P426158	
		Arsenic	0.22		ug/L	P426158	
		Barium	18.4		ug/L	P426158	
		Beryllium	0.010	U	ug/L	P426158	
		Boron	91.7		ug/L	P426158	
		Cadmium	0.020	U	ug/L	P426158	
		Chromium	0.40	U	ug/L	P426158	
		Cobalt	0.080		ug/L	P426158	
		Copper	0.40	U	ug/L	P426158	
		Lead	0.20	U	ug/L	P426158	
		Manganese	41.3		ug/L	P426158	
		Molybdenum	0.15	U	ug/L	P426158	
		Nickel	0.50	U	ug/L	P426158	
		Selenium	0.20	U	ug/L	P426158	
		Silver	0.010	U	ug/L	P426328	
		Thallium	0.10	U	ug/L	P426158	
	SM 2340 B-2011	Hardness	49.7		mg/L	P426158	

Ref. Method and Comment:

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

Sample Location: Bayou Marcus Creek upstream of Mobile Hwy Bridge **Collection Date/Time: 02/15/2023 11:10**

Field ID: G5NW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387989	DEP SOP: NU-094-1	Color (true)	18		PCU	P425968	
	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P425972	
	EPA 300.0 Rev. 2.1	Chloride	8.3		mg Cl/L	P426519	
		Sulfate	4.8		mg SO4/L	P426521	
	SM 2320 B-2011	Total Alkalinity	16		mg CaCO3/L	P426392	
	SM 2540 C-2015	TDS	47		mg/L	P426485	
	SM 2540 D-2015	TSS	3	I	mg/L	P426376	
2387991	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P426396	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P426252	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P426716	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.39		mg N/L	P426136	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P426348	
2388007	SM 5310 B-2011	Organic Carbon	2.3		mg C/L	P426274	
	EPA 8270E	Aldrin	0.76	U	ng/L	P426343	
		Alpha-BHC	0.12	U	ng/L	P426343	
		Alpha-Chlordane	0.23	U	ng/L	P426343	
		PCB-1016	2.3	U	ng/L	P426343	
		Beta-BHC	0.12	U	ng/L	P426343	
		PCB-1221	2.3	U	ng/L	P426343	
		Beta-Cyfluthrin	1.5	U	ng/L	P426343	
		PCB-1232	2.3	U	ng/L	P426343	
		Bifenthrin	0.58	U	ng/L	P426343	
		PCB-1242	2.3	U	ng/L	P426343	
		PCB-1248	2.3	U	ng/L	P426343	
		Chlorothalonil	4.2	U	ng/L	P426343	
		PCB-1254	2.3	U	ng/L	P426343	
		Cis-Nonachlor	0.23	U	ng/L	P426343	
		PCB-1260	2.3	U	ng/L	P426343	
		Cypermethrin	1.7	U	ng/L	P426343	
		Dacthal	0.17	U	ng/L	P426343	
		DDD-p,p'	0.29	U	ng/L	P426343	
		DDE-p,p'	0.23	U	ng/L	P426343	
		DDT-p,p'	0.29	U	ng/L	P426343	
		Delta-BHC	0.47	U	ng/L	P426343	
		Deltamethrin	1.5	U	ng/L	P426343	
		Dichlobenil	0.29	U	ng/L	P426343	
		Dicofol	1.5	U	ng/L	P426343	
		Dieldrin	1.3	I	ng/L	P426343	
		Endosulfan I	0.47	U	ng/L	P426343	
		Endosulfan II	0.47	U	ng/L	P426343	
		Endosulfan Sulfate	0.35	U	ng/L	P426343	
		Endrin	0.47	U	ng/L	P426343	
		Endrin Aldehyde	0.87	U	ng/L	P426343	

Field ID: G5NW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes	
2388007	EPA 8270E	Endrin Ketone	0.47	U	ng/L	P426343	CCV	
		Esfenvalerate	0.87	U	ng/L	P426343		
		Ethalfuralin	0.17	U	ng/L	P426343		
		Fenpropathrin	0.29	U	ng/L	P426343		
		Gamma-BHC	0.15	U	ng/L	P426343		
		Gamma-Chlordane	0.23	U	ng/L	P426343		
		Heptachlor	0.23	U	ng/L	P426343		
		Heptachlor Epoxide	0.93	I	ng/L	P426343		
		Hexachlorobenzene**	1.2	U	ng/L	P426343		
		Kepone	5.8	UJ	ng/L	P426343		
		Lambda-Cyhalothrin	0.87	U	ng/L	P426343		
		Methoprene	0.87	U	ng/L	P426343		
		Methoxychlor	0.35	U	ng/L	P426343		
		MGK-264	0.23	U	ng/L	P426343		
		Mirex	0.41	U	ng/L	P426343		
		Oxychlordane	0.35	U	ng/L	P426343		
		Permethrin	1.9	U	ng/L	P426343		
		Phenothrin	1.0	U	ng/L	P426343		
		Piperonyl Butoxide	0.17	U	ng/L	P426343		
		Prallethrin	2.3	U	ng/L	P426343		
		Tau-Fluvalinate	0.29	U	ng/L	P426343		
		Tetramethrin	0.87	U	ng/L	P426343		
		Trans-Nonachlor	0.23	U	ng/L	P426343		
		Triclosan Methyl	0.17	U	ng/L	P426343		
		Trifluralin	0.23	U	ng/L	P426343		
	EPA 8276	Chlordane	2.3	U	ng/L	P426343		
		Toxaphene	17	U	ng/L	P426343		
	2388014	EPA 200.7 Rev. 4.4	Calcium	6.21		mg/L		P426158
			Iron	580		ug/L		P426158
			Magnesium	1.84		mg/L		P426158
Potassium			1.3		mg/L	P426158		
Sodium			5.4		mg/L	P426158		
Strontium			28.9		ug/L	P426158		
Tin			3.0	U	ug/L	P426158		
Titanium			1.0	I	ug/L	P426158		
Vanadium			2.0	U	ug/L	P426158		
Zinc			5.0	U	ug/L	P426158		
EPA 200.8 Rev. 5.4		Aluminum	52		ug/L	P426158		
		Antimony	0.065	I	ug/L	P426158		
		Arsenic	0.42		ug/L	P426158		
		Barium	21.5		ug/L	P426158		
		Beryllium	0.010	U	ug/L	P426158		
		Boron	34.5		ug/L	P426158		
		Cadmium	0.020	U	ug/L	P426158		
		Chromium	0.40	U	ug/L	P426158		

Field ID: G5NW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388014	EPA 200.8 Rev. 5.4	Cobalt	0.158		ug/L	P426158	
		Copper	0.52	I	ug/L	P426158	
		Lead	0.50		ug/L	P426158	
		Manganese	21.6		ug/L	P426158	
		Molybdenum	0.15	U	ug/L	P426158	
		Nickel	0.50	U	ug/L	P426158	
		Selenium	0.20	U	ug/L	P426158	
		Silver	0.010	U	ug/L	P426328	
		Thallium	0.10	U	ug/L	P426158	
	SM 2340 B-2011	Hardness	23.1		mg/L	P426158	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 02/24/2023.

Sample Location: Jackson Creek downstream of Old Corry Rd. Collection Date/Time: 02/15/2023 10:15

Field ID: G4NW0412

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388012	EPA 8270E	Aldrin	0.74	U	ng/L	P426343	
		Alpha-BHC	0.11	U	ng/L	P426343	
		Alpha-Chlordane	2.9		ng/L	P426343	
		PCB-1016	2.3	U	ng/L	P426343	
		Beta-BHC	0.19	I	ng/L	P426343	
		PCB-1221	2.3	U	ng/L	P426343	
		Beta-Cyfluthrin	1.4	U	ng/L	P426343	
		PCB-1232	2.3	U	ng/L	P426343	
		Bifenthrin	0.57	U	ng/L	P426343	
		PCB-1242	2.3	U	ng/L	P426343	
		PCB-1248	2.3	U	ng/L	P426343	
		Chlorothalonil	4.1	U	ng/L	P426343	
		PCB-1254	2.3	U	ng/L	P426343	
		Cis-Nonachlor	0.23	U	ng/L	P426343	
		PCB-1260	2.3	U	ng/L	P426343	
		Cypermethrin	1.7	U	ng/L	P426343	
		Dacthal	0.17	U	ng/L	P426343	
		DDD-p,p'	0.29	U	ng/L	P426343	
		DDE-p,p'	0.23	U	ng/L	P426343	
		DDT-p,p'	0.29	U	ng/L	P426343	
		Delta-BHC	0.46	U	ng/L	P426343	
		Deltamethrin	1.4	U	ng/L	P426343	
		Dichlobenil	0.29	U	ng/L	P426343	
		Dicofol	1.4	U	ng/L	P426343	
		Dieldrin	27		ng/L	P426343	
		Endosulfan I	0.46	U	ng/L	P426343	
		Endosulfan II	0.46	U	ng/L	P426343	
		Endosulfan Sulfate	0.34	U	ng/L	P426343	
		Endrin	0.46	U	ng/L	P426343	
		Endrin Aldehyde	0.86	U	ng/L	P426343	
		Endrin Ketone	0.64	I	ng/L	P426343	
		Esfenvalerate	0.86	U	ng/L	P426343	
		Ethalfuralin	0.17	U	ng/L	P426343	
		Fenpropathrin	0.29	U	ng/L	P426343	
		Gamma-BHC	0.14	U	ng/L	P426343	
		Gamma-Chlordane	1.4		ng/L	P426343	
		Heptachlor	0.23	U	ng/L	P426343	
		Heptachlor Epoxide	11		ng/L	P426343	
		Hexachlorobenzene**	1.1	U	ng/L	P426343	
		Kepone	5.7	UJ	ng/L	P426343	CCV
		Lambda-Cyhalothrin	0.86	U	ng/L	P426343	
		Methoprene	0.86	U	ng/L	P426343	
		Methoxychlor	0.34	U	ng/L	P426343	
		MGK-264	0.23	U	ng/L	P426343	

Field ID: G4NW0412

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388012	EPA 8270E	Mirex	0.40	U	ng/L	P426343	
		Oxychlordane	0.34	U	ng/L	P426343	
		Permethrin	1.8	U	ng/L	P426343	
		Phenothrin	1.0	U	ng/L	P426343	
		Piperonyl Butoxide	0.17	U	ng/L	P426343	
		Prallethrin	2.3	U	ng/L	P426343	
		Tau-Fluvalinate	0.29	U	ng/L	P426343	
		Tetramethrin	0.86	U	ng/L	P426343	
		Trans-Nonachlor	0.50	I	ng/L	P426343	
		Triclosan Methyl	0.17	U	ng/L	P426343	
		Trifluralin	0.23	U	ng/L	P426343	
	EPA 8276	Chlordane	16		ng/L	P426343	
		Toxaphene	680		ng/L	P426343	

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

Sample Location: Jones Creek upstream of N Navy Blvd

Collection Date/Time: 02/15/2023 09:55

Field ID: G4NW0429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2388008	EPA 8270E	Aldrin	0.76	U	ng/L	P426343	
		Alpha-BHC	0.12	U	ng/L	P426343	
		Alpha-Chlordane	0.23	U	ng/L	P426343	
		PCB-1016	2.3	U	ng/L	P426343	
		Beta-BHC	0.12	U	ng/L	P426343	
		PCB-1221	2.3	U	ng/L	P426343	
		Beta-Cyfluthrin	1.5	U	ng/L	P426343	
		PCB-1232	2.3	U	ng/L	P426343	
		Bifenthrin	0.58	U	ng/L	P426343	
		PCB-1242	2.3	U	ng/L	P426343	
		PCB-1248	2.3	U	ng/L	P426343	
		Chlorothalonil	4.2	U	ng/L	P426343	
		PCB-1254	2.3	U	ng/L	P426343	
		Cis-Nonachlor	0.23	U	ng/L	P426343	
		PCB-1260	2.3	U	ng/L	P426343	
		Cypermethrin	1.8	U	ng/L	P426343	
		Dacthal	0.18	U	ng/L	P426343	
		DDD-p,p'	0.29	U	ng/L	P426343	
		DDE-p,p'	0.23	U	ng/L	P426343	
		DDT-p,p'	0.29	U	ng/L	P426343	
		Delta-BHC	0.47	U	ng/L	P426343	
		Deltamethrin	1.5	U	ng/L	P426343	
		Dichlobenil	0.29	U	ng/L	P426343	
		Dicofol	1.5	U	ng/L	P426343	
		Dieldrin	0.47	U	ng/L	P426343	
		Endosulfan I	0.47	U	ng/L	P426343	
		Endosulfan II	0.47	U	ng/L	P426343	
		Endosulfan Sulfate	0.35	U	ng/L	P426343	
		Endrin	0.47	U	ng/L	P426343	
		Endrin Aldehyde	0.88	U	ng/L	P426343	
		Endrin Ketone	0.47	U	ng/L	P426343	
		Esfenvalerate	0.88	U	ng/L	P426343	
		Ethalfuralin	0.18	U	ng/L	P426343	
		Fenpropathrin	0.29	U	ng/L	P426343	
		Gamma-BHC	0.15	U	ng/L	P426343	
		Gamma-Chlordane	0.23	U	ng/L	P426343	
		Heptachlor	0.23	U	ng/L	P426343	
		Heptachlor Epoxide	0.29	U	ng/L	P426343	
		Hexachlorobenzene**	1.2	U	ng/L	P426343	
		Kepone	5.8	UJ	ng/L	P426343	CCV
		Lambda-Cyhalothrin	0.88	U	ng/L	P426343	
		Methoprene	0.88	U	ng/L	P426343	
		Methoxychlor	0.35	U	ng/L	P426343	
		MGK-264	0.23	U	ng/L	P426343	

Field ID: G4NW0429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes	
2388008	EPA 8270E	Mirex	0.41	U	ng/L	P426343		
		Oxychlordane	0.35	U	ng/L	P426343		
		Permethrin	1.9	U	ng/L	P426343		
		Phenothrin	1.1	U	ng/L	P426343		
		Piperonyl Butoxide	0.18	U	ng/L	P426343		
		Prallethrin	2.3	U	ng/L	P426343		
		Tau-Fluvalinate	0.29	U	ng/L	P426343		
		Tetramethrin	0.88	U	ng/L	P426343		
		Trans-Nonachlor	0.23	U	ng/L	P426343		
		Triclosan Methyl	0.18	U	ng/L	P426343		
		Trifluralin	0.23	U	ng/L	P426343		
		EPA 8276	Chlordane	2.3	U	ng/L	P426343	
	Toxaphene	18	U	ng/L	P426343			
2388016	EPA 200.7 Rev. 4.4	Calcium	5.72		mg/L	P426158		
		Iron	260		ug/L	P426158		
		Magnesium	1.02		mg/L	P426158		
		Potassium	0.47	I	mg/L	P426158		
		Sodium	6.3		mg/L	P426158		
		Strontium	16.0		ug/L	P426158		
		Tin	3.0	U	ug/L	P426158		
		Titanium	3.5		ug/L	P426158		
		Vanadium	2.0	U	ug/L	P426158		
		Zinc	6.8	I	ug/L	P426454		
		EPA 200.8 Rev. 5.4	Aluminum	282		ug/L	P426158	
			Antimony	0.12	I	ug/L	P426158	
	Arsenic		0.55		ug/L	P426158		
	Barium		8.21		ug/L	P426158		
	Beryllium		0.014	I	ug/L	P426158		
	Boron		18.1		ug/L	P426158		
	Cadmium		0.020	U	ug/L	P426158		
	Chromium		0.49	I	ug/L	P426158		
	Cobalt		0.146		ug/L	P426158		
	Copper		0.58	I	ug/L	P426158		
	Lead		0.48		ug/L	P426158		
	Manganese		8.29		ug/L	P426158		
	Molybdenum		0.15	U	ug/L	P426158		
	Nickel		0.50	U	ug/L	P426158		
	Selenium		0.29	I	ug/L	P426158		
	Silver		0.010	U	ug/L	P426328		
	Thallium		0.10	U	ug/L	P426158		
	SM 2340 B-2011		Hardness	18.5		mg/L	P426158	

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

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P425968

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425972

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426158

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 200.7 Rev. 4.4
Batch ID: P426454

Component	Result	Code	Units
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426158

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
Thallium	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426328

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426252

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426716

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426136

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426348

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

Reference Method: EPA 8270E
Batch ID: P426343

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: P426343

Component	Result	Code	Units
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P426343

Component	Result	Code	Units
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P426343

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: P426392

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

Reference Method: SM 2540 C-2015
Batch ID: P426485

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P426376

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P426396

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P426274

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: P425968

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425972

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	101		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	96.7		P	85 - 115
Sodium	98.9		P	85 - 115
Strontium	98.7		P	85 - 115
Tin	102		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	98.6		P	85 - 115
Zinc	106		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.7		P	85 - 115
Antimony	99.6		P	85 - 115
Arsenic	96.7		P	85 - 115
Barium	100		P	85 - 115
Beryllium	93.0		P	85 - 115
Boron	93.9		P	85 - 115
Cadmium	98.0		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	98.7		P	85 - 115
Copper	97.6		P	85 - 115
Lead	95.5		P	85 - 115
Manganese	99.3		P	85 - 115
Molybdenum	95.6		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	98.1		P	85 - 115
Thallium	97.9		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P426328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P426519

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P426521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P426252

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P426716

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P426136

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P426348

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

Reference Method: EPA 8270E
 Batch ID: P426343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	42.2		P	10 - 92.0
Alpha-BHC	76.6		P	75 - 107
Alpha-Chlordane	69.6		P	50 - 108
Beta-BHC	65.3		P	36 - 138
Beta-Cyfluthrin	63.8		P	20 - 161
Bifenthrin	53.2		P	10 - 119
Chlorothalonil	77.9		P	26 - 186
Cis-Nonachlor	61.9		P	42 - 119
Cypermethrin	65.5		P	22 - 150
Dacthal	77.5		P	72 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P426343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DDD-p,p'	60.7		P	45 - 107
DDE-p,p'	65.3		P	48 - 106
DDT-p,p'	55.9		P	48 - 110
Delta-BHC	68.0		P	54 - 140
Deltamethrin	68.1		P	22 - 189
Dichlobenil	60.1		P	36 - 117
Dicofol	66.6		P	46 - 155
Dieldrin	77.2		P	54 - 110
Endosulfan I	75.3		P	59 - 105
Endosulfan II	74.6		P	51 - 118
Endosulfan Sulfate	63.8		P	57 - 121
Endrin	76.1		P	10 - 120
Endrin Aldehyde	68.6		P	34 - 118
Endrin Ketone	88.3		P	69 - 177
Esfenvalerate	63.0		P	23 - 168
Ethalfuralin	68.9		P	49 - 99.0
Fenpropathrin	62.9		P	34 - 117
Gamma-BHC	79.7		P	72 - 117
Gamma-Chlordane	66.1		P	43 - 106
Heptachlor	60.0		P	41 - 98.0
Heptachlor Epoxide	75.8		P	57 - 106
Hexachlorobenzene	51.7		P	36 - 99.0
Kepone	125		P	16 - 215
Lambda-Cyhalothrin	60.6		P	21 - 177
Methoprene	64.7		P	10 - 119
Methoxychlor	71.5		P	60 - 112
MGK-264	50.8		P	26 - 122
Mirex	55.2		P	10 - 169
Oxychlordane	68.5		P	43 - 105
PCB-1016	66.8		P	48 - 112
PCB-1260	71.6		P	44 - 118
Permethrin	67.5		P	24 - 148
Phenothrin	47.2		P	10 - 106
Piperonyl Butoxide	121		P	10 - 139
Prallethrin	53.7		P	17 - 109
Tau-Fluvalinate	59.2		P	13 - 131
Tetramethrin	57.6		P	10 - 132
Trans-Nonachlor	65.9		P	44 - 106
Triclosan Methyl	74.2		P	59 - 109
Trifluralin	67.2		P	44 - 101

Reference Method: EPA 8276
Batch ID: P426343

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	93.6		P	61 - 116
Toxaphene	93.1		P	48 - 124

Reference Method: SM 2320 B-2011
Batch ID: P426392

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

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P426392

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.7		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P426485

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

Reference Method: SM 2540 D-2015
Batch ID: P426376

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P426396

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426274

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P426158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388015	Calcium	98.1		P	80 - 120
2388015	Iron	99.9	102	P/P	80 - 120
2388015	Magnesium	103	105	P/P	80 - 120
2388015	Potassium	94.9	98.7	P/P	80 - 120
2388015	Sodium	97.8		P	80 - 120
2388015	Strontium	97.4	98.8	P/P	80 - 120
2388015	Tin	102	102	P/P	80 - 120
2388015	Titanium	103	104	P/P	80 - 120
2388015	Vanadium	100	101	P/P	80 - 120
2388015	Zinc	104	105	P/P	80 - 120
2388431	Calcium	97.2		P	80 - 120
2388431	Iron	100		P	80 - 120
2388431	Magnesium	101		P	80 - 120
2388431	Potassium	94.7		P	80 - 120
2388431	Sodium	98.1		P	80 - 120
2388431	Strontium	96.4		P	80 - 120
2388431	Tin	99.4		P	80 - 120
2388431	Titanium	103		P	80 - 120
2388431	Vanadium	101		P	80 - 120
2388431	Zinc	105		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P426454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2389779	Zinc	97.9	98.6	P/P	80 - 120
2390233	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388015	Aluminum	112	95.6	P/P	80 - 120
2388015	Antimony	99.9	99.6	P/P	80 - 120
2388015	Arsenic	96.7	96.1	P/P	80 - 120
2388015	Barium	100	100	P/P	80 - 120
2388015	Beryllium	94.6	94.7	P/P	80 - 120
2388015	Boron	97.3	94.2	P/P	80 - 120
2388015	Cadmium	99.8	96.9	P/P	80 - 120
2388015	Chromium	99.4	99.1	P/P	80 - 120
2388015	Cobalt	97.3	96.5	P/P	80 - 120
2388015	Copper	97.1	95.8	P/P	80 - 120
2388015	Lead	96.7	95.0	P/P	80 - 120
2388015	Manganese	101	98.2	P/P	80 - 120
2388015	Molybdenum	97.1	97.0	P/P	80 - 120
2388015	Nickel	99.2	98.2	P/P	80 - 120
2388015	Selenium	96.7	95.7	P/P	80 - 120
2388015	Thallium	98.7	98.8	P/P	80 - 120
2388431	Aluminum	95.8		P	80 - 120
2388431	Antimony	99.4		P	80 - 120
2388431	Arsenic	94.4		P	80 - 120
2388431	Barium	100		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388431	Beryllium	91.0		P	80 - 120
2388431	Boron	94.0		P	80 - 120
2388431	Cadmium	97.2		P	80 - 120
2388431	Chromium	97.4		P	80 - 120
2388431	Cobalt	94.8		P	80 - 120
2388431	Copper	92.6		P	80 - 120
2388431	Lead	96.0		P	80 - 120
2388431	Manganese	97.1		P	80 - 120
2388431	Molybdenum	94.9		P	80 - 120
2388431	Nickel	97.8		P	80 - 120
2388431	Selenium	95.2		P	80 - 120
2388431	Thallium	97.7		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2388014	Silver	101	102	P/P	80 - 120
2388432	Silver	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387929	Chloride	96.8		P	90 - 110
2387931	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387929	Sulfate	101		P	90 - 110
2387931	Sulfate	106		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426252

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387990	Ammonia-N	98.4	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426716

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387990	Kjeldahl Nitrogen	107	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426136

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387938	NO2NO3-N	93.0	91.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P426348

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387991	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P426343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387837	Aldrin	53.3	48.5	P/P	20 - 82.0
2387837	Alpha-BHC	87.7	83.4	P/P	71 - 109
2387837	Alpha-Chlordane	79.9	75.0	P/P	42 - 106
2387837	Beta-BHC	98.3	80.8	P/P	69 - 180
2387837	Beta-Cyfluthrin	92.0	83.6	P/P	18 - 175
2387837	Bifenthrin	77.9	76.4	P/P	21 - 128
2387837	Chlorothalonil	105	94.1	P/P	10 - 300
2387837	Cis-Nonachlor	77.7	73.2	P/P	34 - 106
2387837	Cypermethrin	96.9	88.6	P/P	22 - 158
2387837	Dacthal	92.1	88.3	P/P	54 - 116
2387837	DDD-p,p'	79.0	74.9	P/P	34 - 107
2387837	DDE-p,p'	81.4	78.5	P/P	33 - 110
2387837	DDT-p,p'	80.3	76.7	P/P	50 - 122
2387837	Delta-BHC	96.9	86.1	P/P	77 - 193
2387837	Deltamethrin	105	97.3	P/P	10 - 195
2387837	Dichlobenil	53.7	60.4	P/P	25 - 113
2387837	Dicofol	80.5	74.1	P/P	38 - 247
2387837	Dieldrin	90.8	86.1	P/P	45 - 118
2387837	Endosulfan I	88.2	84.7	P/P	51 - 106
2387837	Endosulfan II	98.5	92.3	P/P	37 - 122
2387837	Endosulfan Sulfate	84.4	74.0	P/P	43 - 132
2387837	Endrin	93.2	86.1	P/P	29 - 101
2387837	Endrin Aldehyde	80.2	69.7	P/P	19 - 110
2387837	Endrin Ketone	93.1	85.3	P/P	60 - 140
2387837	Esfenvalerate	100	90.0	P/P	26 - 199
2387837	Ethalfuralin	82.4	74.0	P/P	45 - 99.0
2387837	Fenpropathrin	80.9	77.8	P/P	35 - 120
2387837	Gamma-BHC	93.2	88.8	P/P	63 - 128
2387837	Gamma-Chlordane	82.4	78.4	P/P	40 - 104
2387837	Heptachlor	72.3	69.8	P/P	36 - 97.0
2387837	Heptachlor Epoxide	89.4	85.1	P/P	49 - 184
2387837	Hexachlorobenzene	58.0	60.6	P/P	39 - 96.0
2387837	Kepone	132	132	P/P	10 - 217
2387837	Lambda-Cyhalothrin	88.0	79.4	P/P	21 - 193
2387837	Methoprene	75.3	74.0	P/P	20 - 106
2387837	Methoxychlor	90.5	86.9	P/P	53 - 118
2387837	MGK-264	63.5	57.6	P/P	40 - 118
2387837	Mirex	73.7	70.0	P/P	26 - 92.0
2387837	Oxychlordane	83.4	81.3	P/P	44 - 99.0
2387837	Permethrin	93.9	88.0	P/P	33 - 182
2387837	Phenothrin	70.1	65.8	P/P	10 - 129
2387837	Piperonyl Butoxide	152	138	P/P	10 - 211
2387837	Prallethrin	65.0	54.9	P/P	24 - 113
2387837	Tau-Fluvalinate	90.5	80.3	P/P	14 - 149
2387837	Tetramethrin	72.8	69.9	P/P	17 - 151
2387837	Trans-Nonachlor	76.8	75.9	P/P	42 - 102

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P426343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387837	Triclosan Methyl	85.4	81.8	P/P	48 - 108
2387837	Trifluralin	83.5	75.7	P/P	47 - 96.0
2387860	PCB-1016	73.6	78.5	P/P	46 - 111
2387860	PCB-1260	79.6	85.3	P/P	45 - 114

Reference Method: EPA 8276
Batch ID: P426343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387860	Chlordane	82.7	84.1	P/P	53 - 126
2387860	Toxaphene	85.4	80.8	P/P	56 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P426396

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387728	Fluoride	101	101	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387936	Organic Carbon	94.6	96.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P425968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387928	Color (true)	5.78	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425972

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387918	Turbidity	4.23	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388015	Calcium	0.501	Spike	P	0 - 20
2388015	Iron	1.72	Spike	P	0 - 20
2388015	Magnesium	1.20	Spike	P	0 - 20
2388015	Potassium	1.97	Spike	P	0 - 20
2388015	Sodium	0.850	Spike	P	0 - 20
2388015	Strontium	1.36	Spike	P	0 - 20
2388015	Tin	0.475	Spike	P	0 - 20
2388015	Titanium	0.653	Spike	P	0 - 20
2388015	Vanadium	0.561	Spike	P	0 - 20
2388015	Zinc	0.557	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P426454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2389779	Zinc	0.677	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388015	Aluminum	15.6	Spike	P	0 - 20
2388015	Antimony	0.378	Spike	P	0 - 20
2388015	Arsenic	0.653	Spike	P	0 - 20
2388015	Barium	0.0687	Spike	P	0 - 20
2388015	Beryllium	0.118	Spike	P	0 - 20
2388015	Boron	1.63	Spike	P	0 - 20
2388015	Cadmium	3.01	Spike	P	0 - 20
2388015	Chromium	0.334	Spike	P	0 - 20
2388015	Cobalt	0.811	Spike	P	0 - 20
2388015	Copper	1.30	Spike	P	0 - 20
2388015	Lead	1.82	Spike	P	0 - 20
2388015	Manganese	1.44	Spike	P	0 - 20
2388015	Molybdenum	0.127	Spike	P	0 - 20
2388015	Nickel	1.06	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388015	Selenium	0.982	Spike	P	0 - 20
2388015	Thallium	0.113	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2388014	Silver	0.206	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426519

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387929	Chloride	1.21	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387929	Sulfate	1.32	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426252

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387990	Ammonia-N	0.130	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P426716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387990	Kjeldahl Nitrogen	5.53	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P426136

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387938	NO2NO3-N	0.948	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P426348

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387991	Total-P	1.09	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P426343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387837	Aldrin	9.43	Spike	P	0 - 41
2387837	Alpha-BHC	4.96	Spike	P	0 - 25
2387837	Alpha-Chlordane	6.23	Spike	P	0 - 33
2387837	Beta-BHC	19.6	Spike	P	0 - 36
2387837	Beta-Cyfluthrin	9.58	Spike	P	0 - 42
2387837	Bifenthrin	1.82	Spike	P	0 - 53
2387837	Chlorothalonil	10.5	Spike	P	0 - 71
2387837	Cis-Nonachlor	6.05	Spike	P	0 - 29
2387837	Cypermethrin	9.02	Spike	P	0 - 40
2387837	Dacthal	4.24	Spike	P	0 - 26
2387837	DDD-p,p'	5.36	Spike	P	0 - 39
2387837	DDE-p,p'	3.67	Spike	P	0 - 33
2387837	DDT-p,p'	4.54	Spike	P	0 - 40
2387837	Delta-BHC	11.7	Spike	P	0 - 37
2387837	Deltamethrin	7.94	Spike	P	0 - 100
2387837	Dichlobenil	11.7	Spike	P	0 - 40
2387837	Dicofol	8.36	Spike	P	0 - 31
2387837	Dieldrin	5.30	Spike	P	0 - 27
2387837	Endosulfan I	4.07	Spike	P	0 - 23
2387837	Endosulfan II	6.45	Spike	P	0 - 28
2387837	Endosulfan Sulfate	13.2	Spike	P	0 - 38
2387837	Endrin	7.92	Spike	P	0 - 63
2387837	Endrin Aldehyde	14.0	Spike	P	0 - 60
2387837	Endrin Ketone	8.82	Spike	P	0 - 37
2387837	Esfenvalerate	10.7	Spike	P	0 - 52
2387837	Ethalfuralin	10.7	Spike	P	0 - 23
2387837	Fenpropathrin	3.84	Spike	P	0 - 32
2387837	Gamma-BHC	4.87	Spike	P	0 - 17
2387837	Gamma-Chlordane	4.95	Spike	P	0 - 40
2387837	Heptachlor	3.61	Spike	P	0 - 29
2387837	Heptachlor Epoxide	4.98	Spike	P	0 - 25
2387837	Hexachlorobenzene	4.31	Spike	P	0 - 36
2387837	Kepone	0.0374	Spike	P	0 - 93
2387837	Lambda-Cyhalothrin	10.3	Spike	P	0 - 55
2387837	Methoprene	1.62	Spike	P	0 - 53
2387837	Methoxychlor	4.08	Spike	P	0 - 29
2387837	MGK-264	9.78	Spike	P	0 - 35
2387837	Mirex	5.16	Spike	P	0 - 46
2387837	Oxychlordane	2.61	Spike	P	0 - 29
2387837	Permethrin	6.50	Spike	P	0 - 44
2387837	Phenothrin	6.33	Spike	P	0 - 56
2387837	Piperonyl Butoxide	10.2	Spike	P	0 - 100
2387837	Prallethrin	16.9	Spike	P	0 - 42
2387837	Tau-Fluvalinate	12.0	Spike	P	0 - 54
2387837	Tetramethrin	4.06	Spike	P	0 - 51
2387837	Trans-Nonachlor	1.29	Spike	P	0 - 37
2387837	Triclosan Methyl	4.34	Spike	P	0 - 31
2387837	Trifluralin	9.81	Spike	P	0 - 30
2387860	PCB-1016	6.42	Spike	P	0 - 32
2387860	PCB-1260	6.97	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P426343

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387860	Chlordane	1.66	Spike	P	0 - 25
2387860	Toxaphene	5.53	Spike	P	0 - 26

Reference Method: SM 2320 B-2011

Batch ID: P426392

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387728	Total Alkalinity	0.783	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P426485

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387726	TDS	4.89	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P426396

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387728	Fluoride	0.513	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P426274

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387936	Organic Carbon	2.10	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2388006
Field Sample ID: G5NW0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	40.5	P	29 - 130
EPA 8270E	Decachlorobiphenyl	39.8	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	23.3	F	29 - 104
EPA 8270E	Tetrachloro-m-xylene	24.9	F	30 - 97.0
EPA 8276	Decachlorobiphenyl	27.1	F	30 - 101
EPA 8276	PCNB	52.0	P	48 - 121

Lab Sample ID: 2388007
Field Sample ID: G5NW0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	50.5	P	29 - 130
EPA 8270E	Decachlorobiphenyl	47.3	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	37.5	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	37.4	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	36.1	P	30 - 101
EPA 8276	PCNB	52.5	P	48 - 121

Lab Sample ID: 2388008
Field Sample ID: G4NW0429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	71.7	P	29 - 130
EPA 8270E	Decachlorobiphenyl	69.0	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	36.7	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	39.0	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	50.3	P	30 - 101
EPA 8276	PCNB	63.3	P	48 - 121

Lab Sample ID: 2388009
Field Sample ID: G4NW0505

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	46.1	P	29 - 130
EPA 8270E	Decachlorobiphenyl	43.1	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	35.4	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	35.8	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	30.4	P	30 - 101
EPA 8276	PCNB	64.3	P	48 - 121

Lab Sample ID: 2388010
Field Sample ID: G4NW0036

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	46.6	P	29 - 130
EPA 8270E	Decachlorobiphenyl	40.8	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	23.9	F	29 - 104
EPA 8270E	Tetrachloro-m-xylene	26.0	F	30 - 97.0
EPA 8276	Decachlorobiphenyl	26.4	F	30 - 101
EPA 8276	PCNB	48.2	P	48 - 121

Quality Assurance Report Surrogates

Lab Sample ID: 2388011
Field Sample ID: G4NW0244

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	50.7	P	29 - 130
EPA 8270E	Decachlorobiphenyl	48.2	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	37.1	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	39.9	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	31.3	P	30 - 101
EPA 8276	PCNB	60.4	P	48 - 121

Lab Sample ID: 2388012
Field Sample ID: G4NW0412

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	52.7	P	29 - 130
EPA 8270E	Decachlorobiphenyl	48.5	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	38.4	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	41.5	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	33.8	P	30 - 101
EPA 8276	PCNB	64.9	P	48 - 121

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117491

Included Lab Sample IDs: 2387988, 2387989, 2387992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117492

Included Lab Sample IDs: 2387988, 2387989, 2387992

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117560

Included Lab Sample IDs: 2387990, 2387991, 2387993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117602

Included Lab Sample IDs: 2387990, 2387991, 2387993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	99.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117613

Included Lab Sample IDs: 2388013, 2388014, 2388015, 2388016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	98.6	P/P	90 - 110
Calcium	99.3	100	P/P	90 - 110
Iron	100	98.5	P/P	90 - 110
Iron	98.9	100	P/P	90 - 110
Magnesium	100	98.7	P/P	90 - 110
Magnesium	99.4	100	P/P	90 - 110
Potassium	101	99.4	P/P	90 - 110
Potassium	99.3	101	P/P	90 - 110
Sodium	97.8	99.5	P/P	90 - 110
Sodium	99.5	98.7	P/P	90 - 110
Strontium	100	101	P/P	90 - 110
Strontium	101	101	P/P	90 - 110
Tin	102	101	P/P	90 - 110
Tin	104	102	P/P	90 - 110
Titanium	102	101	P/P	90 - 110
Titanium	103	102	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Vanadium	103	101	P/P	90 - 110
Zinc	108	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117614

Included Lab Sample IDs: 2388013, 2388014, 2388015, 2388016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.0	95.3	P/P	90 - 110
Aluminum	96.9	96.0	P/P	90 - 110
Antimony	98.3	97.9	P/P	90 - 110
Antimony	98.9	98.3	P/P	90 - 110
Arsenic	96.3	93.8	P/P	90 - 110
Arsenic	97.7	96.3	P/P	90 - 110
Barium	97.3	96.3	P/P	90 - 110
Barium	98.7	97.3	P/P	90 - 110
Beryllium	95.6	96.2	P/P	90 - 110
Beryllium	96.2	93.0	P/P	90 - 110
Boron	90.8	95.5	P/P	90 - 110
Boron	95.5	92.5	P/P	90 - 110
Cadmium	95.5	95.8	P/P	90 - 110
Cadmium	95.8	95.8	P/P	90 - 110
Chromium	97.3	95.1	P/P	90 - 110
Chromium	97.6	97.3	P/P	90 - 110
Cobalt	95.3	93.1	P/P	90 - 110
Cobalt	96.7	95.3	P/P	90 - 110
Copper	92.9	92.0	P/P	90 - 110
Copper	96.4	92.9	P/P	90 - 110
Lead	93.4	93.5	P/P	90 - 110
Lead	94.3	93.4	P/P	90 - 110
Manganese	95.7	98.0	P/P	90 - 110
Manganese	98.0	97.1	P/P	90 - 110
Molybdenum	94.5	93.9	P/P	90 - 110
Molybdenum	95.5	94.5	P/P	90 - 110
Nickel	94.8	93.2	P/P	90 - 110
Nickel	97.2	94.8	P/P	90 - 110
Selenium	96.9	96.4	P/P	90 - 110
Selenium	97.7	96.9	P/P	90 - 110
Thallium	96.8	97.1	P/P	90 - 110
Thallium	96.9	96.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A117617

Included Lab Sample IDs: 2387990, 2387991, 2387993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.9	95.8	P/P	90 - 110
Organic Carbon	95.8	96.6	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117667

Included Lab Sample IDs: 2387988, 2387989, 2387992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.0	99.1	P/P	90 - 110
Total Alkalinity	98.6	96.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A117667

Included Lab Sample IDs: 2387988, 2387989, 2387992

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

Reference Method: EPA 8276

Run ID: A117678

Included Lab Sample IDs: 2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Chlordane	101		P	80 - 120
Toxaphene	104		P	80 - 120
Toxaphene	105		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117682

Included Lab Sample IDs: 2387990, 2387991, 2387993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.5	97.5	P/P	90 - 110
Total-P	97.5	98.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117687

Included Lab Sample IDs: 2387988, 2387989, 2387992

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	95.7	98.3	P/P	90 - 110
Sulfate	99.1	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117690

Included Lab Sample IDs: 2388014

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

Reference Method: EPA 8270E

Run ID: A117713

Included Lab Sample IDs: 2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	102		P	80 - 120
PCB-1260	103		P	80 - 120

Reference Method: EPA 8270E

Run ID: A117715

Included Lab Sample IDs: 2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.9		P	80 - 120
Alpha-BHC	99.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A117715

Included Lab Sample IDs: 2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-Chlordane	97.3		P	80 - 120
Beta-BHC	90.0		P	80 - 120
Beta-Cyfluthrin	83.0		P	80 - 120
Bifenthrin	87.8		P	80 - 120
Chlorothalonil	90.6		P	80 - 120
Cis-Nonachlor	99.6		P	80 - 120
Cypermethrin	85.7		P	80 - 120
Dacthal	99.5		P	80 - 120
DDD-p,p'	91.2		P	80 - 120
DDE-p,p'	99.9		P	80 - 120
DDT-p,p'	97.3		P	80 - 120
Delta-BHC	87.1		P	80 - 120
Deltamethrin	84.4		P	80 - 120
Dichlobenil	83.0		P	80 - 120
Dicofol	95.3		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	95.9		P	80 - 120
Endosulfan II	94.6		P	80 - 120
Endosulfan Sulfate	90.7		P	80 - 120
Endrin	99.4		P	80 - 120
Endrin Aldehyde	94.7		P	80 - 120
Endrin Ketone	98.7		P	80 - 120
Esfenvalerate	89.4		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	89.1		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	99.7		P	80 - 120
Heptachlor	100		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	93.8		P	80 - 120
Kepone	64.1*		F	80 - 120
Lambda-Cyhalothrin	87.0		P	80 - 120
Methoprene	101		P	80 - 120
Methoxychlor	90.9		P	80 - 120
MGK-264	90.9		P	80 - 120
Mirex	95.5		P	80 - 120
Oxychlordane	97.8		P	80 - 120
Permethrin	89.4		P	80 - 120
Phenothrin	87.7		P	80 - 120
Piperonyl Butoxide	93.6		P	80 - 120
Prallethrin	98.2		P	80 - 120
Tau-Fluvalinate	84.8		P	80 - 120
Tetramethrin	89.4		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Triclosan Methyl	99.7		P	80 - 120
Trifluralin	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117720

Included Lab Sample IDs: 2388013, 2388015, 2388016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	101	99.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117771

Included Lab Sample IDs: 2388016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	99.9	99.0	P/P	95 - 105

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117914

Included Lab Sample IDs: 2387990, 2387991, 2387993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.6	97.2	P/P	90 - 110
Kjeldahl Nitrogen	97.2	92.6	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)	103				5.78	
EPA 180.1 Rev. 2.0	Turbidity	101				4.23	
EPA 200.7 Rev. 4.4	Calcium	101	98.1	97.2			0.501
	Iron	101	99.9	102	100		1.72
	Magnesium	105	103	105	101		1.20
	Potassium	96.7	94.9	98.7	94.7		1.97
	Sodium	98.9	97.8	98.1			0.850
	Strontium	98.7	97.4	98.8	96.4		1.36
	Tin	102	102	102	99.4		0.475
	Titanium	101	103	104	103		0.653
	Vanadium	98.6	100	101	101		0.561
	Zinc	106	104	105	105		0.557
	Zinc	103	97.9	98.6	102		0.677
EPA 200.8 Rev. 5.4	Aluminum	96.7	112	95.6	95.8		15.6
	Antimony	99.6	99.9	99.6	99.4		0.378
	Arsenic	96.7	96.7	96.1	94.4		0.653
	Barium	100	100	100	100		0.0687
	Beryllium	93.0	94.6	94.7	91.0		0.118
	Boron	93.9	97.3	94.2	94.0		1.63
	Cadmium	98.0	99.8	96.9	97.2		3.01
	Chromium	100	99.4	99.1	97.4		0.334
	Cobalt	98.7	97.3	96.5	94.8		0.811
	Copper	97.6	97.1	95.8	92.6		1.30
	Lead	95.5	96.7	95.0	96.0		1.82
	Manganese	99.3	101	98.2	97.1		1.44
	Molybdenum	95.6	97.1	97.0	94.9		0.127
	Nickel	99.9	99.2	98.2	97.8		1.06
	Selenium	98.1	96.7	95.7	95.2		0.982
	Silver	103	102	101	102		0.206
	Thallium	97.9	98.7	98.8	97.7		0.113
EPA 300.0 Rev. 2.1	Chloride	103	96.8	102		1.21	
	Sulfate	106	101	106		1.32	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6	98.4	98.2			0.130
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	107	100			5.53
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	93.0	91.5			0.948
EPA 365.1 Rev. 2.0	Total-P	101	102	103			1.09
EPA 8270E	Aldrin	42.2	53.3	48.5			9.43
	Alpha-BHC	76.6	87.7	83.4			4.96
	Alpha-Chlordane	69.6	79.9	75.0			6.23
	Beta-BHC	65.3	98.3	80.8			19.6
	Beta-Cyfluthrin	63.8	92.0	83.6			9.58
	Bifenthrin	53.2	77.9	76.4			1.82
	Chlorothalonil	77.9	105	94.1			10.5
	Cis-Nonachlor	61.9	77.7	73.2			6.05
	Cypermethrin	65.5	96.9	88.6			9.02
	Dacthal	77.5	92.1	88.3			4.24
	DDD-p,p'	60.7	79.0	74.9			5.36
	DDE-p,p'	65.3	81.4	78.5			3.67
	DDT-p,p'	55.9	80.3	76.7			4.54
	Delta-BHC	68.0	96.9	86.1			11.7
	Deltamethrin	68.1	105	97.3			7.94
	Dichlobenil	60.1	53.7	60.4			11.7
	Dicofol	66.6	80.5	74.1			8.36
	Dieldrin	77.2	90.8	86.1			5.30

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
			LCS	SMP	MS	
EPA 8270E	Endosulfan I	75.3	88.2	84.7		4.07
	Endosulfan II	74.6	98.5	92.3		6.45
	Endosulfan Sulfate	63.8	84.4	74.0		13.2
	Endrin	76.1	93.2	86.1		7.92
	Endrin Aldehyde	68.6	80.2	69.7		14.0
	Endrin Ketone	88.3	93.1	85.3		8.82
	Esfenvalerate	63.0	100	90.0		10.7
	Ethalfuralin	68.9	82.4	74.0		10.7
	Fenpropathrin	62.9	80.9	77.8		3.84
	Gamma-BHC	79.7	93.2	88.8		4.87
	Gamma-Chlordane	66.1	82.4	78.4		4.95
	Heptachlor	60.0	72.3	69.8		3.61
	Heptachlor Epoxide	75.8	89.4	85.1		4.98
	Hexachlorobenzene	51.7	58.0	60.6		4.31
	Kepone	125	132	132		0.0374
	Lambda-Cyhalothrin	60.6	88.0	79.4		10.3
	Methoprene	64.7	75.3	74.0		1.62
	Methoxychlor	71.5	90.5	86.9		4.08
	MGK-264	50.8	63.5	57.6		9.78
	Mirex	55.2	73.7	70.0		5.16
	Oxychlordane	68.5	83.4	81.3		2.61
	PCB-1016	66.8	73.6	78.5		6.42
	PCB-1260	71.6	79.6	85.3		6.97
	Permethrin	67.5	93.9	88.0		6.50
	Phenothrin	47.2	70.1	65.8		6.33
	Piperonyl Butoxide	121	152	138		10.2
	Prallethrin	53.7	65.0	54.9		16.9
	Tau-Fluvalinate	59.2	90.5	80.3		12.0
	Tetramethrin	57.6	72.8	69.9		4.06
	Trans-Nonachlor	65.9	76.8	75.9		1.29
	Triclosan Methyl	74.2	85.4	81.8		4.34
	Trifluralin	67.2	83.5	75.7		9.81
EPA 8276	Chlordane	93.6	82.7	84.1		1.66
	Toxaphene	93.1	85.4	80.8		5.53
SM 2320 B-2011	Total Alkalinity	97.7			0.783	
SM 2540 C-2015	TDS	104			4.89	
SM 2540 D-2015	TSS	95.3				
SM 4500-F- C-2011	Fluoride	100	101	101		0.513
SM 5310 B-2011	Organic Carbon	95.8	94.6	96.8		2.10

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2387988, 2387989, 2387992
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2387988, 2387989, 2387992
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2388013, 2388014, 2388015, 2388016
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2388013, 2388014, 2388015, 2388016
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2387988, 2387989, 2387992
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2387988, 2387989, 2387992
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2387990, 2387991, 2387993
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2387990, 2387991, 2387993

Reference Method Descriptions

Method	Description	Associated Samples
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2387990, 2387991, 2387993
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2387990, 2387991, 2387993
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012
EPA 8270E	PCBs in water matrices by GC/MS/MS	2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2388006, 2388007, 2388008, 2388009, 2388010, 2388011, 2388012
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2387988, 2387989, 2387992
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2388013, 2388014, 2388015, 2388016
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2387988, 2387989, 2387992
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2387988, 2387989, 2387992
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2387988, 2387989, 2387992
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2387990, 2387991, 2387993

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	02/16/2023			02/16/2023 15:26	Alexis Price	2387988, 2387989
	02/16/2023			02/16/2023 15:27	Alexis Price	2387992
	02/16/2023			02/16/2023 15:06	Khloe J Berg	2387988
EPA 180.1 Rev. 2.0	02/16/2023			02/16/2023 15:07	Khloe J Berg	2387989
	02/16/2023			02/16/2023 15:09	Khloe J Berg	2387992
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 18:04	McKinley C Carter	2388013
EPA 200.7 Rev. 4.4	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 18:10	McKinley C Carter	2388014
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 18:17	McKinley C Carter	2388015
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 19:08	McKinley C Carter	2388016
EPA 200.8 Rev. 5.4	02/16/2023	02/28/2023 11:05	George D Taylor	03/02/2023 14:34	McKinley C Carter	2388016
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 14:30	Conrad Hartmann	2388015
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 15:33	Conrad Hartmann	2388013
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 15:42	Conrad Hartmann	2388014
	02/16/2023	02/21/2023 12:40	George D Taylor	02/22/2023 15:51	Conrad Hartmann	2388016
	02/16/2023	02/24/2023 10:50	George D Taylor	02/27/2023 14:50	Conrad Hartmann	2388014
	02/16/2023	02/24/2023 10:50	George D Taylor	02/28/2023 12:33	Conrad Hartmann	2388013
	02/16/2023	02/24/2023 10:50	George D Taylor	02/28/2023 12:39	Conrad Hartmann	2388015
	02/16/2023	02/24/2023 10:50	George D Taylor	02/28/2023 12:45	Conrad Hartmann	2388016
EPA 300.0 Rev. 2.1	02/16/2023			03/01/2023 05:37	Judith K. Clark	2387988
	02/16/2023			03/01/2023 05:52	Judith K. Clark	2387989
	02/16/2023			03/01/2023 06:07	Judith K. Clark	2387992
EPA 350.1 Rev. 2.0	02/16/2023			02/22/2023 13:31	Ping Hua	2387990
	02/16/2023			02/22/2023 13:35	Ping Hua	2387991
	02/16/2023			02/22/2023 13:36	Ping Hua	2387993
EPA 351.2 Rev. 2.0	02/16/2023	03/07/2023 09:18	Simonne.V. Calhoun	03/09/2023 17:31	Judith K. Clark	2387990
	02/16/2023	03/07/2023 09:18	Simonne.V. Calhoun	03/09/2023 17:35	Judith K. Clark	2387991
	02/16/2023	03/07/2023 09:18	Simonne.V. Calhoun	03/09/2023 17:39	Judith K. Clark	2387993
EPA 353.2 Rev. 2.0	02/16/2023			02/20/2023 11:58	Beverly Y. Sanders	2387990
	02/16/2023			02/20/2023 11:59	Beverly Y. Sanders	2387991
	02/16/2023			02/20/2023 12:00	Beverly Y. Sanders	2387993
EPA 365.1 Rev. 2.0	02/16/2023	02/24/2023 12:02	Adam P Silver	02/27/2023 11:47	James L Waggeberby	2387991
	02/16/2023	02/24/2023 12:02	Adam P Silver	02/27/2023 11:58	James L Waggeberby	2387990
	02/16/2023	02/24/2023 12:02	Adam P Silver	02/27/2023 11:59	James L Waggeberby	2387993
EPA 8270E	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 19:03	Vandana T. Nagar	2388006
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 20:02	Vandana T. Nagar	2388008
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 20:26	Vandana T. Nagar	2388006
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 20:31	Vandana T. Nagar	2388009
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 21:01	Vandana T. Nagar	2388010
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 21:26	Vandana T. Nagar	2388008
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 21:30	Vandana T. Nagar	2388011

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 21:56	Vandana T. Nagar	2388009
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 21:59	Vandana T. Nagar	2388012
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 22:26	Vandana T. Nagar	2388010
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 22:56	Vandana T. Nagar	2388011
	02/16/2023	02/20/2023 09:00	Julie Wi	02/23/2023 23:27	Vandana T. Nagar	2388012
	02/16/2023	02/20/2023 14:29	Julie Wi	02/23/2023 19:33	Vandana T. Nagar	2388007
	02/16/2023	02/20/2023 14:29	Julie Wi	02/23/2023 20:56	Vandana T. Nagar	2388007
EPA 8276	02/16/2023	02/20/2023 09:00	Julie Wi	02/26/2023 10:31	Arthur Maknenko	2388006
	02/16/2023	02/20/2023 09:00	Julie Wi	02/26/2023 13:23	Arthur Maknenko	2388008
	02/16/2023	02/20/2023 09:00	Julie Wi	02/26/2023 14:20	Arthur Maknenko	2388009
	02/16/2023	02/20/2023 09:00	Julie Wi	02/26/2023 15:17	Arthur Maknenko	2388010
	02/16/2023	02/20/2023 09:00	Julie Wi	02/26/2023 16:14	Arthur Maknenko	2388011
	02/16/2023	02/20/2023 09:00	Julie Wi	02/26/2023 17:12	Arthur Maknenko	2388012
SM 2320 B-2011	02/16/2023	02/20/2023 14:29	Julie Wi	02/26/2023 12:25	Arthur Maknenko	2388007
	02/16/2023			02/25/2023 02:46	Dale L. Simmons	2387988
	02/16/2023			02/25/2023 03:36	Dale L. Simmons	2387989
SM 2340 B-2011	02/16/2023			02/25/2023 03:49	Dale L. Simmons	2387992
	02/16/2023			02/22/2023 18:04	McKinley C Carter	2388013
	02/16/2023			02/22/2023 18:10	McKinley C Carter	2388014
	02/16/2023			02/22/2023 18:17	McKinley C Carter	2388015
	02/16/2023			02/22/2023 19:08	McKinley C Carter	2388016
SM 2540 C-2015	02/16/2023			02/20/2023 15:46	Yijie Li	2387988, 2387989, 2387992
SM 2540 D-2015	02/16/2023			02/20/2023 15:46	Yijie Li	2387988, 2387989, 2387992
SM 4500-F- C-2011	02/16/2023			02/25/2023 02:46	Dale L. Simmons	2387988
	02/16/2023			02/25/2023 03:36	Dale L. Simmons	2387989
	02/16/2023			02/25/2023 03:49	Dale L. Simmons	2387992
SM 5310 B-2011	02/16/2023			02/22/2023 15:28	Elise M. Gillis	2387991
	02/16/2023			02/22/2023 16:54	Elise M. Gillis	2387990
	02/16/2023			02/22/2023 17:07	Elise M. Gillis	2387993