

Chemical Analysis Report

NE-DIST-2022-06-09-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **LSJR Southside BOAT 2022**

Request ID: **RQ-2022-05-23-11**

Customer: **NE-DIST**

Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

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

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 01-JUL-2022 12:55

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first 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: GOODBYS CR @ SR-13

Collection Date/Time: 06/08/2022 11:20

Field ID: 20030518

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333576	EPA 8270E	Aldrin	0.69	U	ng/L	P414979	
		Alpha-BHC	0.11	U	ng/L	P414979	
		Alpha-Chlordane	0.21	U	ng/L	P414979	
		PCB-1016	2.1	U	ng/L	P414979	
		Beta-BHC	0.11	U	ng/L	P414979	
		PCB-1221	2.1	U	ng/L	P414979	
		Beta-Cyfluthrin**	1.3	U	ng/L	P414979	
		PCB-1232	2.1	U	ng/L	P414979	
		Bifenthrin**	0.53	U	ng/L	P414979	
		PCB-1242	2.1	U	ng/L	P414979	
		Carbophenothion	0.95	U	ng/L	P414979	
		PCB-1248	2.1	U	ng/L	P414979	
		Chlorothalonil	1.3	U	ng/L	P414979	
		PCB-1254	2.1	U	ng/L	P414979	
		Cis-Nonachlor**	0.21	U	ng/L	P414979	
		PCB-1260	2.1	U	ng/L	P414979	
		Cypermethrin	1.6	U	ng/L	P414979	
		Dacthal**	0.16	U	ng/L	P414979	
		DDD-p,p'	0.26	U	ng/L	P414979	
		DDE-p,p'	0.21	U	ng/L	P414979	
		DDT-p,p'	0.26	U	ng/L	P414979	
		Delta-BHC	0.42	UJ	ng/L	P414979	LCS
		Deltamethrin**	1.3	U	ng/L	P414979	
		Dichlobenil**	0.26	U	ng/L	P414979	
		Dicofol	1.3	U	ng/L	P414979	
		Dieldrin	0.42	U	ng/L	P414979	
		Endosulfan I	0.42	U	ng/L	P414979	
		Endosulfan II	0.42	U	ng/L	P414979	
		Endosulfan Sulfate	0.32	U	ng/L	P414979	
		Endrin	0.42	U	ng/L	P414979	
		Endrin Aldehyde	0.79	U	ng/L	P414979	
		Endrin Ketone	0.42	U	ng/L	P414979	
		Esfenvalerate**	0.79	U	ng/L	P414979	
		Ethalfuralin**	0.16	U	ng/L	P414979	
		Fenpropathrin**	0.26	U	ng/L	P414979	
		Gamma-BHC	0.13	U	ng/L	P414979	
		Gamma-Chlordane	0.21	U	ng/L	P414979	
		Heptachlor	0.21	U	ng/L	P414979	
		Heptachlor Epoxide	0.26	U	ng/L	P414979	
		Hexachlorobenzene**	1.1	U	ng/L	P414979	
		Kepone**	5.3	UJ	ng/L	P414979	LCS, MS
		Lambda-Cyhalothrin**	0.79	U	ng/L	P414979	
		Methoprene**	0.79	U	ng/L	P414979	
		Methoxychlor	0.32	U	ng/L	P414979	

Field ID: 20030518

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333576	EPA 8270E	MGK-264**	0.21	U	ng/L	P414979	
		Mirex	0.74	U	ng/L	P414979	
		Oxychlordane**	0.32	U	ng/L	P414979	
		Permethrin	1.7	U	ng/L	P414979	
		Phenothrin**	0.95	U	ng/L	P414979	
		Piperonyl Butoxide**	0.23	I	ng/L	P414979	
		Prallethrin**	2.1	U	ng/L	P414979	
		Tau-Fluvalinate**	0.26	U	ng/L	P414979	
		Tetramethrin**	0.79	U	ng/L	P414979	
		Trans-Nonachlor**	0.21	U	ng/L	P414979	
		Triclosan Methyl**	0.16	U	ng/L	P414979	
		Trifluralin	0.21	U	ng/L	P414979	
		Chlordane	2.6	U	ng/L	P414979	
2333581	EPA 8276	Toxaphene	16	U	ng/L	P414979	
		Calcium	131		mg/L	P415007	
	EPA 200.7 Rev. 4.4	Iron	290	I	ug/L	P415007	
		Magnesium	296		mg/L	P415007	
		Strontium	2.36E+03		ug/L	P415007	
		Tin	60	U	ug/L	P415007	
		Titanium	2.7	I	ug/L	P415007	
		Vanadium	6.0	U	ug/L	P415007	
		Zinc	15	U	ug/L	P415007	
		Aluminum	50	U	ug/L	P415007	
		Antimony	0.20	U	ug/L	P415007	
		Arsenic	2.19		ug/L	P415007	
		Beryllium	0.10	U	ug/L	P415007	
		Cadmium	0.080	U	ug/L	P415007	
		Chromium	1.6	U	ug/L	P415007	
		Cobalt	0.17	I	ug/L	P415007	
		Copper	1.7	I	ug/L	P415007	
		Lead	0.80	U	ug/L	P415007	
		Manganese	77.9		ug/L	P415007	
		Molybdenum	3.4		ug/L	P415007	
		Nickel	2.0	U	ug/L	P415007	
		Selenium	0.80	U	ug/L	P415007	
		Silver	0.040	U	ug/L	P415007	
		Thallium	0.40	U	ug/L	P415007	
	EPA 200.8 Rev. 5.4						

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Arlington River at Carlton oaks

Collection Date/Time: 06/08/2022 10:00

Field ID: G2NE1152

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333565	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P414997	
	SM 2320 B-2011	Total Alkalinity	91		mg CaCO3/L	P415497	
	SM 2540 D-2011	TSS	5	I	mg/L	P415436	
	SM 4500-F- C-2011	Fluoride	0.64		mg F/L	P415773	
2333567	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P415587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P415360	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P415831	
	EPA 365.1 Rev. 2.0	Total-P	0.084		mg P/L	P415184	
	SM 5310 B-2011	Organic Carbon	8.9		mg C/L	P415408	
2333579	EPA 200.7 Rev. 4.4	Calcium	214		mg/L	P415007	
		Iron	90	U	ug/L	P415007	
		Magnesium	627		mg/L	P415007	
		Strontium	4.01E+03		ug/L	P415007	
	EPA 200.8 Rev. 5.4	Tin	60	U	ug/L	P415007	
		Titanium	3.9	I	ug/L	P415007	
		Vanadium	6.0	U	ug/L	P415007	
		Zinc	15	U	ug/L	P415007	
		Aluminum	61	I	ug/L	P415007	
		Antimony	0.20	U	ug/L	P415007	
		Arsenic	2.18		ug/L	P415007	
		Beryllium	0.10	U	ug/L	P415007	
		Cadmium	0.080	U	ug/L	P415007	
		Chromium	1.6	U	ug/L	P415007	
		Cobalt	0.23	I	ug/L	P415007	
		Copper	1.6	U	ug/L	P415007	
		Lead	0.80	U	ug/L	P415007	
		Manganese	32.9		ug/L	P415007	
		Molybdenum	6.3		ug/L	P415007	
		Nickel	2.9	I	ug/L	P415007	
		Selenium	0.80	U	ug/L	P415007	
		Silver	0.040	U	ug/L	P415007	
		Thallium	0.40	U	ug/L	P415007	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: LITTLE POTTSBURG CREEK AT ATLANTIC BLVD

Collection Date/Time: 06/08/2022 09:45

Field ID: 20030679

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333566	EPA 180.1 Rev. 2.0	Turbidity	6.7		NTU	P414997	
	SM 2320 B-2011	Total Alkalinity	101		mg CaCO3/L	P415497	
	SM 2540 D-2011	TSS	13		mg/L	P415436	
	SM 4500-F- C-2011	Fluoride	0.57		mg F/L	P415773	
2333568	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P415587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P415360	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P415831	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P415184	
	SM 5310 B-2011	Organic Carbon	10		mg C/L	P415408	
2333580	EPA 200.7 Rev. 4.4	Calcium	187		mg/L	P415007	
		Iron	230	I	ug/L	P415007	
		Magnesium	516		mg/L	P415007	
		Strontium	3.44E+03		ug/L	P415007	
		Tin	60	U	ug/L	P415007	
		Titanium	4.6	I	ug/L	P415007	
		Vanadium	6.0	U	ug/L	P415007	
		Zinc	15	U	ug/L	P415007	
		Aluminum	95	I	ug/L	P415007	
		Antimony	0.20	I	ug/L	P415007	
	EPA 200.8 Rev. 5.4	Arsenic	2.22		ug/L	P415007	
		Beryllium	0.10	U	ug/L	P415007	
		Cadmium	0.080	U	ug/L	P415007	
		Chromium	1.6	U	ug/L	P415007	
		Cobalt	0.22	I	ug/L	P415007	
		Copper	1.7	I	ug/L	P415007	
		Lead	0.96	I	ug/L	P415007	
		Manganese	57.7		ug/L	P415007	
		Molybdenum	5.2		ug/L	P415007	
		Nickel	2.0	U	ug/L	P415007	
		Selenium	0.80	U	ug/L	P415007	
		Silver	0.040	U	ug/L	P415007	
		Thallium	0.40	U	ug/L	P415007	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: GOODBYS CREEK AT SANCHEZ RD

Collection Date/Time: 06/08/2022 11:55

Field ID: 20030594

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333577	EPA 8270E	Aldrin	0.74	U	ng/L	P414979	
		Alpha-BHC	0.11	U	ng/L	P414979	
		Alpha-Chlordane	0.23	U	ng/L	P414979	
		PCB-1016	2.3	U	ng/L	P414979	
		Beta-BHC	0.11	U	ng/L	P414979	
		PCB-1221	2.3	U	ng/L	P414979	
		Beta-Cyfluthrin**	1.4	U	ng/L	P414979	
		PCB-1232	2.3	U	ng/L	P414979	
		Bifenthrin**	0.57	U	ng/L	P414979	
		PCB-1242	2.3	U	ng/L	P414979	
		Carbophenothion	1.0	U	ng/L	P414979	
		PCB-1248	2.3	U	ng/L	P414979	
		Chlorothalonil	1.4	U	ng/L	P414979	
		PCB-1254	2.3	U	ng/L	P414979	
		Cis-Nonachlor**	0.23	U	ng/L	P414979	
		PCB-1260	2.3	U	ng/L	P414979	
		Cypermethrin	1.7	U	ng/L	P414979	
		Dacthal**	0.17	U	ng/L	P414979	
		DDD-p,p'	0.29	U	ng/L	P414979	
		DDE-p,p'	0.23	U	ng/L	P414979	
		DDT-p,p'	0.29	U	ng/L	P414979	
		Delta-BHC	0.46	UJ	ng/L	P414979	LCS
		Deltamethrin**	1.4	U	ng/L	P414979	
		Dichlobenil**	0.29	U	ng/L	P414979	
		Dicofol	1.4	U	ng/L	P414979	
		Dieldrin	0.46	U	ng/L	P414979	
		Endosulfan I	0.46	U	ng/L	P414979	
		Endosulfan II	0.46	U	ng/L	P414979	
		Endosulfan Sulfate	0.34	U	ng/L	P414979	
		Endrin	0.46	U	ng/L	P414979	
		Endrin Aldehyde	0.86	U	ng/L	P414979	
		Endrin Ketone	0.46	U	ng/L	P414979	
		Esfenvalerate**	0.86	U	ng/L	P414979	
		Ethalfuralin**	0.17	U	ng/L	P414979	
		Fenpropathrin**	0.29	U	ng/L	P414979	
		Gamma-BHC	0.14	U	ng/L	P414979	
		Gamma-Chlordane	0.23	U	ng/L	P414979	
		Heptachlor	0.23	U	ng/L	P414979	
		Heptachlor Epoxide	0.29	U	ng/L	P414979	
		Hexachlorobenzene**	1.1	U	ng/L	P414979	
		Kepone**	5.7	UJ	ng/L	P414979	LCS, MS
		Lambda-Cyhalothrin**	0.86	U	ng/L	P414979	
		Methoprene**	0.86	U	ng/L	P414979	
		Methoxychlor	0.34	U	ng/L	P414979	

Field ID: 20030594

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333577	EPA 8270E	MGK-264**	0.23	U	ng/L	P414979	
		Mirex	0.80	U	ng/L	P414979	
		Oxychlordane**	0.34	U	ng/L	P414979	
		Permethrin	1.8	U	ng/L	P414979	
		Phenothrin**	1.0	U	ng/L	P414979	
		Piperonyl Butoxide**	0.29	I	ng/L	P414979	
		Prallethrin**	2.3	U	ng/L	P414979	
		Tau-Fluvalinate**	0.29	U	ng/L	P414979	
		Tetramethrin**	0.86	U	ng/L	P414979	
		Trans-Nonachlor**	0.23	U	ng/L	P414979	
		Triclosan Methyl**	0.17	U	ng/L	P414979	
		Trifluralin	0.23	U	ng/L	P414979	
		Chlordane	2.9	U	ng/L	P414979	
		Toxaphene	17	U	ng/L	P414979	
2333582	EPA 200.7 Rev. 4.4	Calcium	102		mg/L	P415007	
		Iron	650		ug/L	P415007	
		Magnesium	191		mg/L	P415007	
		Strontium	1.68E+03		ug/L	P415007	
		Tin	60	U	ug/L	P415007	
		Titanium	2.2	U	ug/L	P415007	
		Vanadium	6.0	U	ug/L	P415007	
		Zinc	15	U	ug/L	P415007	
	EPA 200.8 Rev. 5.4	Aluminum	50	U	ug/L	P415007	
		Antimony	0.20	U	ug/L	P415007	
		Arsenic	2.82		ug/L	P415007	
		Beryllium	0.10	U	ug/L	P415007	
		Cadmium	0.080	U	ug/L	P415007	
		Chromium	1.6	U	ug/L	P415007	
		Cobalt	0.13	I	ug/L	P415007	
		Copper	1.6	U	ug/L	P415007	
		Lead	0.80	U	ug/L	P415007	
		Manganese	68.8		ug/L	P415007	
		Molybdenum	2.4		ug/L	P415007	
		Nickel	2.0	U	ug/L	P415007	
		Selenium	0.80	U	ug/L	P415007	
		Silver	0.040	U	ug/L	P415007	
		Thallium	0.40	U	ug/L	P415007	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: GOODBYS CR AT BAYMEADOWS

Collection Date/Time: 06/08/2022 11:40

Field ID: 20030593

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333578	EPA 8270E	Aldrin	0.71	U	ng/L	P414979	
		Alpha-BHC	0.11	U	ng/L	P414979	
		Alpha-Chlordane	0.23	I	ng/L	P414979	
		PCB-1016	2.2	U	ng/L	P414979	
		Beta-BHC	0.11	U	ng/L	P414979	
		PCB-1221	2.2	U	ng/L	P414979	
		Beta-Cyfluthrin**	1.4	U	ng/L	P414979	
		PCB-1232	2.2	U	ng/L	P414979	
		Bifenthrin**	0.54	U	ng/L	P414979	
		PCB-1242	2.2	U	ng/L	P414979	
		Carbophenothion	0.98	U	ng/L	P414979	
		PCB-1248	2.2	U	ng/L	P414979	
		Chlorothalonil	1.4	U	ng/L	P414979	
		PCB-1254	2.2	U	ng/L	P414979	
		Cis-Nonachlor**	0.22	U	ng/L	P414979	
		PCB-1260	2.2	U	ng/L	P414979	
		Cypermethrin	1.6	U	ng/L	P414979	
		Dacthal**	0.16	U	ng/L	P414979	
		DDD-p,p'	0.27	U	ng/L	P414979	
		DDE-p,p'	0.30	I	ng/L	P414979	
		DDT-p,p'	0.38	I	ng/L	P414979	
		Delta-BHC	0.44	UJ	ng/L	P414979	LCS
		Deltamethrin**	1.4	U	ng/L	P414979	
		Dichlobenil**	0.27	U	ng/L	P414979	
		Dicofol	1.4	U	ng/L	P414979	
		Dieldrin	0.69	I	ng/L	P414979	
		Endosulfan I	0.44	U	ng/L	P414979	
		Endosulfan II	0.44	U	ng/L	P414979	
		Endosulfan Sulfate	0.33	U	ng/L	P414979	
		Endrin	0.44	U	ng/L	P414979	
		Endrin Aldehyde	0.82	U	ng/L	P414979	
		Endrin Ketone	0.44	U	ng/L	P414979	
		Esfenvalerate**	0.82	U	ng/L	P414979	
		Ethalfuralin**	0.16	U	ng/L	P414979	
		Fenpropathrin**	0.27	U	ng/L	P414979	
		Gamma-BHC	0.14	U	ng/L	P414979	
		Gamma-Chlordane	0.25	I	ng/L	P414979	
		Heptachlor	0.22	U	ng/L	P414979	
		Heptachlor Epoxide	0.27	U	ng/L	P414979	
		Hexachlorobenzene**	1.1	U	ng/L	P414979	
		Kepone**	5.4	UJ	ng/L	P414979	LCS, MS
		Lambda-Cyhalothrin**	0.82	U	ng/L	P414979	
		Methoprene**	0.82	U	ng/L	P414979	
		Methoxychlor	0.33	U	ng/L	P414979	

Field ID: 20030593

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2333578	EPA 8270E	MGK-264**	0.22	U	ng/L	P414979	
		Mirex	0.76	U	ng/L	P414979	
		Oxychlordane**	0.33	U	ng/L	P414979	
		Permethrin	1.7	U	ng/L	P414979	
		Phenothrin**	0.98	U	ng/L	P414979	
		Piperonyl Butoxide**	0.29	I	ng/L	P414979	
		Prallethrin**	2.2	U	ng/L	P414979	
		Tau-Fluvalinate**	0.27	U	ng/L	P414979	
		Tetramethrin**	0.82	U	ng/L	P414979	
		Trans-Nonachlor**	0.22	U	ng/L	P414979	
		Triclosan Methyl**	0.16	U	ng/L	P414979	
		Trifluralin	0.22	U	ng/L	P414979	
		Chlordane	2.7	U	ng/L	P414979	
		Toxaphene	16	U	ng/L	P414979	
2333583	EPA 200.7 Rev. 4.4	Calcium	108		mg/L	P415007	
		Iron	510		ug/L	P415007	
		Magnesium	213		mg/L	P415007	
		Strontium	1.87E+03		ug/L	P415007	
		Tin	60	U	ug/L	P415007	
		Titanium	2.2	U	ug/L	P415007	
		Vanadium	6.0	U	ug/L	P415007	
		Zinc	15	U	ug/L	P415007	
	EPA 200.8 Rev. 5.4	Aluminum	50	U	ug/L	P415007	
		Antimony	0.20	U	ug/L	P415007	
		Arsenic	3.00		ug/L	P415007	
		Beryllium	0.10	U	ug/L	P415007	
		Cadmium	0.080	U	ug/L	P415007	
		Chromium	1.6	U	ug/L	P415007	
		Cobalt	0.18	I	ug/L	P415007	
		Copper	1.6	U	ug/L	P415007	
		Lead	0.80	U	ug/L	P415007	
		Manganese	74.2		ug/L	P415007	
		Molybdenum	2.6		ug/L	P415007	
		Nickel	2.0	U	ug/L	P415007	
		Selenium	0.80	U	ug/L	P415007	
		Silver	0.040	U	ug/L	P415007	
		Thallium	0.40	U	ug/L	P415007	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 9417

Event(s)

NE-DIST-2022-06-09-02

Job(s)

TLH-2022-06-09-87

Sample(s)

2333578

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Sample Integrity

Observation: Bottle 1 of 2 received with cracked cap.

Field ID: 20030593 | Test ID: W-CT-CI-R, W-PCB-TQ-R, W-PCL-TQ-R

Resolution: Cracked cap replaced, sample not affected.

Authorized by/Date: Kyle Klug 6/20/2022

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: EPA 180.1 Rev. 2.0
Batch ID: P414997

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415007

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	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: P415007

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	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 350.1 Rev. 2.0
Batch ID: P415587

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415360

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415831

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415184

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

Reference Method: EPA 8270E
Batch ID: P414979

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414979

Component	Result	Code	Units
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P414979

Component	Result	Code	Units
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P414979

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2320 B-2011

Batch ID: P415497

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO3/L

Reference Method: SM 2540 D-2011

Batch ID: P415436

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P415773

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P415408

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P414997

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

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	105		P	85 - 115
Magnesium	101		P	85 - 115
Strontium	105		P	85 - 115
Tin	101		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	96.4		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	99.7		P	85 - 115
Beryllium	97.0		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.0		P	85 - 115
Cobalt	99.0		P	85 - 115
Copper	96.8		P	85 - 115
Lead	103		P	85 - 115
Manganese	99.3		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	98.4		P	85 - 115
Selenium	98.0		P	85 - 115
Silver	99.7		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415587

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415360

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415831

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P415184

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

Reference Method: EPA 8270E
 Batch ID: P414979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	74.6		P	10 - 93.0
Alpha-BHC	97.9		P	75 - 106
Alpha-Chlordane	99.3		P	50 - 109
Beta-BHC	81.4		P	36 - 138
Beta-Cyfluthrin	111		P	23 - 167
Bifenthrin	72.8		P	11 - 123
Carbophenothion	84.0		P	18 - 96.0
Chlorothalonil	124		P	27 - 190
Cis-Nonachlor	84.5		P	40 - 111
Cypermethrin	97.3		P	25 - 155
Dacthal	105		P	72 - 119
DDD-p,p'	85.6		P	47 - 108
DDE-p,p'	89.1		P	48 - 107
DDT-p,p'	93.6		P	49 - 111
Delta-BHC	140		F	54 - 138
Deltamethrin	135		P	22 - 189
Dichlobenil	89.3		P	32 - 113
Dicofol	88.1		P	50 - 108
Dieldrin	87.1		P	56 - 110
Endosulfan I	94.3		P	60 - 105
Endosulfan II	104		P	50 - 120
Endosulfan Sulfate	108		P	55 - 121
Endrin	98.1		P	31 - 119
Endrin Aldehyde	90.6		P	36 - 116
Endrin Ketone	99.3		P	69 - 177
Esfenvalerate	111		P	10 - 179
Ethalfuralin	92.5		P	49 - 99.0
Fenpropathrin	89.7		P	35 - 119
Gamma-BHC	118		P	69 - 120
Gamma-Chlordane	92.5		P	45 - 107
Heptachlor	71.3		P	41 - 100
Heptachlor Epoxide	89.2		P	58 - 106
Hexachlorobenzene	87.6		P	39 - 100
Kepone	245		F	10 - 191
Lambda-Cyhalothrin	80.4		P	21 - 206
Methoprene	83.1		P	10 - 129
Methoxychlor	96.3		P	61 - 111
MGK-264	101		P	20 - 123
Mirex	73.1		P	10 - 182
Oxychlordane	95.6		P	39 - 110
PCB-1016	67.3		P	49 - 111
PCB-1260	96.7		P	42 - 116
Permethrin	95.4		P	26 - 152
Phenothrin	65.8		P	10 - 109
Piperonyl Butoxide	136		P	19 - 147
Prallethrin	103		P	14 - 109

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P414979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tau-Fluvalinate	99.9		P	16 - 134
Tetramethrin	117		P	10 - 125
Trans-Nonachlor	86.3		P	45 - 107
Triclosan Methyl	93.7		P	60 - 110
Trifluralin	90.5		P	44 - 101

Reference Method: EPA 8276

Batch ID: P414979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	105		P	61 - 118
Toxaphene	106		P	51 - 122

Reference Method: SM 2320 B-2011

Batch ID: P415497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P415773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P415408

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333582	Iron	108	106	P/P	70 - 130
2333582	Strontium	110	108	P/P	70 - 130
2333582	Tin	91.4	97.6	P/P	70 - 130
2333582	Titanium	108	111	P/P	70 - 130
2333582	Vanadium	97.6	99.6	P/P	70 - 130
2333582	Zinc	100	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333582	Aluminum	103	105	P/P	70 - 130
2333582	Antimony	101	104	P/P	70 - 130
2333582	Arsenic	111	114	P/P	70 - 130
2333582	Beryllium	109	115	P/P	70 - 130
2333582	Cadmium	96.1	97.1	P/P	70 - 130
2333582	Chromium	96.3	101	P/P	70 - 130
2333582	Cobalt	110	114	P/P	70 - 130
2333582	Copper	105	110	P/P	70 - 130
2333582	Lead	105	109	P/P	70 - 130
2333582	Manganese	95.8	105	P/P	70 - 130
2333582	Molybdenum	110	116	P/P	70 - 130
2333582	Nickel	110	114	P/P	70 - 130
2333582	Selenium	102	106	P/P	70 - 130
2333582	Silver	92.6	95.0	P/P	70 - 130
2333582	Thallium	107	111	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333006	Ammonia-N	104	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332907	Kjeldahl Nitrogen	108	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415831

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333428	NO2NO3-N	98.0	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415184

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333484	Total-P	94.4	94.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P414979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332611	Aldrin	73.2	70.7	P/P	10 - 89.0
2332611	Alpha-BHC	97.9	99.4	P/P	71 - 105
2332611	Alpha-Chlordane	95.3	99.1	P/P	43 - 107
2332611	Beta-BHC	76.5	82.4	P/P	57 - 152
2332611	Beta-Cyfluthrin	103	98.1	P/P	29 - 186
2332611	Bifenthrin	75.0	80.3	P/P	19 - 119
2332611	Carbophenothion	81.2	83.3	P/P	19 - 107
2332611	Chlorothalonil	122	115	P/P	10 - 245
2332611	Cis-Nonachlor	90.5	96.4	P/P	36 - 110
2332611	Cypermethrin	95.6	102	P/P	24 - 169
2332611	Dacthal	107	102	P/P	62 - 115
2332611	DDD-p,p'	92.5	97.2	P/P	36 - 109
2332611	DDE-p,p'	92.0	91.2	P/P	30 - 114
2332611	DDT-p,p'	92.6	88.9	P/P	42 - 108
2332611	Delta-BHC	143	137	P/P	60 - 164
2332611	Deltamethrin	122	109	P/P	10 - 210
2332611	Dichlobenil	82.8	97.0	P/P	23 - 108
2332611	Dicofol	88.5	85.2	P/P	44 - 109
2332611	Dieldrin	92.4	100	P/P	37 - 119
2332611	Endosulfan I	93.2	99.4	P/P	52 - 105
2332611	Endosulfan II	96.4	92.8	P/P	35 - 127
2332611	Endosulfan Sulfate	96.4	89.2	P/P	39 - 130
2332611	Endrin	91.8	90.8	P/P	30 - 116
2332611	Endrin Aldehyde	88.9	81.2	P/P	20 - 110
2332611	Endrin Ketone	95.1	98.2	P/P	48 - 134
2332611	Esfenvalerate	104	96.4	P/P	10 - 199
2332611	Ethalfuralin	89.1	93.4	P/P	48 - 95.0
2332611	Fenpropathrin	81.8	85.6	P/P	37 - 121
2332611	Gamma-BHC	120	118	P/P	61 - 126
2332611	Gamma-Chlordane	91.2	95.4	P/P	39 - 105
2332611	Heptachlor	75.6	83.6	P/P	38 - 96.0
2332611	Heptachlor Epoxide	89.6	99.7	P/P	42 - 114
2332611	Hexachlorobenzene	85.9	90.4	P/P	39 - 93.0
2332611	Kepone	227	201	F/P	10 - 215
2332611	Lambda-Cyhalothrin	81.5	82.3	P/P	10 - 204
2332611	Methoprene	80.8	82.6	P/P	17 - 108
2332611	Methoxychlor	90.4	86.2	P/P	56 - 115
2332611	MGK-264	98.0	99.9	P/P	35 - 120
2332611	Mirex	76.5	78.3	P/P	10 - 178
2332611	Oxychlordane	90.2	87.2	P/P	47 - 91.0
2332611	Permethrin	99.3	95.6	P/P	27 - 170
2332611	Phenothrin	68.1	78.2	P/P	10 - 133
2332611	Piperonyl Butoxide	128	145	P/P	23 - 150
2332611	Prallethrin	94.7	89.9	P/P	21 - 113
2332611	Tau-Fluvalinate	91.0	86.7	P/P	16 - 158
2332611	Tetramethrin	117	113	P/P	22 - 132
2332611	Trans-Nonachlor	89.1	87.7	P/P	43 - 102
2332611	Triclosan Methyl	94.8	100	P/P	49 - 109
2332611	Trifluralin	88.7	88.6	P/P	48 - 93.0
2333132	PCB-1016	101	92.4	P/P	46 - 110
2333132	PCB-1260	97.3	94.4	P/P	42 - 111

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P414979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333132	Chlordane	105	105	P/P	55 - 128
2333132	Toxaphene	127	126	P/P	57 - 211

Reference Method: SM 4500-F- C-2011
Batch ID: P415773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333620	Fluoride	99.0	99.0	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P415408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333622	Organic Carbon	92.0	92.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P414997

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333549	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415007

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333582	Calcium	0.595	Spike	P	0 - 20
2333582	Iron	1.40	Spike	P	0 - 20
2333582	Magnesium	0.133	Spike	P	0 - 20
2333582	Strontium	1.38	Spike	P	0 - 20
2333582	Tin	6.56	Spike	P	0 - 20
2333582	Titanium	2.50	Spike	P	0 - 20
2333582	Vanadium	1.98	Spike	P	0 - 20
2333582	Zinc	1.25	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415007

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333582	Aluminum	1.74	Spike	P	0 - 20
2333582	Antimony	3.18	Spike	P	0 - 20
2333582	Arsenic	3.33	Spike	P	0 - 20
2333582	Beryllium	5.23	Spike	P	0 - 20
2333582	Cadmium	1.06	Spike	P	0 - 20
2333582	Chromium	4.36	Spike	P	0 - 20
2333582	Cobalt	4.09	Spike	P	0 - 20
2333582	Copper	3.87	Spike	P	0 - 20
2333582	Lead	3.24	Spike	P	0 - 20
2333582	Manganese	4.82	Spike	P	0 - 20
2333582	Molybdenum	4.47	Spike	P	0 - 20
2333582	Nickel	3.21	Spike	P	0 - 20
2333582	Selenium	4.00	Spike	P	0 - 20
2333582	Silver	2.59	Spike	P	0 - 20
2333582	Thallium	4.11	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415587

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333006	Ammonia-N	3.41	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P415360

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332907	Kjeldahl Nitrogen	3.75	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415831

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333428	NO2NO3-N	0.445	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415184

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333484	Total-P	0.182	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P414979

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332611	Aldrin	3.53	Spike	P	0 - 37
2332611	Alpha-BHC	1.54	Spike	P	0 - 16
2332611	Alpha-Chlordane	3.89	Spike	P	0 - 28
2332611	Beta-BHC	7.46	Spike	P	0 - 32
2332611	Beta-Cyfluthrin	5.09	Spike	P	0 - 41
2332611	Bifenthrin	6.87	Spike	P	0 - 36
2332611	Carbophenothion	2.52	Spike	P	0 - 30
2332611	Chlorothalonil	6.18	Spike	P	0 - 54
2332611	Cis-Nonachlor	6.37	Spike	P	0 - 33
2332611	Cypermethrin	6.56	Spike	P	0 - 38
2332611	Dacthal	5.11	Spike	P	0 - 23
2332611	DDD-p,p'	4.98	Spike	P	0 - 35
2332611	DDE-p,p'	0.880	Spike	P	0 - 27
2332611	DDT-p,p'	3.99	Spike	P	0 - 31
2332611	Delta-BHC	4.42	Spike	P	0 - 30
2332611	Deltamethrin	10.8	Spike	P	0 - 76
2332611	Dichlobenil	15.8	Spike	P	0 - 33
2332611	Dicofol	3.82	Spike	P	0 - 24
2332611	Dieldrin	8.01	Spike	P	0 - 35
2332611	Endosulfan I	6.45	Spike	P	0 - 25
2332611	Endosulfan II	3.74	Spike	P	0 - 31
2332611	Endosulfan Sulfate	7.76	Spike	P	0 - 38
2332611	Endrin	1.05	Spike	P	0 - 53
2332611	Endrin Aldehyde	9.12	Spike	P	0 - 81
2332611	Endrin Ketone	3.16	Spike	P	0 - 33
2332611	Esfenvalerate	8.06	Spike	P	0 - 46
2332611	Ethalfuralin	4.72	Spike	P	0 - 22
2332611	Fenpropathrin	4.60	Spike	P	0 - 29
2332611	Gamma-BHC	1.77	Spike	P	0 - 17
2332611	Gamma-Chlordane	4.44	Spike	P	0 - 28
2332611	Heptachlor	10.0	Spike	P	0 - 28
2332611	Heptachlor Epoxide	10.6	Spike	P	0 - 23
2332611	Hexachlorobenzene	5.18	Spike	P	0 - 22
2332611	Kepone	12.1	Spike	P	0 - 61
2332611	Lambda-Cyhalothrin	0.984	Spike	P	0 - 52
2332611	Methoprene	2.18	Spike	P	0 - 38
2332611	Methoxychlor	4.70	Spike	P	0 - 29

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P414979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332611	MGK-264	1.93	Spike	P	0 - 41
2332611	Mirex	2.35	Spike	P	0 - 39
2332611	Oxychlordane	3.41	Spike	P	0 - 33
2332611	Permethrin	3.71	Spike	P	0 - 39
2332611	Phenothrin	13.8	Spike	P	0 - 52
2332611	Piperonyl Butoxide	12.6	Spike	P	0 - 91
2332611	Prallethrin	5.28	Spike	P	0 - 34
2332611	Tau-Fluvalinate	4.82	Spike	P	0 - 41
2332611	Tetramethrin	4.13	Spike	P	0 - 43
2332611	Trans-Nonachlor	1.59	Spike	P	0 - 31
2332611	Triclosan Methyl	5.82	Spike	P	0 - 24
2332611	Trifluralin	0.102	Spike	P	0 - 23
2333132	PCB-1016	8.43	Spike	P	0 - 32
2333132	PCB-1260	2.97	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P414979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333132	Chlordane	0.573	Spike	P	0 - 25
2333132	Toxaphene	1.10	Spike	P	0 - 24

Reference Method: SM 2320 B-2011
Batch ID: P415497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333620	Total Alkalinity	0.939	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P415773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333620	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P415408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333622	Organic Carbon	0.416	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2333576
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	105	P	38 - 115
EPA 8270E	Decachlorobiphenyl	85.5	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	75.2	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	71.6	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	82.2	P	30 - 97.0
EPA 8276	PCNB	109	P	45 - 119

Lab Sample ID: 2333577
Field Sample ID: 20030594

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	97.8	P	38 - 115
EPA 8270E	Decachlorobiphenyl	87.4	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	61.5	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	57.2	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	76.5	P	30 - 97.0
EPA 8276	PCNB	89.2	P	45 - 119

Lab Sample ID: 2333578
Field Sample ID: 20030593

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	96.8	P	38 - 115
EPA 8270E	Decachlorobiphenyl	97.0	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	75.0	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	75.2	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	78.7	P	30 - 97.0
EPA 8276	PCNB	103	P	45 - 119

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112710

Included Lab Sample IDs: 2333565, 2333566

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112753

Included Lab Sample IDs: 2333579, 2333580, 2333581, 2333582, 2333583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	101	P/P	95 - 105
Calcium	99.9	100	P/P	95 - 105
Iron	101	101	P/P	95 - 105
Iron	101	103	P/P	95 - 105
Magnesium	100	101	P/P	95 - 105
Magnesium	101	103	P/P	95 - 105
Strontium	103	103	P/P	95 - 105
Strontium	103	104	P/P	95 - 105
Tin	101	102	P/P	95 - 105
Tin	102	102	P/P	95 - 105
Titanium	101	102	P/P	95 - 105
Titanium	99.3	101	P/P	95 - 105
Vanadium	101	102	P/P	95 - 105
Vanadium	102	102	P/P	95 - 105
Zinc	101	103	P/P	95 - 105
Zinc	103	102	P/P	95 - 105

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112826

Included Lab Sample IDs: 2333579, 2333580, 2333581, 2333582, 2333583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	97.1	99.2	P/P	90 - 110
Antimony	99.2	98.8	P/P	90 - 110
Arsenic	100	101	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Cadmium	97.0	98.5	P/P	90 - 110
Cadmium	98.5	98.8	P/P	90 - 110
Chromium	96.4	96.2	P/P	90 - 110
Chromium	97.2	96.4	P/P	90 - 110
Cobalt	102	104	P/P	90 - 110
Cobalt	103	102	P/P	90 - 110
Copper	102	103	P/P	90 - 110
Copper	103	103	P/P	90 - 110
Lead	100	100	P/P	90 - 110
Lead	99.4	100	P/P	90 - 110
Manganese	97.4	97.3	P/P	90 - 110
Manganese	98.7	97.4	P/P	90 - 110
Molybdenum	100	100	P/P	90 - 110
Molybdenum	98.4	100	P/P	90 - 110
Nickel	103	105	P/P	90 - 110
Nickel	103	103	P/P	90 - 110
Selenium	96.2	97.3	P/P	90 - 110
Selenium	97.3	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112826

Included Lab Sample IDs: 2333579, 2333580, 2333581, 2333582, 2333583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	99.1	99.4	P/P	90 - 110
Silver	99.4	100	P/P	90 - 110
Thallium	98.3	98.8	P/P	90 - 110
Thallium	98.8	98.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112854

Included Lab Sample IDs: 2333579, 2333580, 2333581, 2333582, 2333583

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	104	P/P	90 - 110
Beryllium	102	102	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A112863

Included Lab Sample IDs: 2333576, 2333577, 2333578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	103		P	80 - 120
PCB-1260	100		P	80 - 120

Reference Method: EPA 8270E

Run ID: A112881

Included Lab Sample IDs: 2333577, 2333578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	107		P	80 - 120
Alpha-BHC	95.8		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	97.2		P	80 - 120
Beta-Cyfluthrin	106		P	80 - 120
Bifenthrin	98.8		P	80 - 120
Carbophenothion	109		P	80 - 120
Chlorothalonil	94.2		P	80 - 120
Cis-Nonachlor	95.3		P	80 - 120
Cypermethrin	99.0		P	80 - 120
Dacthal	108		P	80 - 120
DDD-p,p'	96.9		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	100		P	80 - 120
Delta-BHC	102		P	80 - 120
Deltamethrin	118		P	80 - 120
Dichlobenil	105		P	80 - 120
Dicofol	100		P	80 - 120
Dieldrin	97.6		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	104		P	80 - 120
Endrin Aldehyde	93.3		P	80 - 120
Endrin Ketone	97.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A112881

Included Lab Sample IDs: 2333577, 2333578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Esfenvalerate	105		P	80 - 120
Ethalfuralin	97.7		P	80 - 120
Fenpropathrin	99.7		P	80 - 120
Gamma-BHC	109		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	95.0		P	80 - 120
Heptachlor Epoxide	93.6		P	80 - 120
Hexachlorobenzene	95.0		P	80 - 120
Kepone	101		P	80 - 120
Lambda-Cyhalothrin	95.3		P	80 - 120
Methoprene	106		P	80 - 120
Methoxychlor	98.2		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	95.7		P	80 - 120
Oxychlordane	99.5		P	80 - 120
Permethrin	96.0		P	80 - 120
Phenothrin	91.8		P	80 - 120
Piperonyl Butoxide	115		P	80 - 120
Prallethrin	108		P	80 - 120
Tau-Fluvalinate	107		P	80 - 120
Tetramethrin	99.5		P	80 - 120
Trans-Nonachlor	99.9		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	97.3		P	80 - 120

Reference Method: EPA 8270E

Run ID: A112885

Included Lab Sample IDs: 2333576

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.1		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	104		P	80 - 120
Beta-Cyfluthrin	97.7		P	80 - 120
Bifenthrin	94.8		P	80 - 120
Carbophenothion	103		P	80 - 120
Chlorothalonil	94.2		P	80 - 120
Cis-Nonachlor	99.0		P	80 - 120
Cypermethrin	89.9		P	80 - 120
Dacthal	99.6		P	80 - 120
DDD-p,p'	92.9		P	80 - 120
DDE-p,p'	98.7		P	80 - 120
DDT-p,p'	97.7		P	80 - 120
Delta-BHC	96.7		P	80 - 120
Deltamethrin	84.1		P	80 - 120
Dichlobenil	95.6		P	80 - 120
Dicofol	99.4		P	80 - 120
Dieldrin	95.7		P	80 - 120
Endosulfan I	96.3		P	80 - 120
Endosulfan II	88.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112885
Included Lab Sample IDs: 2333576

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	102		P	80 - 120
Endrin	98.6		P	80 - 120
Endrin Aldehyde	91.5		P	80 - 120
Endrin Ketone	97.6		P	80 - 120
Esfenvalerate	93.2		P	80 - 120
Ethalfuralin	97.4		P	80 - 120
Fenpropathrin	98.3		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	96.6		P	80 - 120
Heptachlor	89.6		P	80 - 120
Heptachlor Epoxide	92.6		P	80 - 120
Hexachlorobenzene	102		P	80 - 120
Kepone	84.6		P	80 - 120
Lambda-Cyhalothrin	94.1		P	80 - 120
Methoprene	94.9		P	80 - 120
Methoxychlor	97.1		P	80 - 120
MGK-264	90.8		P	80 - 120
Mirex	94.4		P	80 - 120
Oxychlordane	90.8		P	80 - 120
Permethrin	97.1		P	80 - 120
Phenothrin	91.5		P	80 - 120
Piperonyl Butoxide	83.1		P	80 - 120
Prallethrin	91.3		P	80 - 120
Tau-Fluvalinate	93.8		P	80 - 120
Tetramethrin	88.0		P	80 - 120
Trans-Nonachlor	98.8		P	80 - 120
Triclosan Methyl	99.6		P	80 - 120
Trifluralin	97.1		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A112926
Included Lab Sample IDs: 2333567, 2333568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.9	97.7	P/P	90 - 110
Organic Carbon	98.2	94.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112934
Included Lab Sample IDs: 2333568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.4	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A112938
Included Lab Sample IDs: 2333567

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A112951

Included Lab Sample IDs: 2333565, 2333566

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112973

Included Lab Sample IDs: 2333567, 2333568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112990

Included Lab Sample IDs: 2333567, 2333568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A113035

Included Lab Sample IDs: 2333576, 2333577, 2333578

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.2		P	80 - 120
Toxaphene	91.1		P	80 - 120

Reference Method: SM 4500-F- C-2011

Run ID: A113067

Included Lab Sample IDs: 2333565, 2333566

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A113114

Included Lab Sample IDs: 2333567, 2333568

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	98.5	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
EPA 180.1 Rev. 2.0	Turbidity	97.0				0.0	
EPA 200.7 Rev. 4.4	Calcium	103					0.595
	Iron	105	108	106			1.40
	Magnesium	101					0.133
	Strontium	105	110	108			1.38
	Tin	101	91.4	97.6			6.56
	Titanium	102	108	111			2.50
	Vanadium	96.4	97.6	99.6			1.98
	Zinc	101	100	101			1.25
EPA 200.8 Rev. 5.4	Aluminum	103	103	105			1.74
	Antimony	102	101	104			3.18
	Arsenic	99.7	111	114			3.33
	Beryllium	97.0	109	115			5.23
	Cadmium	100	96.1	97.1			1.06
	Chromium	98.0	96.3	101			4.36
	Cobalt	99.0	110	114			4.09
	Copper	96.8	105	110			3.87
	Lead	103	105	109			3.24
	Manganese	99.3	95.8	105			4.82
	Molybdenum	102	110	116			4.47
	Nickel	98.4	110	114			3.21
	Selenium	98.0	102	106			4.00
	Silver	99.7	92.6	95.0			2.59
	Thallium	104	107	111			4.11
EPA 350.1 Rev. 2.0	Ammonia-N	101	104	100			3.41
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	108	103			3.75
EPA 353.2 Rev. 2.0	NO2NO3-N	98.5	98.0	97.6			0.445
EPA 365.1 Rev. 2.0	Total-P	101	94.4	94.6			0.182
EPA 8270E	Aldrin	74.6	70.7	73.2			3.53
	Alpha-BHC	97.9	97.9	99.4			1.54
	Alpha-Chlordane	99.3	95.3	99.1			3.89
	Beta-BHC	81.4	76.5	82.4			7.46
	Beta-Cyfluthrin	111	103	98.1			5.09
	Bifenthrin	72.8	75.0	80.3			6.87
	Carbophenothion	84.0	81.2	83.3			2.52
	Chlorothalonil	124	122	115			6.18
	Cis-Nonachlor	84.5	90.5	96.4			6.37
	Cypermethrin	97.3	95.6	102			6.56
	Dacthal	105	107	102			5.11
	DDD-p,p'	85.6	92.5	97.2			4.98
	DDE-p,p'	89.1	92.0	91.2			0.880
	DDT-p,p'	93.6	92.6	88.9			3.99
	Delta-BHC	140	143	137			4.42
	Deltamethrin	135	122	109			10.8
	Dichlobenil	89.3	82.8	97.0			15.8
	Dicofol	88.1	88.5	85.2			3.82
	Dieldrin	87.1	92.4	100			8.01
	Endosulfan I	94.3	93.2	99.4			6.45
	Endosulfan II	104	96.4	92.8			3.74
	Endosulfan Sulfate	108	96.4	89.2			7.76
	Endrin	98.1	91.8	90.8			1.05
	Endrin Aldehyde	90.6	88.9	81.2			9.12
	Endrin Ketone	99.3	95.1	98.2			3.16
	Esfenvalerate	111	104	96.4			8.06

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Ethalfuralin	92.5	89.1	93.4			4.72
	Fenpropathrin	89.7	81.8	85.6			4.60
	Gamma-BHC	118	120	118			1.77
	Gamma-Chlordane	92.5	91.2	95.4			4.44
	Heptachlor	71.3	75.6	83.6			10.0
	Heptachlor Epoxide	89.2	89.6	99.7			10.6
	Hexachlorobenzene	87.6	85.9	90.4			5.18
	Kepone	245	227	201			12.1
	Lambda-Cyhalothrin	80.4	81.5	82.3			0.984
	Methoprene	83.1	80.8	82.6			2.18
	Methoxychlor	96.3	90.4	86.2			4.70
	MGK-264	101	98.0	99.9			1.93
	Mirex	73.1	76.5	78.3			2.35
	Oxychlordane	95.6	90.2	87.2			3.41
	PCB-1016	67.3	101	92.4			8.43
	PCB-1260	96.7	97.3	94.4			2.97
	Permethrin	95.4	99.3	95.6			3.71
	Phenothrin	65.8	68.1	78.2			13.8
	Piperonyl Butoxide	136	128	145			12.6
	Prallethrin	103	94.7	89.9			5.28
	Tau-Fluvalinate	99.9	91.0	86.7			4.82
	Tetramethrin	117	117	113			4.13
	Trans-Nonachlor	86.3	89.1	87.7			1.59
	Triclosan Methyl	93.7	94.8	100			5.82
	Trifluralin	90.5	88.7	88.6			0.102
EPA 8276	Chlordane	105	105	105			0.573
	Toxaphene	106	127	126			1.10
SM 2320 B-2011	Total Alkalinity	104				0.939	
SM 4500-F- C-2011	Fluoride	98.9	99.0	99.0			0.0
SM 5310 B-2011	Organic Carbon	96.0	92.0	92.4			0.416

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2333565, 2333566
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2333579, 2333580, 2333581, 2333582, 2333583
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2333579, 2333580, 2333581, 2333582, 2333583
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2333567, 2333568
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2333567, 2333568
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2333567, 2333568
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2333567, 2333568
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2333576, 2333577, 2333578
EPA 8270E	PCBs in water matrices by GC/MS/MS	2333576, 2333577, 2333578
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2333576, 2333577, 2333578
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2333565, 2333566
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2333565, 2333566
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2333565, 2333566
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2333567, 2333568

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	06/09/2022			06/09/2022 14:16	Khloe J Berg	2333565
	06/09/2022			06/09/2022 14:18	Khloe J Berg	2333566
EPA 200.7 Rev. 4.4	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 00:47	Betina Topolski	2333579
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 00:59	Betina Topolski	2333579
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 01:11	Betina Topolski	2333580
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 01:23	Betina Topolski	2333580
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 01:35	Betina Topolski	2333581
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 01:48	Betina Topolski	2333581
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 02:28	Betina Topolski	2333582
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 03:16	Betina Topolski	2333582
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 04:04	Betina Topolski	2333583
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/12/2022 04:16	Betina Topolski	2333583
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 18:11	Alexander Thompson	2333582
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 20:06	Alexander Thompson	2333579
EPA 200.8 Rev. 5.4	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 20:15	Alexander Thompson	2333580
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 20:25	Alexander Thompson	2333581
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 20:34	Alexander Thompson	2333583
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/15/2022 11:37	Alexander Thompson	2333579
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/15/2022 11:44	Alexander Thompson	2333580
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/15/2022 11:50	Alexander Thompson	2333581
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/15/2022 11:56	Alexander Thompson	2333583
	06/09/2022	06/10/2022 09:22	Megan Whitefoot	06/15/2022 12:02	Alexander Thompson	2333582
	06/09/2022			06/22/2022 15:47	Judith K. Clark	2333567
	06/09/2022			06/22/2022 15:53	Judith K. Clark	2333568
EPA 351.2 Rev. 2.0	06/09/2022	06/20/2022 16:20	Samantha L Bates	06/21/2022 13:15	Alexandra J Mattheus	2333567
	06/09/2022	06/20/2022 16:20	Samantha L Bates	06/21/2022 13:16	Alexandra J Mattheus	2333568
EPA 353.2 Rev. 2.0	06/09/2022			06/27/2022 14:06	Touraj Touran	2333567
	06/09/2022			06/27/2022 14:07	Touraj Touran	2333568
EPA 365.1 Rev. 2.0	06/09/2022	06/15/2022 11:23	Simonne.V. Calhoun	06/20/2022 11:22	James L Waggeberby	2333568
	06/09/2022	06/15/2022 11:23	Simonne.V. Calhoun	06/20/2022 16:29	James L Waggeberby	2333567
EPA 8270E	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/15/2022 22:53	Michael Poppell	2333577
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/15/2022 23:23	Michael Poppell	2333578
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/16/2022 02:44	Arthur Maknenko	2333576
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/16/2022 03:14	Arthur Maknenko	2333577
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/16/2022 03:44	Arthur Maknenko	2333578
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/16/2022 21:03	Michael Poppell	2333576
EPA 8276	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/24/2022 06:17	Julie Wi	2333576
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/24/2022 07:12	Julie Wi	2333577
	06/09/2022	06/10/2022 08:00	Rasheda Ghaffari	06/24/2022 08:08	Julie Wi	2333578
SM 2320 B-2011	06/09/2022			06/19/2022 02:57	Dale L. Simmons	2333565

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	06/09/2022			06/19/2022 03:08	Dale L. Simmons	2333566
SM 2540 D-2011	06/09/2022			06/14/2022 14:14	Yijie Li	2333565, 2333566
SM 4500-F- C-2011	06/09/2022			06/25/2022 16:28	Dale L. Simmons	2333565
	06/09/2022			06/25/2022 16:33	Dale L. Simmons	2333566
SM 5310 B-2011	06/09/2022			06/18/2022 05:30	Khloe J Berg	2333567
	06/09/2022			06/18/2022 06:14	Khloe J Berg	2333568