

Chemical Analysis Report

NE-DIST-2022-04-08-01

Florida Department of Environmental Protection
Central Laboratory
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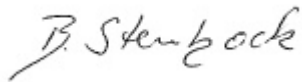
Event Description: **LSJR Southside 2022**
Request ID: **RQ-2022-04-11-23**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 26-APR-2022 11:36



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: 04/07/2022 09:20

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317778	EPA 8270E	Aldrin	0.67	U	ng/L	P412073	
		Alpha-BHC	0.10	U	ng/L	P412073	
		Alpha-Chlordane	0.21	U	ng/L	P412073	
		PCB-1016	2.1	U	ng/L	P412073	
		Beta-BHC	0.10	U	ng/L	P412073	
		PCB-1221	2.1	U	ng/L	P412073	
		Beta-Cyfluthrin**	1.3	U	ng/L	P412073	
		PCB-1232	2.1	U	ng/L	P412073	
		Bifenthrin**	0.51	U	ng/L	P412073	
		PCB-1242	2.1	U	ng/L	P412073	
		Carbophenothion	0.92	U	ng/L	P412073	
		PCB-1248	2.1	U	ng/L	P412073	
		Chlorothalonil	1.3	U	ng/L	P412073	
		PCB-1254	2.1	U	ng/L	P412073	
		Cis-Nonachlor**	0.21	U	ng/L	P412073	
		PCB-1260	2.1	U	ng/L	P412073	
		Cypermethrin	1.5	U	ng/L	P412073	
		Dacthal**	0.15	U	ng/L	P412073	
		DDD-p,p'	0.26	U	ng/L	P412073	
		DDE-p,p'	0.21	U	ng/L	P412073	
		DDT-p,p'	0.26	U	ng/L	P412073	
		Delta-BHC	0.41	U	ng/L	P412073	
		Deltamethrin**	1.3	U	ng/L	P412073	
		Dichlobenil**	0.26	U	ng/L	P412073	
		Dicofol	1.3	U	ng/L	P412073	
		Dieldrin	0.41	U	ng/L	P412073	
		Endosulfan I	0.41	U	ng/L	P412073	
		Endosulfan II	0.41	U	ng/L	P412073	
		Endosulfan Sulfate	0.31	U	ng/L	P412073	
		Endrin	0.41	U	ng/L	P412073	
		Endrin Aldehyde	0.77	U	ng/L	P412073	
		Endrin Ketone	0.41	U	ng/L	P412073	
		Esfenvalerate**	0.77	U	ng/L	P412073	
		Ethalfuralin**	0.15	U	ng/L	P412073	
		Fenpropathrin**	0.26	U	ng/L	P412073	
		Gamma-BHC	0.13	U	ng/L	P412073	
		Gamma-Chlordane	0.21	U	ng/L	P412073	
		Heptachlor	0.21	U	ng/L	P412073	
		Heptachlor Epoxide	0.26	U	ng/L	P412073	
		Hexachlorobenzene**	1.0	U	ng/L	P412073	
		Kepone**	5.1	U	ng/L	P412073	
		Lambda-Cyhalothrin**	0.77	U	ng/L	P412073	
		Methoxychlor	0.31	UJ	ng/L	P412073	LCS
		MGK-264**	0.21	U	ng/L	P412073	RPD

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317778	EPA 8270E	Mirex	0.72	U	ng/L	P412073	
		Permethrin	1.6	U	ng/L	P412073	
		Phenothrin**	0.92	U	ng/L	P412073	
		Piperonyl Butoxide**	0.15	U	ng/L	P412073	
		Prallethrin**	2.1	U	ng/L	P412073	RPD
		Tau-Fluvalinate**	0.26	U	ng/L	P412073	
		Tetramethrin**	0.77	U	ng/L	P412073	RPD
		Trans-Nonachlor**	0.21	U	ng/L	P412073	
		Triclosan Methyl**	0.15	U	ng/L	P412073	
		Trifluralin	0.21	U	ng/L	P412073	
		Chlordane	2.6	UJ	ng/L	P412073	SUR
		Toxaphene	15	UJ	ng/L	P412073	SUR
2317782	EPA 200.7 Rev. 4.4	Calcium	38.6		mg/L	P412183	
		Iron	630		ug/L	P412183	
		Magnesium	10.0		mg/L	P412183	
		Strontium	442		ug/L	P412183	
		Tin	3.0	U	ug/L	P412183	
		Titanium	1.5	I	ug/L	P412183	
		Vanadium	2.0	U	ug/L	P412183	
		Zinc	5.0	U	ug/L	P412183	
	EPA 200.8 Rev. 5.4	Aluminum	66		ug/L	P412183	
		Antimony	0.14	I	ug/L	P412183	
		Arsenic	2.09		ug/L	P412183	
		Beryllium	0.014	I	ug/L	P412183	
		Cadmium	0.020	U	ug/L	P412183	
		Chromium	0.40	U	ug/L	P412183	
		Cobalt	0.081		ug/L	P412183	
		Copper	1.35		ug/L	P412183	
		Lead	0.54		ug/L	P412183	
		Manganese	20.3		ug/L	P412183	
		Molybdenum	0.75		ug/L	P412183	
		Nickel	0.50	U	ug/L	P412183	
		Selenium	0.20	U	ug/L	P412183	
		Silver	0.010	U	ug/L	P412183	
		Thallium	0.10	U	ug/L	P412183	

Ref. Method and Comment:

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

EPA 8276: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Goodbys CR at Baymeadows

Collection Date/Time: 04/07/2022 09:00

Field ID: 20030593

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317779	EPA 8270E	Aldrin	0.67	U	ng/L	P412073	
		Alpha-BHC	0.10	U	ng/L	P412073	
		Alpha-Chlordane	0.21	U	ng/L	P412073	
		PCB-1016	2.1	U	ng/L	P412073	
		Beta-BHC	0.10	U	ng/L	P412073	
		PCB-1221	2.1	U	ng/L	P412073	
		Beta-Cyfluthrin**	1.3	U	ng/L	P412073	
		PCB-1232	2.1	U	ng/L	P412073	
		Bifenthrin**	0.52	U	ng/L	P412073	
		PCB-1242	2.1	U	ng/L	P412073	
		Carbophenothion	0.93	U	ng/L	P412073	
		PCB-1248	2.1	U	ng/L	P412073	
		Chlorothalonil	1.3	U	ng/L	P412073	
		PCB-1254	2.1	U	ng/L	P412073	
		Cis-Nonachlor**	0.21	U	ng/L	P412073	
		PCB-1260	2.1	U	ng/L	P412073	
		Cypermethrin	1.5	U	ng/L	P412073	
		Dacthal**	0.15	U	ng/L	P412073	
		DDD-p,p'	0.32	I	ng/L	P412073	
		DDE-p,p'	0.21	U	ng/L	P412073	
		DDT-p,p'	0.26	U	ng/L	P412073	
		Delta-BHC	0.41	U	ng/L	P412073	
		Deltamethrin**	1.3	U	ng/L	P412073	
		Dichlobenil**	0.26	U	ng/L	P412073	
		Dicofol	1.3	U	ng/L	P412073	
		Dieldrin	0.41	U	ng/L	P412073	
		Endosulfan I	0.41	U	ng/L	P412073	
		Endosulfan II	0.41	U	ng/L	P412073	
		Endosulfan Sulfate	0.31	U	ng/L	P412073	
		Endrin	0.41	U	ng/L	P412073	
		Endrin Aldehyde	0.77	U	ng/L	P412073	
		Endrin Ketone	0.41	U	ng/L	P412073	
		Esfenvalerate**	0.77	U	ng/L	P412073	
		Ethalfuralin**	0.15	U	ng/L	P412073	
		Fenpropathrin**	0.26	U	ng/L	P412073	
		Gamma-BHC	0.13	U	ng/L	P412073	
		Gamma-Chlordane	0.24	I	ng/L	P412073	
		Heptachlor	0.21	U	ng/L	P412073	
		Heptachlor Epoxide	0.26	U	ng/L	P412073	
		Hexachlorobenzene**	1.0	U	ng/L	P412073	
		Kepone**	5.2	U	ng/L	P412073	
		Lambda-Cyhalothrin**	0.77	U	ng/L	P412073	
		Methoxychlor	0.31	UJ	ng/L	P412073	CCV, LCS
		MGK-264**	0.21	U	ng/L	P412073	RPD

Field ID: 20030593

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317779	EPA 8270E	Mirex	0.72	U	ng/L	P412073	
		Permethrin	1.7	U	ng/L	P412073	
		Phenothrin**	0.93	U	ng/L	P412073	
		Piperonyl Butoxide**	0.48	I	ng/L	P412073	
		Prallethrin**	2.1	U	ng/L	P412073	RPD
		Tau-Fluvalinate**	0.26	U	ng/L	P412073	
		Tetramethrin**	0.77	UJ	ng/L	P412073	CCV, RPD
		Trans-Nonachlor**	0.21	U	ng/L	P412073	
		Triclosan Methyl**	0.15	U	ng/L	P412073	
		Trifluralin	0.21	U	ng/L	P412073	
		Chlordane	2.6	U	ng/L	P412073	
2317783	EPA 8276	Toxaphene	15	U	ng/L	P412073	
		Calcium	40.4		mg/L	P412183	
		Iron	1.05E+03		ug/L	P412183	
	EPA 200.7 Rev. 4.4	Magnesium	8.63		mg/L	P412183	
		Strontium	411		ug/L	P412183	
		Tin	3.0	U	ug/L	P412183	
		Titanium	2.1	I	ug/L	P412183	
		Vanadium	2.0	U	ug/L	P412183	
		Zinc	5.0	U	ug/L	P412183	
		Aluminum	89		ug/L	P412183	
		Antimony	0.15	I	ug/L	P412183	
		Arsenic	2.94		ug/L	P412183	
		Beryllium	0.014	I	ug/L	P412183	
		Cadmium	0.020	U	ug/L	P412183	
		Chromium	0.40	U	ug/L	P412183	
		Cobalt	0.090		ug/L	P412183	
		Copper	1.50		ug/L	P412183	
		Lead	0.79		ug/L	P412183	
		Manganese	27.3		ug/L	P412183	
		Molybdenum	0.82		ug/L	P412183	
		Nickel	0.50	U	ug/L	P412183	
		Selenium	0.20	U	ug/L	P412183	
		Silver	0.010	U	ug/L	P412183	
		Thallium	0.10	U	ug/L	P412183	
	EPA 200.8 Rev. 5.4						

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

Sample Location: Goodbys Creek at Sanchez Rd.

Collection Date/Time: 04/07/2022 09:35

Field ID: 20030594

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317780	EPA 8270E	Aldrin	0.72	U	ng/L	P412073	
		Alpha-BHC	0.11	U	ng/L	P412073	
		Alpha-Chlordane	0.22	U	ng/L	P412073	
		PCB-1016	2.2	U	ng/L	P412073	
		Beta-BHC	0.11	U	ng/L	P412073	
		PCB-1221	2.2	U	ng/L	P412073	
		Beta-Cyfluthrin**	1.4	U	ng/L	P412073	
		PCB-1232	2.2	U	ng/L	P412073	
		Bifenthrin**	0.55	U	ng/L	P412073	
		PCB-1242	2.2	U	ng/L	P412073	
		Carbophenothion	0.99	U	ng/L	P412073	
		PCB-1248	2.2	U	ng/L	P412073	
		Chlorothalonil	1.4	U	ng/L	P412073	
		PCB-1254	2.2	U	ng/L	P412073	
		Cis-Nonachlor**	0.22	U	ng/L	P412073	
		PCB-1260	2.2	U	ng/L	P412073	
		Cypermethrin	1.7	U	ng/L	P412073	
		Dacthal**	0.17	U	ng/L	P412073	
		DDD-p,p'	0.28	U	ng/L	P412073	
		DDE-p,p'	0.22	U	ng/L	P412073	
		DDT-p,p'	0.28	U	ng/L	P412073	
		Delta-BHC	0.44	U	ng/L	P412073	
		Deltamethrin**	1.4	U	ng/L	P412073	
		Dichlobenil**	0.28	U	ng/L	P412073	
		Dicofol	1.4	U	ng/L	P412073	
		Dieldrin	0.65	I	ng/L	P412073	
		Endosulfan I	0.44	U	ng/L	P412073	
		Endosulfan II	0.44	U	ng/L	P412073	
		Endosulfan Sulfate	0.33	U	ng/L	P412073	
		Endrin	0.44	U	ng/L	P412073	
		Endrin Aldehyde	0.83	U	ng/L	P412073	
		Endrin Ketone	0.44	U	ng/L	P412073	
		Esfenvalerate**	0.83	U	ng/L	P412073	
		Ethalfuralin**	0.17	U	ng/L	P412073	
		Fenpropathrin**	0.28	U	ng/L	P412073	
		Gamma-BHC	0.14	U	ng/L	P412073	
		Gamma-Chlordane	0.26	I	ng/L	P412073	
		Heptachlor	0.22	U	ng/L	P412073	
		Heptachlor Epoxide	0.28	U	ng/L	P412073	
		Hexachlorobenzene**	1.1	U	ng/L	P412073	
		Kepone**	5.5	U	ng/L	P412073	
		Lambda-Cyhalothrin**	0.83	U	ng/L	P412073	
		Methoxychlor	0.33	UJ	ng/L	P412073	CCV, LCS
		MGK-264**	0.22	U	ng/L	P412073	RPD

Field ID: 20030594

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317780	EPA 8270E	Mirex	0.77	U	ng/L	P412073	
		Permethrin	1.8	U	ng/L	P412073	
		Phenothrin**	0.99	U	ng/L	P412073	
		Piperonyl Butoxide**	0.42	I	ng/L	P412073	
		Prallethrin**	2.2	U	ng/L	P412073	RPD
		Tau-Fluvalinate**	0.28	U	ng/L	P412073	
		Tetramethrin**	0.83	UJ	ng/L	P412073	CCV, RPD
		Trans-Nonachlor**	0.22	U	ng/L	P412073	
		Triclosan Methyl**	0.17	U	ng/L	P412073	
		Trifluralin	0.22	U	ng/L	P412073	
		Chlordane	2.8	U	ng/L	P412073	
		Toxaphene	17	U	ng/L	P412073	
2317784	EPA 200.7 Rev. 4.4	Calcium	42.8		mg/L	P412183	
		Iron	1.57E+03		ug/L	P412183	
		Magnesium	6.93		mg/L	P412183	
		Strontium	387		ug/L	P412183	
		Tin	3.0	U	ug/L	P412183	
		Titanium	2.0	I	ug/L	P412183	
		Vanadium	2.0	U	ug/L	P412183	
		Zinc	5.0	U	ug/L	P412183	
	EPA 200.8 Rev. 5.4	Aluminum	52		ug/L	P412183	
		Antimony	0.16	I	ug/L	P412183	
		Arsenic	3.18		ug/L	P412183	
		Beryllium	0.013	I	ug/L	P412183	
		Cadmium	0.020	U	ug/L	P412183	
		Chromium	0.40	U	ug/L	P412183	
		Cobalt	0.082		ug/L	P412183	
		Copper	1.19		ug/L	P412183	
		Lead	0.32	I	ug/L	P412183	
		Manganese	33.0		ug/L	P412183	
		Molybdenum	0.87		ug/L	P412183	
		Nickel	0.50	U	ug/L	P412183	
		Selenium	0.20	U	ug/L	P412183	
		Silver	0.010	U	ug/L	P412183	
		Thallium	0.10	U	ug/L	P412183	

Ref. Method and Comment:

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

Sample Location: Miramar at San Jose

Collection Date/Time: 04/07/2022 09:55

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317771	DEP SOP: NU-094-1	Color (true)**	35	A	PCU	P412147	
	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P412150	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P412418	
		Sulfate	26		mg SO4/L	P412420	
	SM 2320 B-2011	Total Alkalinity	46		mg CaCO3/L	P412472	
	SM 2540 C-2011	TDS	116	A	mg/L	P412661	
	SM 2540 D-2011	TSS	22	A	mg/L	P412557	
2317772	SM 4500-F- C-2011	Fluoride	0.077	I	mg F/L	P412474	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P412249	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P412327	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.47		mg N/L	P412287	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P412355	
2317777	SM 5310 B-2011	Organic Carbon	9.0		mg C/L	P412206	
	EPA 8270E	Aldrin	0.70	U	ng/L	P412073	
		Alpha-BHC	0.11	U	ng/L	P412073	
		Alpha-Chlordane	0.27	I	ng/L	P412073	
		PCB-1016	2.2	U	ng/L	P412073	
		Beta-BHC	0.11	U	ng/L	P412073	
		PCB-1221	2.2	U	ng/L	P412073	
		Beta-Cyfluthrin**	1.4	U	ng/L	P412073	
		PCB-1232	2.2	U	ng/L	P412073	
		Bifenthrin**	0.54	U	ng/L	P412073	
		PCB-1242	2.2	U	ng/L	P412073	
		Carbophenothion	0.98	U	ng/L	P412073	
		PCB-1248	2.2	U	ng/L	P412073	
		Chlorothalonil	1.4	U	ng/L	P412073	
		PCB-1254	2.2	U	ng/L	P412073	
		Cis-Nonachlor**	0.22	U	ng/L	P412073	
		PCB-1260	2.2	U	ng/L	P412073	
		Cypermethrin	1.6	U	ng/L	P412073	
		Dacthal**	0.16	U	ng/L	P412073	
		DDD-p,p'	0.27	U	ng/L	P412073	
		DDE-p,p'	0.22	U	ng/L	P412073	
		DDT-p,p'	0.27	U	ng/L	P412073	
		Delta-BHC	0.43	U	ng/L	P412073	
		Deltamethrin**	1.4	U	ng/L	P412073	
		Dichlobenil**	0.27	U	ng/L	P412073	
		Dicofol	1.4	U	ng/L	P412073	
		Dieldrin	4.2		ng/L	P412073	
		Endosulfan I	0.43	U	ng/L	P412073	
		Endosulfan II	0.43	U	ng/L	P412073	
		Endosulfan Sulfate	0.33	U	ng/L	P412073	
		Endrin	0.43	U	ng/L	P412073	
		Endrin Aldehyde	0.81	U	ng/L	P412073	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317777	EPA 8270E	Endrin Ketone	0.43	U	ng/L	P412073	
		Esfenvalerate**	0.81	U	ng/L	P412073	
		Ethalfuralin**	0.16	U	ng/L	P412073	
		Fenpropathrin**	0.27	U	ng/L	P412073	
		Gamma-BHC	0.18	I	ng/L	P412073	
		Gamma-Chlordane	0.36	I	ng/L	P412073	
		Heptachlor	0.22	U	ng/L	P412073	
		Heptachlor Epoxide	1.9		ng/L	P412073	
		Hexachlorobenzene**	1.1	U	ng/L	P412073	
		Kepone**	5.4	U	ng/L	P412073	
		Lambda-Cyhalothrin**	0.81	U	ng/L	P412073	
		Methoprene**	0.81	U	ng/L	P412073	
		Methoxychlor	0.33	UJ	ng/L	P412073	CCV, LCS
		MGK-264**	0.22	U	ng/L	P412073	RPD
		Mirex	0.76	U	ng/L	P412073	
		Oxychlordane**	0.33	U	ng/L	P412073	MS
		Permethrin	1.7	U	ng/L	P412073	
		Phenothrin**	0.98	U	ng/L	P412073	
		Piperonyl Butoxide**	2.7		ng/L	P412073	
		Prallethrin**	2.2	U	ng/L	P412073	RPD
		Tau-Fluvalinate**	0.27	U	ng/L	P412073	
		Tetramethrin**	0.81	UJ	ng/L	P412073	CCV, RPD
		Trans-Nonachlor**	0.22	U	ng/L	P412073	
		Triclosan Methyl**	0.16	U	ng/L	P412073	
		Trifluralin	0.65	I	ng/L	P412073	
	EPA 8276	Chlordane	3.0	I	ng/L	P412073	
		Toxaphene	16	U	ng/L	P412073	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: FB_04072022

Collection Date/Time: 04/07/2022 10:00

Field ID: FB_04072022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317773	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P412150	
	EPA 300.0 Rev. 2.1	Sulfate	0.20	U	mg SO4/L	P412420	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P412472	
	SM 2540 C-2011	TDS	15	U	mg/L	P412661	
	SM 2540 D-2011	TSS	2	U	mg/L	P412557	
	SM 4500-F- C-2011	Fluoride	0.035	U	mg F/L	P412474	
2317774	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P412299	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P412327	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P412287	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P412355	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P412206	
2317781	EPA 8270E	Aldrin	0.67	U	ng/L	P412073	
		Alpha-BHC	0.10	U	ng/L	P412073	
		Alpha-Chlordane	0.20	U	ng/L	P412073	
		PCB-1016	2.0	U	ng/L	P412073	
		Beta-BHC	0.10	U	ng/L	P412073	
		PCB-1221	2.0	U	ng/L	P412073	
		Beta-Cyfluthrin**	1.3	U	ng/L	P412073	
		PCB-1232	2.0	U	ng/L	P412073	
		Bifenthrin**	0.51	U	ng/L	P412073	
		PCB-1242	2.0	U	ng/L	P412073	
		Carbophenothion	0.92	U	ng/L	P412073	
		PCB-1248	2.0	U	ng/L	P412073	
		Chlorothalonil	1.3	U	ng/L	P412073	
		PCB-1254	2.0	U	ng/L	P412073	
		Cis-Nonachlor**	0.20	U	ng/L	P412073	
		PCB-1260	2.0	U	ng/L	P412073	
		Cypermethrin	1.5	U	ng/L	P412073	
		Dacthal**	0.15	U	ng/L	P412073	
		DDD-p,p'	0.26	U	ng/L	P412073	
		DDE-p,p'	0.20	U	ng/L	P412073	
		DDT-p,p'	0.26	U	ng/L	P412073	
		Delta-BHC	0.41	U	ng/L	P412073	
		Deltamethrin**	1.3	U	ng/L	P412073	
		Dichlobenil**	0.26	U	ng/L	P412073	
		Dicofol	1.3	U	ng/L	P412073	
		Dieldrin	0.41	U	ng/L	P412073	
		Endosulfan I	0.41	U	ng/L	P412073	
		Endosulfan II	0.41	U	ng/L	P412073	
		Endosulfan Sulfate	0.31	U	ng/L	P412073	
		Endrin	0.41	U	ng/L	P412073	
		Endrin Aldehyde	0.77	U	ng/L	P412073	
		Endrin Ketone	0.41	U	ng/L	P412073	
		Esfenvalerate**	0.77	U	ng/L	P412073	

Field ID: FB_04072022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2317781	EPA 8270E	Ethalfuralin**	0.15	U	ng/L	P412073	
		Fenpropathrin**	0.26	U	ng/L	P412073	
		Gamma-BHC	0.13	U	ng/L	P412073	
		Gamma-Chlordane	0.20	U	ng/L	P412073	
		Heptachlor	0.20	U	ng/L	P412073	
		Heptachlor Epoxide	0.26	U	ng/L	P412073	
		Hexachlorobenzene**	1.0	U	ng/L	P412073	
		Kepone**	5.1	U	ng/L	P412073	
		Lambda-Cyhalothrin**	0.77	U	ng/L	P412073	
		Methoprene**	0.77	U	ng/L	P412073	
		Methoxychlor	0.31	UJ	ng/L	P412073	CCV, LCS
		MGK-264**	0.20	U	ng/L	P412073	RPD
		Mirex	0.72	U	ng/L	P412073	
		Oxychlordane**	0.31	U	ng/L	P412073	MS
		Permethrin	1.6	U	ng/L	P412073	
		Phenothrin**	0.92	U	ng/L	P412073	
		Piperonyl Butoxide**	0.15	U	ng/L	P412073	
		Prallethrin**	2.0	U	ng/L	P412073	RPD
		Tau-Fluvalinate**	0.26	U	ng/L	P412073	
		Tetramethrin**	0.77	UJ	ng/L	P412073	CCV, RPD
		Trans-Nonachlor**	0.20	U	ng/L	P412073	
		Triclosan Methyl**	0.15	U	ng/L	P412073	
		Trifluralin	0.20	U	ng/L	P412073	
	EPA 8276	Chlordane	2.6	U	ng/L	P412073	
		Toxaphene	15	U	ng/L	P412073	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P412147

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412150

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412183

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: P412183

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 300.0 Rev. 2.1
Batch ID: P412418

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412420

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412249

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412299

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412327

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412287

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412355

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

Reference Method: EPA 8270E
Batch ID: P412073

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412073

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P412073

Component	Result	Code	Units
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
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: P412073

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: P412472

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P412472

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

Reference Method: SM 2540 C-2011
Batch ID: P412661

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P412557

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P412474

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P412206

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: P412147

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412150

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412183

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Strontium	100		P	85 - 115
Tin	101		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	94.4		P	85 - 115
Zinc	99.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412183

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	98.6		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	98.8		P	85 - 115
Cobalt	101		P	85 - 115
Copper	98.9		P	85 - 115
Lead	99.1		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	99.8		P	85 - 115
Nickel	99.4		P	85 - 115
Selenium	101		P	85 - 115
Silver	104		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412418

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412420

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412249

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412299

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412327

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412287

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412355

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

Reference Method: EPA 8270E
Batch ID: P412073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	30.6		P	10 - 93.0
Alpha-BHC	87.9		P	75 - 106
Alpha-Chlordane	64.4		P	50 - 109
Beta-BHC	101		P	36 - 138
Beta-Cyfluthrin	61.3		P	23 - 167
Bifenthrin	39.8		P	11 - 123
Carbophenothion	51.8		P	18 - 96.0
Chlorothalonil	137		P	27 - 190
Cis-Nonachlor	70.2		P	40 - 111
Cypermethrin	69.2		P	25 - 155
Dacthal	106		P	72 - 119
DDD-p,p'	83.5		P	47 - 108
DDE-p,p'	65.2		P	48 - 107
DDT-p,p'	58.4		P	49 - 111
Delta-BHC	121		P	54 - 138
Deltamethrin	67.5		P	22 - 189
Dichlobenil	96.7		P	32 - 113
Dicofol	62.0		P	50 - 108
Dieldrin	75.0		P	56 - 110
Endosulfan I	71.8		P	60 - 105
Endosulfan II	87.9		P	50 - 120
Endosulfan Sulfate	107		P	55 - 121

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P412073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	80.4		P	31 - 119
Endrin Aldehyde	87.4		P	36 - 116
Endrin Ketone	96.4		P	69 - 177
Esfenvalerate	68.0		P	10 - 179
Ethalfuralin	74.5		P	49 - 99.0
Fenpropathrin	59.9		P	35 - 119
Gamma-BHC	98.2		P	69 - 120
Gamma-Chlordane	54.8		P	45 - 107
Heptachlor	60.9		P	41 - 100
Heptachlor Epoxide	75.6		P	58 - 106
Hexachlorobenzene	64.5		P	39 - 100
Kepone	126		P	10 - 191
Lambda-Cyhalothrin	54.5		P	21 - 206
Methoprene	45.8		P	10 - 129
Methoxychlor	59.7		F	61 - 111
MGK-264	71.6		P	20 - 123
Mirex	49.2		P	10 - 182
Oxychlordane	66.5		P	39 - 110
PCB-1016	64.0		P	49 - 111
PCB-1260	82.0		P	42 - 116
Permethrin	61.2		P	26 - 152
Phenothrin	35.1		P	10 - 109
Piperonyl Butoxide	105		P	19 - 147
Prallethrin	55.1		P	14 - 109
Tau-Fluvalinate	59.0		P	16 - 134
Tetramethrin	46.7		P	10 - 125
Trans-Nonachlor	60.9		P	45 - 107
Triclosan Methyl	68.8		P	60 - 110
Trifluralin	62.6		P	44 - 101

Reference Method: EPA 8276

Batch ID: P412073

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	79.8		P	61 - 118
Toxaphene	94.5		P	51 - 122

Reference Method: SM 2320 B-2011

Batch ID: P412472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.1		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P412474

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.5		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P412206

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P412183

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315178	Calcium	101		P	80 - 120
2315178	Iron	105	105	P/P	80 - 120
2315178	Magnesium	104	104	P/P	80 - 120
2315178	Strontium	100	100	P/P	80 - 120
2315178	Tin	103	103	P/P	80 - 120
2315178	Titanium	101	101	P/P	80 - 120
2315178	Vanadium	96.0	95.9	P/P	80 - 120
2315178	Zinc	99.8	99.3	P/P	80 - 120
2315194	Calcium	107		P	80 - 120
2315194	Iron	105		P	80 - 120
2315194	Magnesium	108		P	80 - 120
2315194	Strontium	99.3		P	80 - 120
2315194	Tin	97.7		P	80 - 120
2315194	Titanium	101		P	80 - 120
2315194	Vanadium	95.2		P	80 - 120
2315194	Zinc	97.7		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P412183

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315178	Aluminum	103	102	P/P	80 - 120
2315178	Antimony	105	105	P/P	80 - 120
2315178	Arsenic	102	101	P/P	80 - 120
2315178	Beryllium	101	97.9	P/P	80 - 120
2315178	Cadmium	103	103	P/P	80 - 120
2315178	Chromium	103	103	P/P	80 - 120
2315178	Cobalt	103	101	P/P	80 - 120
2315178	Copper	98.0	98.1	P/P	80 - 120
2315178	Lead	100	100	P/P	80 - 120
2315178	Manganese	103	103	P/P	80 - 120
2315178	Molybdenum	103	103	P/P	80 - 120
2315178	Nickel	100	98.6	P/P	80 - 120
2315178	Selenium	99.3	98.1	P/P	80 - 120
2315178	Silver	104	104	P/P	80 - 120
2315178	Thallium	105	106	P/P	80 - 120
2315194	Aluminum	103		P	80 - 120
2315194	Antimony	106		P	80 - 120
2315194	Arsenic	104		P	80 - 120
2315194	Beryllium	101		P	80 - 120
2315194	Cadmium	105		P	80 - 120
2315194	Chromium	103		P	80 - 120
2315194	Cobalt	101		P	80 - 120
2315194	Copper	97.8		P	80 - 120
2315194	Lead	102		P	80 - 120
2315194	Manganese	102		P	80 - 120
2315194	Molybdenum	106		P	80 - 120
2315194	Nickel	98.2		P	80 - 120
2315194	Selenium	100		P	80 - 120
2315194	Silver	106		P	80 - 120
2315194	Thallium	107		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317754	Chloride	97.9		P	90 - 110
2317847	Chloride	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317847	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317714	Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317796	Ammonia-N	96.0	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317796	Kjeldahl Nitrogen	102	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317758	NO2NO3-N	98.0	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412355

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317772	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P412073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317302	PCB-1016	69.8	62.8	P/P	46 - 110
2317302	PCB-1260	69.0	68.6	P/P	42 - 111
2317899	Aldrin	34.4	27.4	P/P	10 - 89.0
2317899	Alpha-BHC	94.1	81.2	P/P	71 - 105
2317899	Alpha-Chlordane	56.7	58.4	P/P	43 - 107
2317899	Beta-BHC	112	107	P/P	57 - 152
2317899	Beta-Cyfluthrin	58.3	61.3	P/P	29 - 186
2317899	Bifenthrin	43.2	46.8	P/P	19 - 119
2317899	Carbophenothion	38.9	40.0	P/P	19 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P412073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317899	Chlorothalonil	131	125	P/P	10 - 245
2317899	Cis-Nonachlor	50.1	59.7	P/P	36 - 110
2317899	Cypermethrin	60.3	64.8	P/P	24 - 169
2317899	Dacthal	81.7	73.5	P/P	62 - 115
2317899	DDD-p,p'	57.0	64.4	P/P	36 - 109
2317899	DDE-p,p'	54.9	59.8	P/P	30 - 114
2317899	DDT-p,p'	52.6	60.6	P/P	42 - 108
2317899	Delta-BHC	109	110	P/P	60 - 164
2317899	Deltamethrin	60.4	48.7	P/P	10 - 210
2317899	Dichlobenil	89.6	77.6	P/P	23 - 108
2317899	Dicofol	68.6	67.4	P/P	44 - 109
2317899	Dieldrin	58.0	62.1	P/P	37 - 119
2317899	Endosulfan I	62.9	58.0	P/P	52 - 105
2317899	Endosulfan II	75.3	66.9	P/P	35 - 127
2317899	Endosulfan Sulfate	83.5	77.4	P/P	39 - 130
2317899	Endrin	61.7	63.3	P/P	30 - 116
2317899	Endrin Aldehyde	77.7	85.2	P/P	20 - 110
2317899	Endrin Ketone	85.0	78.0	P/P	48 - 134
2317899	Esfenvalerate	59.0	68.1	P/P	10 - 199
2317899	Ethalfuralin	68.7	59.7	P/P	48 - 95.0
2317899	Fenpropathrin	56.3	63.8	P/P	37 - 121
2317899	Gamma-BHC	106	98.8	P/P	61 - 126
2317899	Gamma-Chlordane	47.8	53.7	P/P	39 - 105
2317899	Heptachlor	49.2	47.9	P/P	38 - 96.0
2317899	Heptachlor Epoxide	56.3	65.4	P/P	42 - 114
2317899	Hexachlorobenzene	59.4	62.1	P/P	39 - 93.0
2317899	Kepone	123	103	P/P	10 - 215
2317899	Lambda-Cyhalothrin	54.6	57.1	P/P	10 - 204
2317899	Methoprene	43.7	45.1	P/P	17 - 108
2317899	Methoxychlor	64.7	67.1	P/P	56 - 115
2317899	MGK-264	70.5	43.3	P/P	35 - 120
2317899	Mirex	45.7	49.4	P/P	10 - 178
2317899	Oxychlordane	46.9	51.4	F/P	47 - 91.0
2317899	Permethrin	49.7	65.0	P/P	27 - 170
2317899	Phenothrin	31.4	32.9	P/P	10 - 133
2317899	Piperonyl Butoxide	97.0	85.4	P/P	23 - 150
2317899	Prallethrin	58.5	38.1	P/P	21 - 113
2317899	Tau-Fluvalinate	53.8	58.8	P/P	16 - 158
2317899	Tetramethrin	61.7	38.9	P/P	22 - 132
2317899	Trans-Nonachlor	56.9	60.6	P/P	43 - 102
2317899	Triclosan Methyl	64.6	57.4	P/P	49 - 109
2317899	Trifluralin	65.5	70.3	P/P	48 - 93.0

Reference Method: EPA 8276
Batch ID: P412073

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317302	Chlordane	60.6	74.0	P/P	55 - 128
2317302	Toxaphene	77.4	96.4	P/P	57 - 211

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P412474

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317794	Fluoride	97.6	101	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P412206

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2317479	Organic Carbon	97.2	97.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P412147

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317771	Color (true)	0.691	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P412150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317754	Turbidity	9.07	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P412183

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315178	Calcium	1.07	Spike	P	0 - 20
2315178	Iron	0.357	Spike	P	0 - 20
2315178	Magnesium	0.0305	Spike	P	0 - 20
2315178	Strontium	0.181	Spike	P	0 - 20
2315178	Tin	0.384	Spike	P	0 - 20
2315178	Titanium	0.601	Spike	P	0 - 20
2315178	Vanadium	0.113	Spike	P	0 - 20
2315178	Zinc	0.494	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P412183

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315178	Aluminum	0.703	Spike	P	0 - 20
2315178	Antimony	0.344	Spike	P	0 - 20
2315178	Arsenic	0.239	Spike	P	0 - 20
2315178	Beryllium	2.90	Spike	P	0 - 20
2315178	Cadmium	0.513	Spike	P	0 - 20
2315178	Chromium	0.713	Spike	P	0 - 20
2315178	Cobalt	1.10	Spike	P	0 - 20
2315178	Copper	0.101	Spike	P	0 - 20
2315178	Lead	0.200	Spike	P	0 - 20
2315178	Manganese	0.163	Spike	P	0 - 20
2315178	Molybdenum	0.271	Spike	P	0 - 20
2315178	Nickel	1.46	Spike	P	0 - 20
2315178	Selenium	1.29	Spike	P	0 - 20
2315178	Silver	0.506	Spike	P	0 - 20
2315178	Thallium	0.567	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317754	Chloride	0.138	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P412420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317754	Sulfate	0.370	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317714	Ammonia-N	0.798	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P412299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317796	Ammonia-N	0.347	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P412327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317796	Kjeldahl Nitrogen	2.21	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P412287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317758	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P412355

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317772	Total-P	1.11	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P412073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317302	PCB-1016	10.8	Spike	P	0 - 32
2317302	PCB-1260	1.05	Spike	P	0 - 31
2317899	Aldrin	22.4	Spike	P	0 - 37
2317899	Alpha-BHC	14.8	Spike	P	0 - 16
2317899	Alpha-Chlordane	2.89	Spike	P	0 - 28
2317899	Beta-BHC	4.24	Spike	P	0 - 32
2317899	Beta-Cyfluthrin	5.12	Spike	P	0 - 41
2317899	Bifenthrin	7.82	Spike	P	0 - 36
2317899	Carbophenothion	2.64	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P412073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317899	Chlorothalonil	5.08	Spike	P	0 - 54
2317899	Cis-Nonachlor	17.7	Spike	P	0 - 33
2317899	Cypermethrin	7.11	Spike	P	0 - 38
2317899	Dacthal	10.5	Spike	P	0 - 23
2317899	DDD-p,p'	12.1	Spike	P	0 - 35
2317899	DDE-p,p'	8.54	Spike	P	0 - 27
2317899	DDT-p,p'	14.1	Spike	P	0 - 31
2317899	Delta-BHC	0.667	Spike	P	0 - 30
2317899	Deltamethrin	21.4	Spike	P	0 - 76
2317899	Dichlobenil	14.4	Spike	P	0 - 33
2317899	Dicofol	1.77	Spike	P	0 - 24
2317899	Dieldrin	6.14	Spike	P	0 - 35
2317899	Endosulfan I	8.19	Spike	P	0 - 25
2317899	Endosulfan II	11.9	Spike	P	0 - 31
2317899	Endosulfan Sulfate	7.53	Spike	P	0 - 38
2317899	Endrin	2.56	Spike	P	0 - 53
2317899	Endrin Aldehyde	9.18	Spike	P	0 - 81
2317899	Endrin Ketone	8.50	Spike	P	0 - 33
2317899	Esfenvalerate	14.3	Spike	P	0 - 46
2317899	Ethalfuralin	14.1	Spike	P	0 - 22
2317899	Fenpropathrin	12.5	Spike	P	0 - 29
2317899	Gamma-BHC	6.79	Spike	P	0 - 17
2317899	Gamma-Chlordane	11.6	Spike	P	0 - 28
2317899	Heptachlor	2.75	Spike	P	0 - 28
2317899	Heptachlor Epoxide	14.9	Spike	P	0 - 23
2317899	Hexachlorobenzene	4.45	Spike	P	0 - 22
2317899	Kepone	17.8	Spike	P	0 - 61
2317899	Lambda-Cyhalothrin	4.50	Spike	P	0 - 52
2317899	Methoprene	3.15	Spike	P	0 - 38
2317899	Methoxychlor	3.58	Spike	P	0 - 29
2317899	MGK-264	47.7	Spike	F	0 - 41
2317899	Mirex	7.70	Spike	P	0 - 39
2317899	Oxychlordane	9.13	Spike	P	0 - 33
2317899	Permethrin	26.8	Spike	P	0 - 39
2317899	Phenothrin	4.66	Spike	P	0 - 52
2317899	Piperonyl Butoxide	12.7	Spike	P	0 - 91
2317899	Prallethrin	42.3	Spike	F	0 - 34
2317899	Tau-Fluvalinate	8.93	Spike	P	0 - 41
2317899	Tetramethrin	45.4	Spike	F	0 - 43
2317899	Trans-Nonachlor	6.30	Spike	P	0 - 31
2317899	Triclosan Methyl	11.8	Spike	P	0 - 24
2317899	Trifluralin	7.04	Spike	P	0 - 23

Reference Method: EPA 8276
Batch ID: P412073

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317302	Chlordane	19.9	Spike	P	0 - 25
2317302	Toxaphene	21.8	Spike	P	0 - 24

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P412472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317794	Total Alkalinity	1.16	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P412661

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317771	TDS	6.01	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P412557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317771	TSS	5.41	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P412474

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317794	Fluoride	2.04	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P412206

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2317479	Organic Carbon	0.0664	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2317777
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	59.1	P	38 - 115
EPA 8270E	Decachlorobiphenyl	82.3	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	60.8	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	73.2	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	83.8	P	30 - 97.0
EPA 8276	PCNB	79.8	P	45 - 119

Lab Sample ID: 2317778
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.5	P	38 - 115
EPA 8270E	Decachlorobiphenyl	69.9	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	58.1	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	69.3	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	98.0	F	30 - 97.0
EPA 8276	PCNB	79.7	P	45 - 119

Lab Sample ID: 2317779
Field Sample ID: 20030593

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	68.8	P	38 - 115
EPA 8270E	Decachlorobiphenyl	117	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	65.7	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	78.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	93.7	P	30 - 97.0
EPA 8276	PCNB	81.2	P	45 - 119

Lab Sample ID: 2317780
Field Sample ID: 20030594

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	63.3	P	38 - 115
EPA 8270E	Decachlorobiphenyl	89.7	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	62.6	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	76.2	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	90.2	P	30 - 97.0
EPA 8276	PCNB	77.4	P	45 - 119

Lab Sample ID: 2317781
Field Sample ID: FB_04072022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	53.7	P	38 - 115
EPA 8270E	Decachlorobiphenyl	72.3	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	57.9	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	71.7	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	74.5	P	30 - 97.0
EPA 8276	PCNB	70.6	P	45 - 119

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A111395

Included Lab Sample IDs: 2317771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111398

Included Lab Sample IDs: 2317771, 2317773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 5310 B-2011

Run ID: A111422

Included Lab Sample IDs: 2317772, 2317774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	97.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111429

Included Lab Sample IDs: 2317772

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A111439

Included Lab Sample IDs: 2317782, 2317783, 2317784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	105	105	P/P	90 - 110
Antimony	107	108	P/P	90 - 110
Arsenic	103	104	P/P	90 - 110
Beryllium	99.6	102	P/P	90 - 110
Cadmium	105	106	P/P	90 - 110
Chromium	103	105	P/P	90 - 110
Cobalt	103	103	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	102	102	P/P	90 - 110
Manganese	103	107	P/P	90 - 110
Molybdenum	103	103	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Selenium	104	106	P/P	90 - 110
Silver	109	110	P/P	90 - 110
Thallium	103	102	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111443

Included Lab Sample IDs: 2317771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.7	99.5	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A111443

Included Lab Sample IDs: 2317771, 2317773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	100	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A111444

Included Lab Sample IDs: 2317772, 2317774

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A111449

Included Lab Sample IDs: 2317774

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

Reference Method: EPA 8270E

Run ID: A111487

Included Lab Sample IDs: 2317777, 2317778, 2317779, 2317780, 2317781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	110		P	80 - 120
PCB-1260	110		P	80 - 120

Reference Method: EPA 8276

Run ID: A111490

Included Lab Sample IDs: 2317777, 2317778, 2317779, 2317780, 2317781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.4		P	80 - 120
Chlordane	98.0		P	80 - 120
Toxaphene	103		P	80 - 120
Toxaphene	111		P	80 - 120

Reference Method: EPA 8270E

Run ID: A111495

Included Lab Sample IDs: 2317777, 2317779, 2317780, 2317781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	97.8		P	80 - 120
Alpha-Chlordane	99.6		P	80 - 120
Beta-BHC	115		P	80 - 120
Beta-Cyfluthrin	98.9		P	80 - 120
Bifenthrin	86.5		P	80 - 120
Carbophenothion	113		P	80 - 120
Chlorothalonil	96.5		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	98.6		P	80 - 120
Dacthal	103		P	80 - 120
DDD-p,p'	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A111495

Included Lab Sample IDs: 2317777, 2317779, 2317780, 2317781

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDE-p,p'	102		P	80 - 120
DDT-p,p'	94.0		P	80 - 120
Delta-BHC	109		P	80 - 120
Deltamethrin	88.7		P	80 - 120
Dichlobenil	114		P	80 - 120
Dicofol	104		P	80 - 120
Dieldrin	100		P	80 - 120
Endosulfan I	94.9		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	99.9		P	80 - 120
Endrin	108		P	80 - 120
Endrin Aldehyde	118		P	80 - 120
Endrin Ketone	117		P	80 - 120
Esfenvalerate	101		P	80 - 120
Ethalfuralin	99.5		P	80 - 120
Fenpropathrin	91.0		P	80 - 120
Gamma-BHC	109		P	80 - 120
Gamma-Chlordane	92.5		P	80 - 120
Heptachlor	98.4		P	80 - 120
Heptachlor Epoxide	118		P	80 - 120
Hexachlorobenzene	111		P	80 - 120
Kepone	87.9		P	80 - 120
Lambda-Cyhalothrin	98.9		P	80 - 120
Methoprene	94.3		P	80 - 120
Methoxychlor	76.7*		F	80 - 120
MGK-264	99.1		P	80 - 120
Mirex	101		P	80 - 120
Oxychlordane	98.8		P	80 - 120
Permethrin	95.2		P	80 - 120
Phenothrin	96.8		P	80 - 120
Piperonyl Butoxide	96.1		P	80 - 120
Prallethrin	98.9		P	80 - 120
Tau-Fluvalinate	101		P	80 - 120
Tetramethrin	75.3*		F	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	105		P	80 - 120

Reference Method: EPA 8270E

Run ID: A111500

Included Lab Sample IDs: 2317778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	93.7		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	94.7		P	80 - 120
Beta-Cyfluthrin	109		P	80 - 120
Bifenthrin	95.2		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorothalonil	89.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111500
Included Lab Sample IDs: 2317778

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cis-Nonachlor	95.6		P	80 - 120
Cypermethrin	94.1		P	80 - 120
Dacthal	87.6		P	80 - 120
DDD-p,p'	97.1		P	80 - 120
DDE-p,p'	95.8		P	80 - 120
DDT-p,p'	92.8		P	80 - 120
Delta-BHC	97.4		P	80 - 120
Deltamethrin	99.6		P	80 - 120
Dichlobenil	102		P	80 - 120
Dicofol	97.6		P	80 - 120
Dieldrin	93.0		P	80 - 120
Endosulfan I	108		P	80 - 120
Endosulfan II	98.1		P	80 - 120
Endosulfan Sulfate	112		P	80 - 120
Endrin	97.6		P	80 - 120
Endrin Aldehyde	109		P	80 - 120
Endrin Ketone	99.7		P	80 - 120
Esfenvalerate	100		P	80 - 120
Ethalfuralin	101		P	80 - 120
Fenpropathrin	91.3		P	80 - 120
Gamma-BHC	96.2		P	80 - 120
Gamma-Chlordane	99.9		P	80 - 120
Heptachlor	91.2		P	80 - 120
Heptachlor Epoxide	103		P	80 - 120
Hexachlorobenzene	117		P	80 - 120
Kepone	103		P	80 - 120
Lambda-Cyhalothrin	95.1		P	80 - 120
Methoxychlor	89.5		P	80 - 120
MGK-264	106		P	80 - 120
Mirex	94.0		P	80 - 120
Permethrin	107		P	80 - 120
Phenothrin	99.8		P	80 - 120
Piperonyl Butoxide	110		P	80 - 120
Prallethrin	101		P	80 - 120
Tau-Fluvalinate	99.1		P	80 - 120
Tetramethrin	100		P	80 - 120
Trans-Nonachlor	96.2		P	80 - 120
Triclosan Methyl	115		P	80 - 120
Trifluralin	97.9		P	80 - 120

Reference Method: SM 2320 B-2011
Run ID: A111514
Included Lab Sample IDs: 2317771, 2317773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.2	95.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A111514

Included Lab Sample IDs: 2317771, 2317773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111523

Included Lab Sample IDs: 2317782, 2317783, 2317784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.0	99.6	P/P	90 - 110
Iron	97.8	99.5	P/P	90 - 110
Magnesium	97.7	99.5	P/P	90 - 110
Strontium	98.0	98.2	P/P	90 - 110
Tin	99.0	99.4	P/P	90 - 110
Titanium	98.7	96.0	P/P	90 - 110
Vanadium	100	99.0	P/P	90 - 110
Zinc	101	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111557

Included Lab Sample IDs: 2317774

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111558

Included Lab Sample IDs: 2317772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111587

Included Lab Sample IDs: 2317772, 2317774

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	97.1	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	100					0.691	
EPA 180.1 Rev. 2.0	Turbidity	96.5					9.07	
EPA 200.7 Rev. 4.4	Calcium	102	101	107				1.07
	Iron	104	105	105	105			0.357
	Magnesium	104	104	104	108			0.0305
	Strontium	100	100	100	99.3			0.181
	Tin	101	103	103	97.7			0.384
	Titanium	100	101	101	101			0.601
	Vanadium	94.4	96.0	95.9	95.2			0.113
	Zinc	99.2	99.8	99.3	97.7			0.494
EPA 200.8 Rev. 5.4	Aluminum	102	103	102	103			0.703
	Antimony	102	105	105	106			0.344
	Arsenic	101	102	101	104			0.239
	Beryllium	98.6	101	97.9	101			2.90
	Cadmium	98.9	103	103	105			0.513
	Chromium	98.8	103	103	103			0.713
	Cobalt	101	103	101	101			1.10
	Copper	98.9	98.0	98.1	97.8			0.101
	Lead	99.1	100	100	102			0.200
	Manganese	101	103	103	102			0.163
	Molybdenum	99.8	103	103	106			0.271
	Nickel	99.4	100	98.6	98.2			1.46
	Selenium	101	99.3	98.1	100			1.29
	Silver	104	104	104	106			0.506
	Thallium	102	105	106	107			0.567
EPA 300.0 Rev. 2.1	Chloride	99.8	97.9	99.6			0.138	
	Sulfate	100	101				0.370	
EPA 350.1 Rev. 2.0	Ammonia-N	95.4	99.8	101				0.798
	Ammonia-N	98.4	96.0	96.4				0.347
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7	102	106				2.21
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100	98.0	99.0				1.02
EPA 365.1 Rev. 2.0	Total-P	101	103	104				1.11
EPA 8270E	Aldrin	30.6	34.4	27.4				22.4
	Alpha-BHC	87.9	94.1	81.2				14.8
	Alpha-Chlordane	64.4	56.7	58.4				2.89
	Beta-BHC	101	112	107				4.24
	Beta-Cyfluthrin	61.3	58.3	61.3				5.12
	Bifenthrin	39.8	43.2	46.8				7.82
	Carbophenothion	51.8	38.9	40.0				2.64
	Chlorothalonil	137	131	125				5.08
	Cis-Nonachlor	70.2	50.1	59.7				17.7
	Cypermethrin	69.2	60.3	64.8				7.11
	Dacthal	106	81.7	73.5				10.5
	DDD-p,p'	83.5	57.0	64.4				12.1
	DDE-p,p'	65.2	54.9	59.8				8.54
	DDT-p,p'	58.4	52.6	60.6				14.1
	Delta-BHC	121	109	110				0.667
	Deltamethrin	67.5	60.4	48.7				21.4
	Dichlobenil	96.7	89.6	77.6				14.4
	Dicofol	62.0	68.6	67.4				1.77
	Dieldrin	75.0	58.0	62.1				6.14
	Endosulfan I	71.8	62.9	58.0				8.19
	Endosulfan II	87.9	75.3	66.9				11.9
	Endosulfan Sulfate	107	83.5	77.4				7.53

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
			LCS	SMP	MS	
EPA 8270E	Endrin	80.4	61.7	63.3		2.56
	Endrin Aldehyde	87.4	77.7	85.2		9.18
	Endrin Ketone	96.4	85.0	78.0		8.50
	Esfenvalerate	68.0	59.0	68.1		14.3
	Ethalfuralin	74.5	68.7	59.7		14.1
	Fenpropathrin	59.9	56.3	63.8		12.5
	Gamma-BHC	98.2	106	98.8		6.79
	Gamma-Chlordane	54.8	47.8	53.7		11.6
	Heptachlor	60.9	49.2	47.9		2.75
	Heptachlor Epoxide	75.6	56.3	65.4		14.9
	Hexachlorobenzene	64.5	59.4	62.1		4.45
	Kepone	126	123	103		17.8
	Lambda-Cyhalothrin	54.5	54.6	57.1		4.50
	Methoprene	45.8	43.7	45.1		3.15
	Methoxychlor	59.7	64.7	67.1		3.58
	MGK-264	71.6	70.5	43.3		47.7
	Mirex	49.2	45.7	49.4		7.70
	Oxychlordane	66.5	46.9	51.4		9.13
	PCB-1016	64.0	69.8	62.8		10.8
	PCB-1260	82.0	69.0	68.6		1.05
	Permethrin	61.2	49.7	65.0		26.8
	Phenothrin	35.1	31.4	32.9		4.66
	Piperonyl Butoxide	105	97.0	85.4		12.7
	Prallethrin	55.1	58.5	38.1		42.3
	Tau-Fluvalinate	59.0	53.8	58.8		8.93
	Tetramethrin	46.7	61.7	38.9		45.4
	Trans-Nonachlor	60.9	56.9	60.6		6.30
	Triclosan Methyl	68.8	64.6	57.4		11.8
	Trifluralin	62.6	65.5	70.3		7.04
EPA 8276	Chlordane	79.8	60.6	74.0		19.9
	Toxaphene	94.5	77.4	96.4		21.8
SM 2320 B-2011	Total Alkalinity	98.1			1.16	
SM 2540 C-2011	TDS				6.01	
SM 2540 D-2011	TSS				5.41	
SM 4500-F- C-2011	Fluoride	94.5	97.6	101		2.04
SM 5310 B-2011	Organic Carbon	96.4	97.2	97.2		0.0664

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2317771
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2317771, 2317773
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2317782, 2317783, 2317784
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2317782, 2317783, 2317784
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2317771
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2317771, 2317773
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2317772, 2317774
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2317772, 2317774
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2317772, 2317774
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2317772, 2317774

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2317777, 2317778, 2317779, 2317780, 2317781
EPA 8270E	PCBs in water matrices by GC/MS/MS	2317777, 2317778, 2317779, 2317780, 2317781
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2317777, 2317778, 2317779, 2317780, 2317781
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2317771, 2317773
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2317771, 2317773
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2317771, 2317773
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2317771, 2317773
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2317772, 2317774

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	04/08/2022			04/08/2022 15:54	Samantha L Bates	2317771
EPA 180.1 Rev. 2.0	04/08/2022			04/08/2022 14:15	Khloe J Berg	2317771
	04/08/2022			04/08/2022 14:17	Khloe J Berg	2317773
EPA 200.7 Rev. 4.4	04/08/2022	04/11/2022 10:28	Megan Whitefoot	04/16/2022 17:00	Josef B Mick	2317782
	04/08/2022	04/11/2022 10:28	Megan Whitefoot	04/16/2022 17:07	Josef B Mick	2317783
	04/08/2022	04/11/2022 10:28	Megan Whitefoot	04/16/2022 17:15	Josef B Mick	2317784
EPA 200.8 Rev. 5.4	04/08/2022	04/11/2022 10:28	Megan Whitefoot	04/12/2022 18:20	Alexander Thompson	2317782
	04/08/2022	04/11/2022 10:28	Megan Whitefoot	04/12/2022 18:29	Alexander Thompson	2317783
	04/08/2022	04/11/2022 10:28	Megan Whitefoot	04/12/2022 18:39	Alexander Thompson	2317784
EPA 300.0 Rev. 2.1	04/08/2022			04/14/2022 21:38	Anna M. Plaviak	2317771
	04/08/2022			04/15/2022 01:15	Anna M. Plaviak	2317773
EPA 350.1 Rev. 2.0	04/08/2022			04/12/2022 12:12	Ping Hua	2317772
	04/08/2022			04/13/2022 11:27	Ping Hua	2317774
EPA 351.2 Rev. 2.0	04/08/2022	04/20/2022 10:53	Samantha L Bates	04/20/2022 15:31	Alexandra J Mattheus	2317772
	04/08/2022	04/20/2022 10:53	Samantha L Bates	04/20/2022 15:33	Alexandra J Mattheus	2317774
EPA 353.2 Rev. 2.0	04/08/2022			04/12/2022 15:56	Nathaniel J Jones	2317774
	04/08/2022			04/12/2022 15:58	Nathaniel J Jones	2317772
EPA 365.1 Rev. 2.0	04/08/2022	04/18/2022 13:05	Simonne.V. Calhoun	04/19/2022 11:35	Sarah A Nixon	2317772
	04/08/2022	04/18/2022 13:05	Simonne.V. Calhoun	04/19/2022 13:53	James L Waggeberby	2317774
EPA 8270E	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 02:10	Vandana T. Nagar	2317777
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 03:08	Vandana T. Nagar	2317779
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 03:37	Vandana T. Nagar	2317780
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 04:07	Vandana T. Nagar	2317781
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 16:32	Vandana T. Nagar	2317778
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 20:10	Vandana T. Nagar	2317777
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 20:40	Vandana T. Nagar	2317778
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 21:10	Vandana T. Nagar	2317779
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 21:41	Vandana T. Nagar	2317780
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 22:11	Vandana T. Nagar	2317781
EPA 8276	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 06:02	Arthur Maknenko	2317777
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 07:00	Arthur Maknenko	2317778
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 08:54	Arthur Maknenko	2317779
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 09:52	Arthur Maknenko	2317780
	04/08/2022	04/11/2022 08:00	Fe-Val Siddell	04/14/2022 10:49	Arthur Maknenko	2317781
SM 2320 B-2011	04/08/2022			04/14/2022 06:24	Dale L. Simmons	2317771
	04/08/2022			04/14/2022 06:33	Dale L. Simmons	2317773
SM 2540 C-2011	04/08/2022			04/13/2022 14:02	Yijie Li	2317771, 2317773
SM 2540 D-2011	04/08/2022			04/13/2022 14:26	Yijie Li	2317771, 2317773
SM 4500-F- C-2011	04/08/2022			04/14/2022 06:24	Dale L. Simmons	2317771
	04/08/2022			04/14/2022 06:33	Dale L. Simmons	2317773

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-2011	04/08/2022			04/12/2022 02:34	Judith K. Clark	2317772
	04/08/2022			04/12/2022 02:47	Judith K. Clark	2317774