

Chemical Analysis Report

NE-DIST-2024-04-17-03

Florida DEP Laboratory
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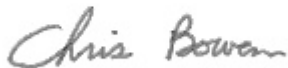
Event Description: **LSJR North 2 2024**
Request ID: **RQ-2024-04-22-11**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 09-MAY-2024 16:56



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: 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: TRIBUTARY TO TROUT AT BESSENT RD

Collection Date/Time: 04/16/2024 09:30

Field ID: G2NE1207					Matrix: W-SURF-FRH		
Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2482922	DEP SOP: NU-094-1	Color (true)	86		PCU	P444377	
	EPA 180.1 Rev. 2.0	Turbidity	13		NTU	P444390	
	EPA 300.0 Rev. 2.1	Chloride	520		mg Cl/L	P444875	
		Sulfate	76		mg SO4/L	P444878	
	SM 2320 B-2011	Total Alkalinity	93		mg CaCO3/L	P444923	RPD
	SM 2540 C-2015	TDS	1.13E+03		mg/L	P444844	
	SM 2540 D-2015	TSS	11		mg/L	P444743	
	SM 4500-F- C-2011	Fluoride	0.17		mg F/L	P444926	
2482924	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P444483	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.90		mg N/L	P444702	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P444722	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P444614	
	SM 5310 B-2014	Organic Carbon	11		mg C/L	P444810	

Ref. Method and Comment:
SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 2040 umhos/cm.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location:
 TRIBUTARY TO TROUT AT CAPPER RD

Collection Date/Time:
 04/16/2024 09:50

Field ID: G2NE1208				Matrix: W-SURF-FRH			
Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2482926	DEP SOP: NU-094-1	Color (true)	87		PCU	P444377	
	EPA 180.1 Rev. 2.0	Turbidity	7.9		NTU	P444390	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P444875	
		Sulfate	10		mg SO4/L	P444878	
	SM 2320 B-2011	Total Alkalinity	85		mg CaCO3/L	P444923	RPD
	SM 2540 C-2015	TDS	196	Q	mg/L	P445040	
	SM 2540 D-2015	TSS	5	I	mg/L	P444743	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P444926	
2482927	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P444567	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P444702	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P444905	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P444614	
	SM 5310 B-2014	Organic Carbon	8.8		mg C/L	P444810	

Ref. Method and Comment:
 SM 2540 C-2015: The sample was reanalyzed out of holding time because of analytical difficulties.
 SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BLOCKHOUSE AT BROWARD RD

Collection Date/Time: 04/16/2024 10:05

Field ID: G2NE1180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2482920	DEP SOP: NU-094-1	Color (true)	82	A	PCU	P444377	
	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P444390	
	EPA 300.0 Rev. 2.1	Chloride	3.1E+03		mg Cl/L	P444875	
		Sulfate	450		mg SO4/L	P444878	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P444533	
	SM 2540 C-2015	TDS	5.13E+03		mg/L	P444844	
	SM 2540 D-2015	TSS	17		mg/L	P444743	
2482921	SM 4500-F- C-2011	Fluoride	0.30		mg F/L	P444928	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P444566	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P444703	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.069		mg N/L	P444605	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P444619	
2482940	SM 5310 B-2014	Organic Carbon	12		mg C/L	P444809	
	EPA 8270E	Aldrin	0.69	U	ng/L	P444318	
		Alpha-BHC	0.11	U	ng/L	P444318	
		Alpha-Chlordane	0.21	U	ng/L	P444318	
		PCB-1016	2.1	U	ng/L	P444318	
		Beta-BHC	0.11	U	ng/L	P444318	
		PCB-1221	2.1	U	ng/L	P444318	
		Beta-Cyfluthrin	1.3	U	ng/L	P444318	
		PCB-1232	2.1	U	ng/L	P444318	
		Bifenthrin	0.53	U	ng/L	P444318	
		PCB-1242	2.1	U	ng/L	P444318	
		PCB-1248	2.1	U	ng/L	P444318	
		Chlorothalonil	3.8	U	ng/L	P444318	
		PCB-1254	2.1	U	ng/L	P444318	
		Cis-Nonachlor	0.21	U	ng/L	P444318	
		PCB-1260	2.1	U	ng/L	P444318	
		Cypermethrin	1.6	U	ng/L	P444318	
		Dacthal	0.16	U	ng/L	P444318	
		DDD-p,p'	0.27	U	ng/L	P444318	
		DDE-p,p'	0.21	U	ng/L	P444318	
		DDT-p,p'	0.85	U	ng/L	P444318	
		Delta-BHC	0.43	U	ng/L	P444318	
		Deltamethrin	1.3	U	ng/L	P444318	
		Dichlobenil	0.27	U	ng/L	P444318	
		Dicofol	1.3	U	ng/L	P444318	
		Diieldrin	0.43	U	ng/L	P444318	
		Endosulfan I	0.43	U	ng/L	P444318	
		Endosulfan II	0.96	U	ng/L	P444318	
		Endosulfan Sulfate	0.32	U	ng/L	P444318	
		Endrin	0.96	U	ng/L	P444318	
		Endrin Aldehyde	0.80	U	ng/L	P444318	
		Endrin Ketone	0.43	U	ng/L	P444318	

Field ID: G2NE1180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2482940	EPA 8270E	Esfenvalerate	0.80	U	ng/L	P444318	CCV
		Ethalfuralin	0.16	U	ng/L	P444318	
		Fenpropathrin	0.27	U	ng/L	P444318	
		Gamma-BHC	0.13	U	ng/L	P444318	
		Gamma-Chlordane	0.21	U	ng/L	P444318	
		Heptachlor	0.21	U	ng/L	P444318	
		Heptachlor Epoxide	0.27	U	ng/L	P444318	
		Hexachlorobenzene**	1.1	U	ng/L	P444318	
		Kepone	14	UJ	ng/L	P444318	
		Lambda-Cyhalothrin	0.80	U	ng/L	P444318	
		Methoprene	0.80	U	ng/L	P444318	
		Methoxychlor	0.32	U	ng/L	P444318	
		MGK-264	0.21	U	ng/L	P444318	
		Mirex	0.37	U	ng/L	P444318	
		Oxychlordane	0.32	U	ng/L	P444318	
		Permethrin	1.7	U	ng/L	P444318	
		Phenothrin	0.96	U	ng/L	P444318	
		Piperonyl Butoxide	0.16	U	ng/L	P444318	
		Prallethrin	2.1	U	ng/L	P444318	
		Tau-Fluvalinate	0.27	U	ng/L	P444318	
		Tetramethrin	0.80	U	ng/L	P444318	
		Trans-Nonachlor	0.21	U	ng/L	P444318	
		Triclosan Methyl	0.16	U	ng/L	P444318	
		Trifluralin	0.21	U	ng/L	P444318	
	EPA 8276	Chlordane	2.1	U	ng/L	P444318	
		Toxaphene	16	U	ng/L	P444318	

Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: HIGHLANDS CR AT BROWARD RD

Collection Date/Time: 04/16/2024 10:25

Field ID: 20030025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2482923	DEP SOP: NU-094-1	Color (true)	77	J	PCU	P444377	
	EPA 180.1 Rev. 2.0	Turbidity	30		NTU	P444390	
	EPA 300.0 Rev. 2.1	Chloride	3.4E+03		mg Cl/L	P444875	
		Sulfate	470		mg SO4/L	P444878	
	SM 2320 B-2011	Total Alkalinity	86		mg CaCO3/L	P444533	
	SM 2540 C-2015	TDS	5.45E+03		mg/L	P444844	
	SM 2540 D-2015	TSS	61		mg/L	P444743	
	SM 4500-F- C-2011	Fluoride	0.31		mg F/L	P444928	
2482925	EPA 350.1 Rev. 2.0	Ammonia-N	0.076		mg N/L	P444566	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P445185	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.091		mg N/L	P444605	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P444619	
	SM 5310 B-2014	Organic Carbon	11		mg C/L	P444810	

Ref. Method and Comment:
DEP SOP: NU-094-1: The result may be biased high because of turbidity.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P444377

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444390

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444875

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444878

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444483

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444567

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444702

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444703

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444605

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444722

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444905

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444614

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

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

Reference Method: EPA 8270E
Batch ID: P444318

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P444318

Component	Result	Code	Units
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P444318

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: SM 2320 B-2011

Batch ID: P444533

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P444923

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

Reference Method: SM 2540 C-2015
Batch ID: P444844

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P445040

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P444743

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P444926

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P444809

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

Reference Method: SM 5310 B-2014
Batch ID: P444810

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: P444377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	96.3		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444390

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444875

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444878

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444483

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444567

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444702

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444703

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444605

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444722

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444905

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444614

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

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

Reference Method: EPA 8270E
Batch ID: P444318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	47.1		P	30 - 96.0
Alpha-BHC	84.4		P	70 - 109
Alpha-Chlordane	79.5		P	45 - 107
Beta-BHC	97.2		P	64 - 138
Beta-Cyfluthrin	69.9		P	17 - 141
Bifenthrin	51.5		P	10 - 113
Chlorothalonil	75.5		P	26 - 180
Cis-Nonachlor	68.4		P	37 - 102
Cypermethrin	69.8		P	20 - 133
Dacthal	88.9		P	69 - 114
DDD-p,p'	75.2		P	42 - 105
DDE-p,p'	78.3		P	42 - 106
DDT-p,p'	70.4		P	42 - 107
Delta-BHC	94.4		P	67 - 144
Deltamethrin	86.6		P	15 - 149
Dichlobenil	86.4		P	46 - 117

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P444318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dicofol	65.0		P	34 - 114
Dieldrin	81.1		P	50 - 108
Endosulfan I	79.7		P	55 - 104
Endosulfan II	78.0		P	51 - 111
Endosulfan Sulfate	85.2		P	56 - 121
Endrin	82.1		P	10 - 106
Endrin Aldehyde	70.6		P	34 - 114
Endrin Ketone	82.3		P	63 - 177
Esfenvalerate	71.2		P	29 - 143
Ethalfuralin	71.5		P	46 - 96.0
Fenpropathrin	62.7		P	28 - 115
Gamma-BHC	88.6		P	65 - 121
Gamma-Chlordane	74.9		P	39 - 103
Heptachlor	73.0		P	39 - 94.0
Heptachlor Epoxide	78.6		P	54 - 104
Hexachlorobenzene	73.9		P	36 - 100
Kepone	89.0		P	10 - 225
Lambda-Cyhalothrin	58.2		P	10 - 135
Methoprene	52.7		P	10 - 109
Methoxychlor	77.6		P	52 - 112
MGK-264	67.4		P	44 - 117
Mirex	63.3		P	20 - 90.0
Oxychlordane	71.1		P	44 - 102
PCB-1016	64.4		P	45 - 107
PCB-1260	62.8		P	40 - 118
Permethrin	68.2		P	18 - 135
Phenothrin	38.5		P	10 - 102
Piperonyl Butoxide	105		P	28 - 156
Prallethrin	60.7		P	28 - 113
Tau-Fluvalinate	59.0		P	10 - 123
Tetramethrin	64.5		P	18 - 158
Trans-Nonachlor	77.0		P	39 - 104
Triclosan Methyl	84.0		P	54 - 108
Trifluralin	73.1		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P444318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	71.2		P	52 - 117
Toxaphene	74.7		P	44 - 125

Reference Method: SM 2320 B-2011
Batch ID: P444533

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	92 - 105

Reference Method: SM 2320 B-2011
Batch ID: P444923

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

Reference Method: SM 2320 B-2011
Batch ID: P444923

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P444844

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.4		P	85 - 115

Reference Method: SM 2540 C-2015
Batch ID: P445040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	106		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P444743

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.4		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P444926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.3		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P444809

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	88.9		P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P444810

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444875

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482946	Chloride	98.4		P	90 - 110
2482961	Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444878

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482946	Sulfate	93.8		P	90 - 110
2482961	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444483

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482856	Ammonia-N	98.2	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482890	Ammonia-N	94.6	96.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444567

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482950	Ammonia-N	97.0	97.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482891	Kjeldahl Nitrogen	109	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482651	Kjeldahl Nitrogen	91.0	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483307	Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444605

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482652	NO2NO3-N	99.5	100	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482856	NO2NO3-N	95.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482927	NO2NO3-N	94.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482950	Total-P	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482985	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P444318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482499	Aldrin	72.1	71.8	P/P	24 - 81.0
2482499	Alpha-BHC	88.8	89.0	P/P	65 - 110
2482499	Alpha-Chlordane	103	103	P/P	43 - 119
2482499	Beta-BHC	104	101	P/P	54 - 165
2482499	Beta-Cyfluthrin	113	110	P/P	27 - 165
2482499	Bifenthrin	103	101	P/P	17 - 117
2482499	Chlorothalonil	119	114	P/P	10 - 255
2482499	Cis-Nonachlor	78.8	75.9	P/P	34 - 98.0
2482499	Cypermethrin	114	112	P/P	25 - 143
2482499	Dacthal	94.5	92.6	P/P	55 - 139
2482499	DDD-p,p'	82.3	81.2	P/P	30 - 109
2482499	DDE-p,p'	83.9	83.6	P/P	35 - 106
2482499	DDT-p,p'	83.8	83.6	P/P	41 - 101
2482499	Delta-BHC	117	111	P/P	58 - 165
2482499	Deltamethrin	161	156	P/P	10 - 194
2482499	Dichlobenil	51.0	51.4	P/P	22 - 114
2482499	Dicofol	77.9	77.6	P/P	17 - 133
2482499	Dieldrin	96.3	94.3	P/P	45 - 129
2482499	Endosulfan I	91.1	90.5	P/P	49 - 104
2482499	Endosulfan II	79.0	78.2	P/P	37 - 117
2482499	Endosulfan Sulfate	86.8	80.8	P/P	38 - 128
2482499	Endrin	90.9	90.8	P/P	35 - 116
2482499	Endrin Aldehyde	65.2	65.8	P/P	19 - 108
2482499	Endrin Ketone	79.9	80.6	P/P	44 - 134
2482499	Esfenvalerate	130	128	P/P	27 - 176
2482499	Ethalfuralin	87.2	85.3	P/P	49 - 100
2482499	Fenpropathrin	89.9	88.5	P/P	34 - 117
2482499	Gamma-BHC	91.5	89.0	P/P	59 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P444318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482499	Gamma-Chlordane	95.9	97.8	P/P	33 - 107
2482499	Heptachlor	84.1	83.4	P/P	37 - 94.0
2482499	Heptachlor Epoxide	88.0	87.6	P/P	38 - 118
2482499	Hexachlorobenzene	74.8	74.8	P/P	35 - 97.0
2482499	Kepone	83.7	79.8	P/P	10 - 221
2482499	Lambda-Cyhalothrin	119	116	P/P	23 - 190
2482499	Methoprene	87.1	86.1	P/P	21 - 109
2482499	Methoxychlor	96.0	96.2	P/P	46 - 118
2482499	MGK-264	84.7	82.3	P/P	39 - 122
2482499	Mirex	79.9	79.6	P/P	25 - 90.0
2482499	Oxychlordane	77.9	75.5	P/P	42 - 100
2482499	Permethrin	103	103	P/P	33 - 181
2482499	Phenothrin	95.6	96.2	P/P	12 - 125
2482499	Piperonyl Butoxide	115	117	P/P	10 - 178
2482499	Prallethrin	91.6	94.8	P/P	24 - 122
2482499	Tau-Fluvalinate	117	115	P/P	13 - 151
2482499	Tetramethrin	107	104	P/P	16 - 172
2482499	Trans-Nonachlor	91.5	93.5	P/P	39 - 100
2482499	Triclosan Methyl	89.4	90.2	P/P	43 - 110
2482499	Trifluralin	82.0	81.6	P/P	45 - 94.0
2482668	PCB-1016	71.2	75.2	P/P	45 - 107
2482668	PCB-1260	66.1	72.2	P/P	40 - 112

Reference Method: EPA 8276
Batch ID: P444318

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482668	Chlordane	70.2	80.5	P/P	43 - 123
2482668	Toxaphene	71.3	81.6	P/P	27 - 156

Reference Method: SM 4500-F- C-2011
Batch ID: P444926

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483912	Fluoride	98.0	98.6	P/P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482981	Fluoride	104	105	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P444809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482865	Organic Carbon	101	102	P/P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P444810

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

Reference Method: SM 5310 B-2014
Batch ID: P444810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482924	Organic Carbon	98.5	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P444377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482920	Color (true)	9.57	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482767	Turbidity	4.30	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444875

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482946	Chloride	2.94	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444878

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482946	Sulfate	2.50	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482856	Ammonia-N	1.63	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482890	Ammonia-N	1.33	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444567

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482950	Ammonia-N	0.569	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482891	Kjeldahl Nitrogen	4.18	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P444703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482651	Kjeldahl Nitrogen	9.60	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483307	Kjeldahl Nitrogen	2.81	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444605

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482652	NO2NO3-N	1.00	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482856	NO2NO3-N	0.698	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482927	NO2NO3-N	1.99	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482950	Total-P	0.314	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482985	Total-P	1.86	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P444318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482499	Aldrin	0.360	Spike	P	0 - 41
2482499	Alpha-BHC	0.181	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P444318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482499	Alpha-Chlordane	0.118	Spike	P	0 - 32
2482499	Beta-BHC	2.90	Spike	P	0 - 33
2482499	Beta-Cyfluthrin	3.24	Spike	P	0 - 43
2482499	Bifenthrin	2.40	Spike	P	0 - 52
2482499	Chlorothalonil	3.77	Spike	P	0 - 82
2482499	Cis-Nonachlor	3.77	Spike	P	0 - 33
2482499	Cypermethrin	1.37	Spike	P	0 - 51
2482499	Dacthal	2.05	Spike	P	0 - 27
2482499	DDD-p,p'	1.33	Spike	P	0 - 39
2482499	DDE-p,p'	0.427	Spike	P	0 - 31
2482499	DDT-p,p'	0.274	Spike	P	0 - 29
2482499	Delta-BHC	4.85	Spike	P	0 - 35
2482499	Deltamethrin	2.73	Spike	P	0 - 100
2482499	Dichlobenil	0.760	Spike	P	0 - 40
2482499	Dicofol	0.352	Spike	P	0 - 37
2482499	Dieldrin	2.02	Spike	P	0 - 27
2482499	Endosulfan I	0.679	Spike	P	0 - 23
2482499	Endosulfan II	1.04	Spike	P	0 - 34
2482499	Endosulfan Sulfate	7.21	Spike	P	0 - 36
2482499	Endrin	0.132	Spike	P	0 - 45
2482499	Endrin Aldehyde	0.904	Spike	P	0 - 76
2482499	Endrin Ketone	0.862	Spike	P	0 - 43
2482499	Esfenvalerate	1.54	Spike	P	0 - 51
2482499	Ethalfuralin	2.25	Spike	P	0 - 22
2482499	Fenpropathrin	1.54	Spike	P	0 - 49
2482499	Gamma-BHC	2.74	Spike	P	0 - 28
2482499	Gamma-Chlordane	1.98	Spike	P	0 - 40
2482499	Heptachlor	0.757	Spike	P	0 - 29
2482499	Heptachlor Epoxide	0.445	Spike	P	0 - 33
2482499	Hexachlorobenzene	0.0532	Spike	P	0 - 36
2482499	Kepone	4.80	Spike	P	0 - 85
2482499	Lambda-Cyhalothrin	2.44	Spike	P	0 - 55
2482499	Methoprene	1.09	Spike	P	0 - 53
2482499	Methoxychlor	0.239	Spike	P	0 - 50
2482499	MGK-264	2.81	Spike	P	0 - 43
2482499	Mirex	0.377	Spike	P	0 - 40
2482499	Oxychlordane	3.11	Spike	P	0 - 31
2482499	Permethrin	0.385	Spike	P	0 - 50
2482499	Phenothrin	0.606	Spike	P	0 - 58
2482499	Piperonyl Butoxide	1.58	Spike	P	0 - 100
2482499	Prallethrin	3.43	Spike	P	0 - 39
2482499	Tau-Fluvalinate	1.77	Spike	P	0 - 54
2482499	Tetramethrin	2.73	Spike	P	0 - 51
2482499	Trans-Nonachlor	2.18	Spike	P	0 - 39
2482499	Triclosan Methyl	0.985	Spike	P	0 - 31
2482499	Trifluralin	0.481	Spike	P	0 - 22
2482668	PCB-1016	5.53	Spike	P	0 - 25
2482668	PCB-1260	8.91	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P444318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482668	Chlordane	13.7	Spike	P	0 - 28
2482668	Toxaphene	13.4	Spike	P	0 - 27

Reference Method: SM 2320 B-2011
Batch ID: P444533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482981	Total Alkalinity	1.56	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011
Batch ID: P444923

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483912	Total Alkalinity	4.28	Sample	F	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P444844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482607	TDS	5.67	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P445040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483890	TDS	2.99	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P444926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483912	Fluoride	0.503	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482981	Fluoride	0.501	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P444809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482865	Organic Carbon	1.01	Spike	P	0 - 15

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2014
Batch ID: P444810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482924	Organic Carbon	1.56	Spike	P	0 - 15

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2482940
Field Sample ID: G2NE1180

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	76.8	P	37 - 129
EPA 8270E	Decachlorobiphenyl	86.9	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	45.1	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	57.5	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	68.0	P	23 - 110
EPA 8276	PCNB	87.9	P	51 - 130

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A125361

Included Lab Sample IDs: 2482920, 2482922, 2482923, 2482926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	97.4	99.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A125365

Included Lab Sample IDs: 2482920, 2482922, 2482923, 2482926

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A125397

Included Lab Sample IDs: 2482924

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.9	99.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A125412

Included Lab Sample IDs: 2482920, 2482923

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.3	99.7	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A125430

Included Lab Sample IDs: 2482921, 2482925, 2482927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	98.8	P/P	90 - 110
Ammonia-N	98.9	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A125445

Included Lab Sample IDs: 2482921, 2482925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A125460

Included Lab Sample IDs: 2482921, 2482924, 2482925, 2482927

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

Reference Method: EPA 8270E

Run ID: A125462

Included Lab Sample IDs: 2482940

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

Reference Method: EPA 8270E
Run ID: A125462
Included Lab Sample IDs: 2482940

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	98.2		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	96.9		P	80 - 120
Beta-Cyfluthrin	97.9		P	80 - 120
Bifenthrin	95.9		P	80 - 120
Chlorothalonil	87.4		P	80 - 120
Cis-Nonachlor	103		P	80 - 120
Cypermethrin	106		P	80 - 120
Dacthal	102		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	94.2		P	80 - 120
Delta-BHC	94.4		P	80 - 120
Deltamethrin	100		P	80 - 120
Dichlobenil	114		P	80 - 120
Dicofol	91.5		P	80 - 120
Dieldrin	97.0		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	103		P	80 - 120
Endrin	100		P	80 - 120
Endrin Aldehyde	93.5		P	80 - 120
Endrin Ketone	96.8		P	80 - 120
Esfenvalerate	92.3		P	80 - 120
Ethalfuralin	103		P	80 - 120
Fenpropathrin	99.5		P	80 - 120
Gamma-BHC	99.1		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	98.9		P	80 - 120
Kepone	63.7*		F	80 - 120
Lambda-Cyhalothrin	94.3		P	80 - 120
Methoprene	102		P	80 - 120
Methoxychlor	95.9		P	80 - 120
MGK-264	101		P	80 - 120
Mirex	102		P	80 - 120
Oxychlordane	103		P	80 - 120
Permethrin	101		P	80 - 120
Phenothrin	98.1		P	80 - 120
Piperonyl Butoxide	96.7		P	80 - 120
Prallethrin	102		P	80 - 120
Tau-Fluvalinate	94.8		P	80 - 120
Tetramethrin	98.3		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	103		P	80 - 120
Trifluralin	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A125492

Included Lab Sample IDs: 2482924

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: SM 5310 B-2014

Run ID: A125527

Included Lab Sample IDs: 2482921, 2482924, 2482925, 2482927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.3	115	P/P	85 - 115

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A125529

Included Lab Sample IDs: 2482921, 2482924, 2482927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	105	P/P	90 - 110
Kjeldahl Nitrogen	108	102	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A125537

Included Lab Sample IDs: 2482940

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.5		P	80 - 120
Toxaphene	102		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A125563

Included Lab Sample IDs: 2482927

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A125568

Included Lab Sample IDs: 2482922, 2482926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	98.6	P/P	90 - 110
Total Alkalinity	98.6	96.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A125568

Included Lab Sample IDs: 2482920, 2482922, 2482923, 2482926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	98.5	P/P	90 - 110
Fluoride	102	98.0	P/P	90 - 110
Fluoride	98.5	102	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A125571

Included Lab Sample IDs: 2482920, 2482922, 2482923, 2482926

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.1	98.2	P/P	90 - 110
Sulfate	99.7	100	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A125576

Included Lab Sample IDs: 2482940

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	99.9		P	80 - 120
PCB-1260	99.4		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A125705

Included Lab Sample IDs: 2482925

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.5	96.5	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		Precision		
					LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	96.3				9.57	
EPA 180.1 Rev. 2.0	Turbidity	102				4.30	
EPA 300.0 Rev. 2.1	Chloride	98.8	98.4	98.4		2.94	
	Sulfate	102	93.8	99.1		2.50	
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	98.2	100			1.63
	Ammonia-N	96.0	94.6	96.0			1.33
	Ammonia-N	95.4	97.0	97.6			0.569
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.5	109	103			4.18
	Kjeldahl Nitrogen	101	91.0	101			9.60
	Kjeldahl Nitrogen	97.9	103	106			2.81
EPA 353.2 Rev. 2.0	NO2NO3-N	100	99.5	100			1.00
	NO2NO3-N	97.0	95.8				0.698
	NO2NO3-N	98.5	94.8				1.99
EPA 365.1 Rev. 2.0	Total-P	104	106	106			0.314
	Total-P	105	104	106			1.86
EPA 8270E	Aldrin	47.1	72.1	71.8			0.360
	Alpha-BHC	84.4	88.8	89.0			0.181
	Alpha-Chlordane	79.5	103	103			0.118
	Beta-BHC	97.2	104	101			2.90
	Beta-Cyfluthrin	69.9	113	110			3.24
	Bifenthrin	51.5	103	101			2.40
	Chlorothalonil	75.5	119	114			3.77
	Cis-Nonachlor	68.4	78.8	75.9			3.77
	Cypermethrin	69.8	114	112			1.37
	Dacthal	88.9	94.5	92.6			2.05
	DDD-p,p'	75.2	82.3	81.2			1.33
	DDE-p,p'	78.3	83.9	83.6			0.427
	DDT-p,p'	70.4	83.8	83.6			0.274
	Delta-BHC	94.4	117	111			4.85
	Deltamethrin	86.6	161	156			2.73
	Dichlobenil	86.4	51.0	51.4			0.760
	Dicofol	65.0	77.9	77.6			0.352
	Dieldrin	81.1	96.3	94.3			2.02
	Endosulfan I	79.7	91.1	90.5			0.679
	Endosulfan II	78.0	79.0	78.2			1.04
	Endosulfan Sulfate	85.2	86.8	80.8			7.21
	Endrin	82.1	90.9	90.8			0.132
	Endrin Aldehyde	70.6	65.2	65.8			0.904
	Endrin Ketone	82.3	79.9	80.6			0.862
	Esfenvalerate	71.2	130	128			1.54
	Ethalfuralin	71.5	87.2	85.3			2.25
	Fenpropathrin	62.7	89.9	88.5			1.54
	Gamma-BHC	88.6	91.5	89.0			2.74
	Gamma-Chlordane	74.9	95.9	97.8			1.98
	Heptachlor	73.0	84.1	83.4			0.757
	Heptachlor Epoxide	78.6	88.0	87.6			0.445
	Hexachlorobenzene	73.9	74.8	74.8			0.0532
	Kepone	89.0	83.7	79.8			4.80
	Lambda-Cyhalothrin	58.2	119	116			2.44
	Methoprene	52.7	87.1	86.1			1.09
	Methoxychlor	77.6	96.0	96.2			0.239
	MGK-264	67.4	84.7	82.3			2.81
	Mirex	63.3	79.9	79.6			0.377
	Oxychlordane	71.1	77.9	75.5			3.11

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8270E	PCB-1016	64.4	71.2	75.2		5.53
	PCB-1260	62.8	66.1	72.2		8.91
	Permethrin	68.2	103	103		0.385
	Phenothrin	38.5	95.6	96.2		0.606
	Piperonyl Butoxide	105	115	117		1.58
	Prallethrin	60.7	91.6	94.8		3.43
	Tau-Fluvalinate	59.0	117	115		1.77
	Tetramethrin	64.5	107	104		2.73
	Trans-Nonachlor	77.0	91.5	93.5		2.18
	Triclosan Methyl	84.0	89.4	90.2		0.985
	Trifluralin	73.1	82.0	81.6		0.481
	Chlordane	71.2	70.2	80.5		13.7
EPA 8276	Toxaphene	74.7	71.3	81.6		13.4
SM 2320 B-2011	Total Alkalinity	99.6			1.56	
	Total Alkalinity	101			4.28	
SM 2540 C-2015	TDS	94.4			5.67	
	TDS	106			2.99	
SM 2540 D-2015	TSS	94.4				
SM 4500-F- C-2011	Fluoride	97.3	98.0	98.6		0.503
	Fluoride	98.8	104	105		0.501
SM 5310 B-2014	Organic Carbon	88.9	101	102		1.01
	Organic Carbon	99.8	98.5	100		1.56

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2482920, 2482922, 2482923, 2482926
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2482920, 2482922, 2482923, 2482926
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2482920, 2482922, 2482923, 2482926
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2482920, 2482922, 2482923, 2482926
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2482921, 2482924, 2482925, 2482927
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2482921, 2482924, 2482925, 2482927
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2482921, 2482924, 2482925, 2482927
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2482921, 2482924, 2482925, 2482927
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2482940
EPA 8270E	PCBs in water matrices by GC/MS/MS	2482940
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2482940
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2482920, 2482922, 2482923, 2482926
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2482920, 2482922, 2482923, 2482926
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2482920, 2482922, 2482923, 2482926
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2482920, 2482922, 2482923, 2482926
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2482921, 2482924, 2482925, 2482927

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	04/17/2024			04/17/2024 14:26	Chandler E Cox	2482920
	04/17/2024			04/17/2024 14:27	Chandler E Cox	2482922, 2482923
	04/17/2024			04/17/2024 14:28	Chandler E Cox	2482926
EPA 180.1 Rev. 2.0	04/17/2024			04/17/2024 13:22	Jessica K Wilks	2482920
	04/17/2024			04/17/2024 13:23	Jessica K Wilks	2482922
	04/17/2024			04/17/2024 13:26	Jessica K Wilks	2482923
EPA 300.0 Rev. 2.1	04/17/2024			04/17/2024 13:27	Jessica K Wilks	2482926
	04/17/2024			04/27/2024 16:06	James L Waggeberby	2482920
	04/17/2024			04/27/2024 16:21	James L Waggeberby	2482922
EPA 350.1 Rev. 2.0	04/17/2024			04/27/2024 16:36	James L Waggeberby	2482923
	04/17/2024			04/27/2024 16:51	James L Waggeberby	2482926
	04/17/2024			04/18/2024 13:25	Khloe J Berg	2482924
EPA 351.2 Rev. 2.0	04/17/2024			04/19/2024 11:51	Khloe J Berg	2482921
	04/17/2024			04/19/2024 11:52	Khloe J Berg	2482925
	04/17/2024			04/19/2024 12:13	Khloe J Berg	2482927
EPA 353.2 Rev. 2.0	04/17/2024	04/24/2024 13:31	Samantha L Bates	04/25/2024 11:49	Robyn Blevins	2482924
	04/17/2024	04/24/2024 13:31	Samantha L Bates	04/25/2024 11:50	Robyn Blevins	2482927
	04/17/2024	04/24/2024 13:31	Samantha L Bates	04/25/2024 13:37	Robyn Blevins	2482921
EPA 365.1 Rev. 2.0	04/17/2024	05/03/2024 11:57	Ping Hua	05/06/2024 14:27	Samantha L Bates	2482925
	04/17/2024			04/19/2024 15:40	Fadila Guebre	2482921
	04/17/2024			04/19/2024 15:41	Fadila Guebre	2482925
EPA 8270E	04/17/2024			04/23/2024 16:53	Fadila Guebre	2482924
	04/17/2024			04/25/2024 14:37	Fadila Guebre	2482927
	04/17/2024			04/23/2024 08:59	Elise M. Gillis	2482922
EPA 8276	04/17/2024	04/22/2024 13:25	Adam P Silver	04/23/2024 09:00	Elise M. Gillis	2482927
	04/17/2024	04/22/2024 13:25	Adam P Silver	04/23/2024 10:17	Elise M. Gillis	2482921
	04/17/2024	04/22/2024 13:25	Adam P Silver	04/23/2024 10:18	Elise M. Gillis	2482925
SM 2320 B-2011	04/17/2024	04/18/2024 08:00	Rasheda Ghaffari	04/23/2024 03:44	Kenedi Mills	2482940
	04/17/2024	04/18/2024 08:00	Rasheda Ghaffari	04/25/2024 05:27	Lipi Saha	2482940
	04/17/2024	04/18/2024 08:00	Rasheda Ghaffari	04/23/2024 15:09	Arthur Maknenko	2482940
SM 2540 C-2015	04/17/2024			04/19/2024 05:50	Dale L. Simmons	2482920
	04/17/2024			04/19/2024 06:02	Dale L. Simmons	2482923
	04/17/2024			04/25/2024 19:47	Dale L. Simmons	2482926
SM 2540 D-2015	04/17/2024			04/25/2024 21:43	Dale L. Simmons	2482922
	04/17/2024			04/19/2024 16:49	Yijie Li	2482920, 2482922, 2482923
	04/17/2024			04/23/2024 15:01	Yijie Li	2482926
SM 4500-F- C-2011	04/17/2024			04/19/2024 16:49	Yijie Li	2482920, 2482922, 2482923, 2482926
	04/17/2024			04/25/2024 19:47	Dale L. Simmons	2482926
	04/17/2024			04/25/2024 21:43	Dale L. Simmons	2482922
	04/17/2024			04/26/2024 04:05	Dale L. Simmons	2482920

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500-F- C-2011	04/17/2024			04/26/2024 04:10	Dale L. Simmons	2482923
SM 5310 B-2014	04/17/2024			04/24/2024 01:47	Jessica K Wilks	2482921
	04/17/2024			04/24/2024 03:11	Jessica K Wilks	2482924
	04/17/2024			04/24/2024 03:58	Jessica K Wilks	2482925
	04/17/2024			04/24/2024 04:21	Jessica K Wilks	2482927