

Chemical Analysis Report

SO-DIST-2024-02-23-03

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

Event Description: **2024 SMP : P Riv**
Request ID: **RQ-2024-02-12-15**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 314
Fort Myers, FL 33901-3381
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Certified by: Marek Topolski, Environmental Specialist III

Date Certified: 14-MAR-2024 12:32

A handwritten signature in black ink, appearing to read "Marek Topolski", with a stylized flourish at the end.

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: PEACE RIVER ESTUARY AT HARBOUR
HEIGHTS

Collection Date/Time: 02/22/2024 09:25

Field ID: G3SD0148

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2471327	EPA 8321B	2,4-D	0.012		ug/L	P441858	
		Acesulfame K	0.10	U	ug/L	P441916	
		2,4,5-T	0.0040	U	ug/L	P441858	
		AMPA	0.21	I	ug/L	P441916	
		Acetaminophen	0.0080	U	ug/L	P441858	
		Acetamiprid	0.0020	U	ug/L	P441858	
		Endothall	0.25	U	ug/L	P441916	
		Glufosinate	0.10	U	ug/L	P441916	
		Glyphosate	0.17	I	ug/L	P441916	
		Afidopyropen	0.0020	U	ug/L	P441858	
		Bentazon	0.0037		ug/L	P441858	
		Sucralose	0.80		ug/L	P441916	
		Benzovindiflupyr	0.0020	U	ug/L	P441858	
		Carbamazepine	8.4E-04	I	ug/L	P441858	
		Clothianidin	0.0070	I	ug/L	P441858	
		Dinotefuran	0.0020	U	ug/L	P441858	
		Diuron	0.0085		ug/L	P441858	
		Fenuron	0.032	U	ug/L	P441858	
		Fluridone	8.0E-04	U	ug/L	P441858	
		Imazapyr	0.064		ug/L	P441858	
		Hydrocodone	0.0020	U	ug/L	P441858	
		Ibuprofen	0.080	U	ug/L	P441858	
		Imidacloprid	0.016		ug/L	P441858	
		Linuron	0.0040	U	ug/L	P441858	
		Mandestrobin	0.0020	U	ug/L	P441858	
		MCPP	0.0020	U	ug/L	P441858	
		Naproxen	0.0080	U	ug/L	P441858	
		Primidone	0.0040	U	ug/L	P441858	
		Pyraclostrobin	0.0020	U	ug/L	P441858	
		Silvex	0.0040	U	ug/L	P441858	
		Thiamethoxam	0.014		ug/L	P441858	
		Tolfenpyrad	0.0020	U	ug/L	P441858	
		Triclopyr	0.0040	U	ug/L	P441858	

Sample Location: PEACE RIVER NEAR HUNTER CRK

Collection Date/Time: 02/22/2024 10:00

Field ID: G3SD0241				Matrix: W-SURF-FRH			
Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2471318	DEP SOP: NU-094-1	Color (true)	140		PCU	P441888	
	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P441894	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P442240	
		Sulfate	75		mg SO4/L	P442402	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P442291	RPD
	SM 2540 C-2015	TDS	284	A	mg/L	P442318	
	SM 2540 D-2015	TSS	4	IA	mg/L	P442117	
	SM 4500-F- C-2011	Fluoride	0.51		mg F/L	P442292	RPD
2471319	EPA 350.1 Rev. 2.0	Ammonia-N	0.039		mg N/L	P442074	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P442019	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.53		mg N/L	P441986	
	EPA 365.1 Rev. 2.0	Total-P	0.49		mg P/L	P442031	
	SM 5310 B-2014	Organic Carbon	21		mg C/L	P442047	

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

Sample Location: PEACE RIVER ABOVE HORSE CREEK 2

Collection Date/Time: 02/22/2024 10:40

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2471326	EPA 8270E	Aldrin	0.67	U	ng/L	P441976	
		Alpha-BHC	0.10	U	ng/L	P441976	
		Alpha-Chlordane	0.21	U	ng/L	P441976	
		PCB-1016	2.1	U	ng/L	P441976	
		Beta-BHC	0.10	U	ng/L	P441976	
		PCB-1221	2.1	U	ng/L	P441976	
		Beta-Cyfluthrin	1.3	U	ng/L	P441976	
		PCB-1232	2.1	U	ng/L	P441976	
		Bifenthrin	0.51	U	ng/L	P441976	
		PCB-1242	2.1	U	ng/L	P441976	
		PCB-1248	2.1	U	ng/L	P441976	
		Chlorothalonil	3.7	U	ng/L	P441976	
		PCB-1254	2.1	U	ng/L	P441976	
		Cis-Nonachlor	0.21	U	ng/L	P441976	
		PCB-1260	2.1	U	ng/L	P441976	
		Cypermethrin	1.5	U	ng/L	P441976	
		Dacthal	0.15	UJ	ng/L	P441976	MS
		DDD-p,p'	0.26	U	ng/L	P441976	
		DDE-p,p'	0.21	U	ng/L	P441976	
		DDT-p,p'	0.82	U	ng/L	P441976	
		Delta-BHC	0.41	U	ng/L	P441976	
		Deltamethrin	1.3	U	ng/L	P441976	
		Dichlobenil	0.26	U	ng/L	P441976	
		Dicofol	1.3	UJ	ng/L	P441976	CCV
		Dieldrin	0.41	U	ng/L	P441976	
		Endosulfan I	0.41	U	ng/L	P441976	
		Endosulfan II	0.93	U	ng/L	P441976	
		Endosulfan Sulfate	0.31	U	ng/L	P441976	
		Endrin	0.93	U	ng/L	P441976	
		Endrin Aldehyde	0.77	UJ	ng/L	P441976	MS
		Endrin Ketone	0.41	UJ	ng/L	P441976	RPD
		Esfenvalerate	0.77	U	ng/L	P441976	
		Ethalfuralin	0.15	UJ	ng/L	P441976	MS
		Fenpropathrin	0.26	U	ng/L	P441976	
		Gamma-BHC	0.13	U	ng/L	P441976	
		Gamma-Chlordane	0.21	U	ng/L	P441976	
		Heptachlor	0.21	U	ng/L	P441976	
		Heptachlor Epoxide	0.26	U	ng/L	P441976	
		Hexachlorobenzene**	1.0	U	ng/L	P441976	
		Kepone	14	U	ng/L	P441976	
		Lambda-Cyhalothrin	0.77	U	ng/L	P441976	
		Methoprene	0.77	U	ng/L	P441976	
		Methoxychlor	0.31	U	ng/L	P441976	
		MGK-264	0.21	U	ng/L	P441976	

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2471326	EPA 8270E	Mirex	0.36	U	ng/L	P441976	
		Oxychlordane	0.31	U	ng/L	P441976	
		Permethrin	1.6	U	ng/L	P441976	
		Phenothrin	0.93	U	ng/L	P441976	
		Piperonyl Butoxide	1.1		ng/L	P441976	
		Prallethrin	2.1	U	ng/L	P441976	
		Tau-Fluvalinate	0.26	U	ng/L	P441976	
		Tetramethrin	0.77	U	ng/L	P441976	
		Trans-Nonachlor	0.21	U	ng/L	P441976	
		Triclosan Methyl	0.15	UJ	ng/L	P441976	MS
		Trifluralin	0.21	U	ng/L	P441976	
	EPA 8276	Chlordane	2.1	UJ	ng/L	P441976	LCS
		Toxaphene	15	U	ng/L	P441976	

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.

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P441888

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P441894

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442402

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442074

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442019

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P441986

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442031

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

Reference Method: EPA 8270E
Batch ID: P441976

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P441976

Component	Result	Code	Units
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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276

Batch ID: P441976

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

Reference Method: EPA 8321B

Batch ID: P441858

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P441916

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P442291

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P442318

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P442117

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P442047

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: P441888

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P441894

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442402

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442074

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442019

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P441986

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: P442031

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

Reference Method: EPA 8270E
Batch ID: P441976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.1		P	30 - 96.0
Alpha-BHC	85.6		P	70 - 109
Alpha-Chlordane	95.9		P	45 - 107
Beta-BHC	118		P	64 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P441976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	85.8		P	17 - 141
Bifenthrin	91.9		P	10 - 113
Chlorothalonil	34.8		P	26 - 180
Cis-Nonachlor	71.9		P	37 - 102
Cypermethrin	88.7		P	20 - 133
Dacthal	69.6		P	69 - 114
DDD-p,p'	92.2		P	42 - 105
DDE-p,p'	88.7		P	42 - 106
DDT-p,p'	71.2		P	42 - 107
Delta-BHC	78.5		P	67 - 144
Deltamethrin	93.9		P	15 - 149
Dichlobenil	84.9		P	46 - 117
Dicofol	55.2		P	34 - 114
Dieldrin	79.0		P	50 - 108
Endosulfan I	79.1		P	55 - 104
Endosulfan II	87.2		P	51 - 111
Endosulfan Sulfate	95.4		P	56 - 121
Endrin	80.5		P	10 - 106
Endrin Aldehyde	70.7		P	34 - 114
Endrin Ketone	107		P	63 - 177
Esfenvalerate	84.5		P	29 - 143
Ethalfuralin	92.1		P	46 - 96.0
Fenpropathrin	109		P	28 - 115
Gamma-BHC	105		P	65 - 121
Gamma-Chlordane	97.2		P	39 - 103
Heptachlor	91.0		P	39 - 94.0
Heptachlor Epoxide	65.7		P	54 - 104
Hexachlorobenzene	48.1		P	36 - 100
Kepone	99.0		P	10 - 225
Lambda-Cyhalothrin	98.8		P	10 - 135
Methoprene	106		P	10 - 109
Methoxychlor	76.6		P	52 - 112
MGK-264	111		P	44 - 117
Mirex	67.6		P	20 - 90.0
Oxychlordane	87.3		P	44 - 102
PCB-1016	89.3		P	45 - 107
PCB-1260	98.2		P	40 - 118
Permethrin	107		P	18 - 135
Phenothrin	93.1		P	10 - 102
Piperonyl Butoxide	96.9		P	28 - 156
Prallethrin	87.8		P	28 - 113
Tau-Fluvalinate	101		P	10 - 123
Tetramethrin	91.0		P	18 - 158
Trans-Nonachlor	81.8		P	39 - 104
Triclosan Methyl	67.5		P	54 - 108
Trifluralin	95.0		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P441976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	122		F	52 - 117

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P441976

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	125		P	44 - 125

Reference Method: EPA 8321B
Batch ID: P441858

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.2		P	40 - 150
2,4,5-T	77.5		P	40 - 150
Acetaminophen	73.8		P	30 - 150
Acetamiprid	83.9		P	40 - 150
Afidopyropen	61.2		P	30 - 150
Bentazon	81.5		P	30 - 150
Benzovindiflupyr	80.7		P	40 - 150
Carbamazepine	83.4		P	40 - 150
Clothianidin	83.1		P	40 - 150
Dinotefuran	90.5		P	40 - 150
Diuron	87.2		P	40 - 150
Fenuron	87.9		P	40 - 150
Fluridone	88.6		P	40 - 150
Hydrocodone	86.4		P	40 - 150
Ibuprofen	47.3		P	40 - 150
Imazapyr	78.8		P	40 - 150
Imidacloprid	83.5		P	40 - 150
Linuron	64.6		P	40 - 150
Mandestrobin	72.2		P	40 - 150
MCPP	78.5		P	40 - 150
Naproxen	65.6		P	40 - 150
Primidone	75.7		P	40 - 150
Pyraclostrobin	76.4		P	40 - 150
Silvex	74.0		P	40 - 150
Thiamethoxam	87.0		P	40 - 150
Tolfenpyrad	54.1		P	30 - 150
Triclopyr	80.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P441916

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 160
AMPA	92.5		P	40 - 160
Endothall	83.1		P	40 - 160
Glufosinate	86.4		P	40 - 160
Glyphosate	88.3		P	40 - 160
Sucralose	118		P	40 - 160

Reference Method: SM 2320 B-2011
Batch ID: P442291

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.9		P	92 - 105

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P442318

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	102		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P442117

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

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P442047

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471341	Chloride	103		P	90 - 110
2471438	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442402

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2472365	Sulfate	97.5		P	90 - 110
2472422	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442074

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471312	Ammonia-N	94.4	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442019

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471165	Kjeldahl Nitrogen	95.1	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P441986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471243	NO2NO3-N	95.0	95.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2470681	Total-P	97.5	95.7	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P441976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471107	PCB-1016	69.6	77.6	P/P	45 - 107
2471107	PCB-1260	64.1	68.4	P/P	40 - 112
2471326	Aldrin	42.7	52.2	P/P	24 - 81.0
2471326	Alpha-BHC	90.8	87.8	P/P	65 - 110
2471326	Alpha-Chlordane	77.8	78.5	P/P	43 - 119
2471326	Beta-BHC	90.2	97.2	P/P	54 - 165
2471326	Beta-Cyfluthrin	87.1	95.1	P/P	27 - 165
2471326	Bifenthrin	66.3	89.2	P/P	17 - 117
2471326	Chlorothalonil	32.2	52.6	P/P	10 - 255
2471326	Cis-Nonachlor	48.3	62.7	P/P	34 - 98.0
2471326	Cypermethrin	88.9	107	P/P	25 - 143
2471326	Dacthal	52.6	57.7	F/P	55 - 139
2471326	DDD-p,p'	42.6	63.4	P/P	30 - 109
2471326	DDE-p,p'	57.2	65.3	P/P	35 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P441976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471326	DDT-p,p'	65.6	70.3	P/P	41 - 101
2471326	Delta-BHC	71.5	88.1	P/P	58 - 165
2471326	Deltamethrin	70.4	113	P/P	10 - 194
2471326	Dichlobenil	54.0	55.1	P/P	22 - 114
2471326	Dicofol	53.6	61.8	P/P	17 - 133
2471326	Dieldrin	56.7	61.2	P/P	45 - 129
2471326	Endosulfan I	62.5	65.5	P/P	49 - 104
2471326	Endosulfan II	73.2	72.5	P/P	37 - 117
2471326	Endosulfan Sulfate	77.5	65.7	P/P	38 - 128
2471326	Endrin	50.7	57.3	P/P	35 - 116
2471326	Endrin Aldehyde	17.9	13.1	F/F	19 - 108
2471326	Endrin Ketone	130	73.1	P/P	44 - 134
2471326	Esfenvalerate	105	125	P/P	27 - 176
2471326	Ethalfuralin	84.8	101	P/F	49 - 100
2471326	Fenpropathrin	97.7	104	P/P	34 - 117
2471326	Gamma-BHC	89.2	95.7	P/P	59 - 129
2471326	Gamma-Chlordane	95.1	88.3	P/P	33 - 107
2471326	Heptachlor	77.1	88.8	P/P	37 - 94.0
2471326	Heptachlor Epoxide	45.9	50.6	P/P	38 - 118
2471326	Hexachlorobenzene	39.5	46.2	P/P	35 - 97.0
2471326	Kepone	81.0	91.0	P/P	10 - 221
2471326	Lambda-Cyhalothrin	100	107	P/P	23 - 190
2471326	Methoprene	97.1	93.3	P/P	21 - 109
2471326	Methoxychlor	76.8	73.4	P/P	46 - 118
2471326	MGK-264	106	96.6	P/P	39 - 122
2471326	Mirex	46.8	56.8	P/P	25 - 90.0
2471326	Oxychlordane	68.4	78.0	P/P	42 - 100
2471326	Permethrin	97.8	86.9	P/P	33 - 181
2471326	Phenothrin	70.7	88.5	P/P	12 - 125
2471326	Piperonyl Butoxide	42.4	51.8	P/P	10 - 178
2471326	Prallethrin	68.6	76.1	P/P	24 - 122
2471326	Tau-Fluvalinate	124	151	P/P	13 - 151
2471326	Tetramethrin	84.1	93.3	P/P	16 - 172
2471326	Trans-Nonachlor	53.0	58.0	P/P	39 - 100
2471326	Triclosan Methyl	41.9	44.7	F/P	43 - 110
2471326	Trifluralin	77.4	81.8	P/P	45 - 94.0

Reference Method: EPA 8276
Batch ID: P441976

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471107	Chlordane	94.2	83.3	P/P	43 - 123
2471107	Toxaphene	107	98.6	P/P	27 - 156

Reference Method: EPA 8321B
Batch ID: P441858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2470865	2,4-D	85.6	81.8	P/P	40 - 150
2470865	2,4,5-T	83.7	88.4	P/P	40 - 150
2470865	Acetaminophen	65.9	74.0	P/P	30 - 150
2470865	Acetamiprid	71.4	69.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P441858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2470865	Afidopyropen	66.1	67.1	P/P	30 - 150
2470865	Bentazon	92.4	81.0	P/P	30 - 150
2470865	Benzovindiflupyr	80.9	79.2	P/P	40 - 150
2470865	Carbamazepine	76.7	83.9	P/P	40 - 150
2470865	Clothianidin	82.9	86.7	P/P	40 - 150
2470865	Dinotefuran	91.3	94.4	P/P	40 - 150
2470865	Diuron	82.2	83.5	P/P	40 - 150
2470865	Fenuron	84.5	88.9	P/P	40 - 150
2470865	Fluridone	83.1	90.7	P/P	40 - 150
2470865	Hydrocodone	84.3	86.4	P/P	40 - 150
2470865	Ibuprofen	59.1	63.6	P/P	40 - 150
2470865	Imazapyr	86.8	85.4	P/P	40 - 150
2470865	Imidacloprid	85.9	89.1	P/P	40 - 150
2470865	Linuron	76.1	89.5	P/P	40 - 150
2470865	Mandestrobin	76.5	71.6	P/P	40 - 150
2470865	MCCP	83.2	81.0	P/P	40 - 150
2470865	Naproxen	95.8	83.0	P/P	40 - 150
2470865	Primidone	76.1	85.5	P/P	40 - 150
2470865	Pyraclostrobin	82.0	83.1	P/P	40 - 150
2470865	Silvex	77.1	74.0	P/P	40 - 150
2470865	Thiamethoxam	78.3	84.4	P/P	40 - 150
2470865	Tolfenpyrad	54.8	54.6	P/P	30 - 150
2470865	Triclopyr	78.7	88.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P441916

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471088	Acesulfame K	99.4	99.4	P/P	40 - 160
2471088	AMPA	88.2	86.5	P/P	40 - 160
2471088	Endothall	94.0	89.4	P/P	40 - 160
2471088	Glufosinate	78.3	85.9	P/P	40 - 160
2471088	Glyphosate	83.2	85.1	P/P	40 - 160
2471088	Sucralose	112	116	P/P	40 - 160

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471438	Fluoride	94.9	98.2	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P442047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2471289	Organic Carbon	91.0	92.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P441888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471287	Color (true)	6.95	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P441894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471203	Turbidity	2.99	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442240

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471341	Chloride	0.136	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442402

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2472365	Sulfate	0.319	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442074

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471312	Ammonia-N	2.47	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442019

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471165	Kjeldahl Nitrogen	2.03	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P441986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471243	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2470681	Total-P	1.86	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P441976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471107	PCB-1016	11.0	Spike	P	0 - 25
2471107	PCB-1260	6.40	Spike	P	0 - 30
2471326	Aldrin	20.0	Spike	P	0 - 41
2471326	Alpha-BHC	3.42	Spike	P	0 - 25
2471326	Alpha-Chlordane	0.834	Spike	P	0 - 32
2471326	Beta-BHC	7.49	Spike	P	0 - 33
2471326	Beta-Cyfluthrin	8.79	Spike	P	0 - 43
2471326	Bifenthrin	29.5	Spike	P	0 - 52
2471326	Chlorothalonil	48.2	Spike	P	0 - 82
2471326	Cis-Nonachlor	26.0	Spike	P	0 - 33
2471326	Cypermethrin	18.7	Spike	P	0 - 51
2471326	Dacthal	9.23	Spike	P	0 - 27
2471326	DDD-p,p'	33.2	Spike	P	0 - 39
2471326	DDE-p,p'	13.3	Spike	P	0 - 31
2471326	DDT-p,p'	6.84	Spike	P	0 - 29
2471326	Delta-BHC	20.9	Spike	P	0 - 35
2471326	Deltamethrin	46.9	Spike	P	0 - 100
2471326	Dichlobenil	2.04	Spike	P	0 - 40
2471326	Dicofol	14.1	Spike	P	0 - 37
2471326	Dieldrin	7.76	Spike	P	0 - 27
2471326	Endosulfan I	4.75	Spike	P	0 - 23
2471326	Endosulfan II	0.957	Spike	P	0 - 34
2471326	Endosulfan Sulfate	16.5	Spike	P	0 - 36
2471326	Endrin	12.1	Spike	P	0 - 45
2471326	Endrin Aldehyde	31.3	Spike	P	0 - 76
2471326	Endrin Ketone	55.8	Spike	F	0 - 43
2471326	Esfenvalerate	16.8	Spike	P	0 - 51
2471326	Ethalfuralin	17.5	Spike	P	0 - 22
2471326	Fenpropathrin	6.51	Spike	P	0 - 49
2471326	Gamma-BHC	7.00	Spike	P	0 - 28
2471326	Gamma-Chlordane	7.41	Spike	P	0 - 40
2471326	Heptachlor	14.0	Spike	P	0 - 29
2471326	Heptachlor Epoxide	9.79	Spike	P	0 - 33
2471326	Hexachlorobenzene	15.6	Spike	P	0 - 36
2471326	Kepone	11.7	Spike	P	0 - 85
2471326	Lambda-Cyhalothrin	6.86	Spike	P	0 - 55
2471326	Methoprene	3.97	Spike	P	0 - 53
2471326	Methoxychlor	4.51	Spike	P	0 - 50
2471326	MGK-264	9.54	Spike	P	0 - 43
2471326	Mirex	19.2	Spike	P	0 - 40
2471326	Oxychlordane	13.1	Spike	P	0 - 31
2471326	Permethrin	11.8	Spike	P	0 - 50
2471326	Phenothrin	22.4	Spike	P	0 - 58
2471326	Piperonyl Butoxide	11.0	Spike	P	0 - 100
2471326	Prallethrin	10.3	Spike	P	0 - 39
2471326	Tau-Fluvalinate	19.6	Spike	P	0 - 54
2471326	Tetramethrin	10.4	Spike	P	0 - 51
2471326	Trans-Nonachlor	9.09	Spike	P	0 - 39
2471326	Triclosan Methyl	6.54	Spike	P	0 - 31
2471326	Trifluralin	5.53	Spike	P	0 - 22

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P441976

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471107	Chlordane	12.3	Spike	P	0 - 28
2471107	Toxaphene	8.11	Spike	P	0 - 27

Reference Method: EPA 8321B
Batch ID: P441858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2470865	2,4-D	4.55	Spike	P	0 - 30
2470865	2,4,5-T	5.47	Spike	P	0 - 30
2470865	Acetaminophen	11.7	Spike	P	0 - 30
2470865	Acetamiprid	2.98	Spike	P	0 - 30
2470865	Afidopyropen	1.46	Spike	P	0 - 30
2470865	Bentazon	13.2	Spike	P	0 - 30
2470865	Benzovindiflupyr	2.11	Spike	P	0 - 30
2470865	Carbamazepine	8.41	Spike	P	0 - 30
2470865	Clothianidin	4.45	Spike	P	0 - 30
2470865	Dinotefuran	3.42	Spike	P	0 - 30
2470865	Diuron	1.58	Spike	P	0 - 30
2470865	Fenuron	5.18	Spike	P	0 - 30
2470865	Fluridone	8.79	Spike	P	0 - 30
2470865	Hydrocodone	2.43	Spike	P	0 - 30
2470865	Ibuprofen	7.40	Spike	P	0 - 30
2470865	Imazapyr	1.17	Spike	P	0 - 30
2470865	Imidacloprid	3.19	Spike	P	0 - 30
2470865	Linuron	16.3	Spike	P	0 - 30
2470865	Mandestrobin	6.61	Spike	P	0 - 30
2470865	MCPP	2.65	Spike	P	0 - 30
2470865	Naproxen	14.3	Spike	P	0 - 30
2470865	Primidone	11.6	Spike	P	0 - 30
2470865	Pyraclostrobin	1.38	Spike	P	0 - 30
2470865	Silvex	4.15	Spike	P	0 - 30
2470865	Thiamethoxam	7.51	Spike	P	0 - 30
2470865	Tolfenpyrad	0.361	Spike	P	0 - 30
2470865	Triclopyr	11.7	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P441916

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471088	Acesulfame K	0.0326	Spike	P	0 - 30
2471088	AMPA	2.00	Spike	P	0 - 30
2471088	Endothall	4.92	Spike	P	0 - 30
2471088	Glufosinate	9.28	Spike	P	0 - 30
2471088	Glyphosate	2.13	Spike	P	0 - 30
2471088	Sucralose	2.94	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P442291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471438	Total Alkalinity	4.41	Sample	F	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P442318

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471318	TDS	1.76	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P442292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471438	Fluoride	1.92	Spike	F	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P442047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2471289	Organic Carbon	1.59	Spike	P	0 - 15

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

Quality Assurance Report Surrogates

Lab Sample ID: 2471326
Field Sample ID: G3SD0154

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	82.4	P	37 - 129
EPA 8270E	Decachlorobiphenyl	62.4	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	57.1	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	56.0	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	62.7	P	23 - 110
EPA 8276	PCNB	87.4	P	51 - 130

Lab Sample ID: 2471327
Field Sample ID: G3SD0148

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	62.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	53.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.4	P	30 - 160
EPA 8321B	Diuron-d6	52.1	P	30 - 160
EPA 8321B	Endothall-d6	90.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	92.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.7	P	30 - 160
EPA 8321B	Primidone-d5	57.1	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A124359
Included Lab Sample IDs: 2471318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	95.4	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A124363
Included Lab Sample IDs: 2471318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A124406
Included Lab Sample IDs: 2471319

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

Reference Method: EPA 8321B
Run ID: A124424
Included Lab Sample IDs: 2471327

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	93.3	89.6	P/P	60 - 160
Endothall	78.0	73.0	P/P	60 - 160
Glufosinate	83.6	76.7	P/P	60 - 160
Glyphosate	90.5	86.2	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A124426
Included Lab Sample IDs: 2471327

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	102	99.7	P/P	60 - 160
Sucralose	119	120	P/P	60 - 160

Reference Method: SM 5310 B-2014
Run ID: A124437
Included Lab Sample IDs: 2471319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	99.0	101	P/P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A124439
Included Lab Sample IDs: 2471318

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A124442
Included Lab Sample IDs: 2471319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A124467
Included Lab Sample IDs: 2471319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	104	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A124488
Included Lab Sample IDs: 2471327

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	78.7	70.7	P/P	50 - 150
2,4,5-T	69.6	75.6	P/P	50 - 150
Acetaminophen	76.4	74.2	P/P	60 - 160
Acetamiprid	74.6	72.7	P/P	50 - 150
Afidopyropen	70.1	73.1	P/P	50 - 150
Bentazon	68.0	74.9	P/P	50 - 160
Benzovindiflupyr	96.5	89.0	P/P	50 - 150
Carbamazepine	88.2	81.8	P/P	60 - 150
Clothianidin	73.4	76.5	P/P	60 - 150
Dinotefuran	87.0	89.8	P/P	50 - 150
Diuron	78.0	82.4	P/P	60 - 160
Fenuron	81.1	79.3	P/P	60 - 150
Fluridone	82.0	81.5	P/P	60 - 160
Hydrocodone	82.5	79.2	P/P	60 - 150
Ibuprofen	133	120	P/P	50 - 160
Imazapyr	76.1	71.0	P/P	50 - 150
Imidacloprid	69.8	71.6	P/P	60 - 150
Linuron	95.8	93.2	P/P	60 - 150
Mandestrobin	74.7	77.1	P/P	50 - 150
MCPP	67.3	75.5	P/P	50 - 150
Naproxen	88.7	78.9	P/P	50 - 160
Primidone	84.7	81.9	P/P	60 - 150
Pyraclostrobin	99.3	98.2	P/P	60 - 150
Silvex	70.0	78.7	P/P	50 - 150
Thiamethoxam	79.4	77.8	P/P	50 - 150
Tolfenpyrad	93.0	91.2	P/P	60 - 150
Triclopyr	67.4	70.7	P/P	50 - 150

Reference Method: SM 2320 B-2011
Run ID: A124531
Included Lab Sample IDs: 2471318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	96.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011
Run ID: A124531
Included Lab Sample IDs: 2471318

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A124559
Included Lab Sample IDs: 2471319

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	96.6	98.2	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A124581
Included Lab Sample IDs: 2471318

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	97.7	97.0	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A124676
Included Lab Sample IDs: 2471326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	106		P	80 - 120
PCB-1260	105		P	80 - 120

Reference Method: EPA 8276
Run ID: A124684
Included Lab Sample IDs: 2471326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.6		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: EPA 8270E
Run ID: A124688
Included Lab Sample IDs: 2471326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	104		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	86.3		P	80 - 120
Beta-BHC	87.7		P	80 - 120
Beta-Cyfluthrin	96.4		P	80 - 120
Bifenthrin	108		P	80 - 120
Chlorothalonil	103		P	80 - 120
Cis-Nonachlor	88.3		P	80 - 120
Cypermethrin	103		P	80 - 120
Dacthal	91.1		P	80 - 120
DDE-p,p'	111		P	80 - 120
Delta-BHC	98.2		P	80 - 120
Deltamethrin	101		P	80 - 120
Dichlobenil	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A124688
Included Lab Sample IDs: 2471326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dicofol	79.2*		F	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	104		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	95.9		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	97.6		P	80 - 120
Endrin Ketone	101		P	80 - 120
Esfenvalerate	97.5		P	80 - 120
Ethalfuralin	113		P	80 - 120
Fenpropathrin	108		P	80 - 120
Gamma-BHC	97.9		P	80 - 120
Gamma-Chlordane	92.6		P	80 - 120
Heptachlor	85.9		P	80 - 120
Heptachlor Epoxide	88.0		P	80 - 120
Hexachlorobenzene	100		P	80 - 120
Kepone	98.4		P	80 - 120
Lambda-Cyhalothrin	102		P	80 - 120
Methoprene	98.3		P	80 - 120
Methoxychlor	100		P	80 - 120
MGK-264	99.2		P	80 - 120
Mirex	103		P	80 - 120
Oxychlordane	116		P	80 - 120
Permethrin	96.4		P	80 - 120
Phenothrin	103		P	80 - 120
Prallethrin	105		P	80 - 120
Tau-Fluvalinate	98.2		P	80 - 120
Tetramethrin	100		P	80 - 120
Trans-Nonachlor	89.6		P	80 - 120
Triclosan Methyl	91.1		P	80 - 120
Trifluralin	98.9		P	80 - 120

Reference Method: EPA 8270E
Run ID: A124707
Included Lab Sample IDs: 2471326

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDD-p,p'	100		P	80 - 120
DDT-p,p'	94.2		P	80 - 120
Piperonyl Butoxide	103		P	80 - 120

* 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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	102				6.95	
EPA 180.1 Rev. 2.0	Turbidity	104				2.99	
EPA 300.0 Rev. 2.1	Chloride	104	103	104		0.136	
	Sulfate	99.3	97.5	104		0.319	
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	94.4	97.0			2.47
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	95.1	98.3			2.03
EPA 353.2 Rev. 2.0	NO2NO3-N	100	95.0	95.0			0.0
EPA 365.1 Rev. 2.0	Total-P	96.0	97.5	95.7			1.86
EPA 8270E	Aldrin	62.1	42.7	52.2			20.0
	Alpha-BHC	85.6	90.8	87.8			3.42
	Alpha-Chlordane	95.9	77.8	78.5			0.834
	Beta-BHC	118	90.2	97.2			7.49
	Beta-Cyfluthrin	85.8	87.1	95.1			8.79
	Bifenthrin	91.9	66.3	89.2			29.5
	Chlorothalonil	34.8	32.2	52.6			48.2
	Cis-Nonachlor	71.9	48.3	62.7			26.0
	Cypermethrin	88.7	88.9	107			18.7
	Dacthal	69.6	52.6	57.7			9.23
	DDD-p,p'	92.2	42.6	63.4			33.2
	DDE-p,p'	88.7	57.2	65.3			13.3
	DDT-p,p'	71.2	65.6	70.3			6.84
	Delta-BHC	78.5	71.5	88.1			20.9
	Deltamethrin	93.9	70.4	113			46.9
	Dichlobenil	84.9	54.0	55.1			2.04
	Dicofol	55.2	53.6	61.8			14.1
	Dieldrin	79.0	56.7	61.2			7.76
	Endosulfan I	79.1	62.5	65.5			4.75
	Endosulfan II	87.2	73.2	72.5			0.957
	Endosulfan Sulfate	95.4	77.5	65.7			16.5
	Endrin	80.5	50.7	57.3			12.1
	Endrin Aldehyde	70.7	17.9	13.1			31.3
	Endrin Ketone	107	130	73.1			55.8
	Esfenvalerate	84.5	105	125			16.8
	Ethalfuralin	92.1	84.8	101			17.5
	Fenpropathrin	109	97.7	104			6.51
	Gamma-BHC	105	89.2	95.7			7.00
	Gamma-Chlordane	97.2	95.1	88.3			7.41
	Heptachlor	91.0	77.1	88.8			14.0
	Heptachlor Epoxide	65.7	45.9	50.6			9.79
	Hexachlorobenzene	48.1	39.5	46.2			15.6
	Kepone	99.0	81.0	91.0			11.7
	Lambda-Cyhalothrin	98.8	100	107			6.86
	Methoprene	106	97.1	93.3			3.97
	Methoxychlor	76.6	76.8	73.4			4.51
	MGK-264	111	106	96.6			9.54
	Mirex	67.6	46.8	56.8			19.2
	Oxychlordane	87.3	68.4	78.0			13.1
	PCB-1016	89.3	69.6	77.6			11.0
	PCB-1260	98.2	64.1	68.4			6.40
	Permethrin	107	97.8	86.9			11.8
	Phenothrin	93.1	70.7	88.5			22.4
	Piperonyl Butoxide	96.9	42.4	51.8			11.0
	Prallethrin	87.8	68.6	76.1			10.3
	Tau-Fluvalinate	101	124	151			19.6

Quality Assurance Report

Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	MS
			LCS	SMP		
EPA 8270E	Tetramethrin	91.0	84.1	93.3		10.4
	Trans-Nonachlor	81.8	53.0	58.0		9.09
	Triclosan Methyl	67.5	41.9	44.7		6.54
	Trifluralin	95.0	77.4	81.8		5.53
EPA 8276	Chlordane	122	94.2	83.3		12.3
	Toxaphene	125	107	98.6		8.11
EPA 8321B	2,4-D	79.2	81.8	85.6		4.55
	2,4,5-T	77.5	88.4	83.7		5.47
	Acesulfame K	102	99.4	99.4		0.0326
	Acetaminophen	73.8	74.0	65.9		11.7
	Acetamiprid	83.9	69.3	71.4		2.98
	Afidopyropen	61.2	67.1	66.1		1.46
	AMPA	92.5	88.2	86.5		2.00
	Bentazon	81.5	81.0	92.4		13.2
	Benzovindiflupyr	80.7	79.2	80.9		2.11
	Carbamazepine	83.4	83.9	76.7		8.41
	Clothianidin	83.1	86.7	82.9		4.45
	Dinotefuran	90.5	94.4	91.3		3.42
	Diuron	87.2	83.5	82.2		1.58
	Endothall	83.1	94.0	89.4		4.92
	Fenuron	87.9	88.9	84.5		5.18
	Fluridone	88.6	90.7	83.1		8.79
	Glufosinate	86.4	78.3	85.9		9.28
	Glyphosate	88.3	83.2	85.1		2.13
	Hydrocodone	86.4	86.4	84.3		2.43
	Ibuprofen	47.3	59.1	63.6		7.40
	Imazapyr	78.8	85.4	86.8		1.17
	Imidacloprid	83.5	89.1	85.9		3.19
	Linuron	64.6	89.5	76.1		16.3
	Mandestrobin	72.2	71.6	76.5		6.61
	MCPP	78.5	81.0	83.2		2.65
	Naproxen	65.6	83.0	95.8		14.3
	Primidone	75.7	85.5	76.1		11.6
	Pyraclostrobin	76.4	83.1	82.0		1.38
	Silvex	74.0	77.1	74.0		4.15
	Sucralose	118	112	116		2.94
	Thiamethoxam	87.0	84.4	78.3		7.51
	Tolfenpyrad	54.1	54.6	54.8		0.361
	Triclopyr	80.3	88.4	78.7		11.7
SM 2320 B-2011	Total Alkalinity	98.9			4.41	
SM 2540 C-2015	TDS	102			1.76	
SM 2540 D-2015	TSS	96.0				
SM 4500-F- C-2011	Fluoride	100	94.9	98.2		1.92
SM 5310 B-2014	Organic Carbon	100	91.0	92.9		1.59

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2471318
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2471318
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2471318
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2471318
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2471319

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2471319
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2471319
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2471319
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2471326
EPA 8270E	PCBs in water matrices by GC/MS/MS	2471326
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2471326
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2471327
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2471318
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2471318
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2471318
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2471318
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2471319

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	02/23/2024			02/23/2024 13:04	Jessica K Wilks	2471318
EPA 180.1 Rev. 2.0	02/23/2024			02/23/2024 12:27	Chandler E Cox	2471318
EPA 300.0 Rev. 2.1	02/23/2024			03/01/2024 06:16	James L Waggeberby	2471318
	02/23/2024			03/05/2024 12:29	James L Waggeberby	2471318
EPA 350.1 Rev. 2.0	02/23/2024			02/28/2024 12:30	Khloe J Berg	2471319
EPA 351.2 Rev. 2.0	02/23/2024	02/28/2024 07:55	Samantha L Bates	02/29/2024 10:48	Robyn Blevins	2471319
EPA 353.2 Rev. 2.0	02/23/2024			02/26/2024 14:34	Fadila Guebre	2471319
EPA 365.1 Rev. 2.0	02/23/2024	02/28/2024 16:12	Josephine W Gitau	03/06/2024 11:23	Simonne.V. Calhoun	2471319
EPA 8270E	02/23/2024	02/28/2024 08:00	Rasheda Ghaffari	03/08/2024 04:22	Vandana T. Nagar	2471326
	02/23/2024	02/28/2024 08:00	Rasheda Ghaffari	03/08/2024 23:04	Julie Wi	2471326
	02/23/2024	02/28/2024 08:00	Rasheda Ghaffari	03/12/2024 22:39	Julie Wi	2471326
EPA 8276	02/23/2024	02/28/2024 08:00	Rasheda Ghaffari	03/05/2024 16:01	Kenedi Mills	2471326
EPA 8321B	02/23/2024	02/26/2024 09:00	Hoor Shaik	03/01/2024 16:25	Juyoung Kim	2471327
	02/23/2024	02/27/2024 07:30	Tae K Lee	02/27/2024 12:47	Tae K Lee	2471327
	02/23/2024	02/27/2024 07:30	Tae K Lee	02/28/2024 00:05	Tae K Lee	2471327
SM 2320 B-2011	02/23/2024			03/01/2024 19:46	Dale L. Simmons	2471318
SM 2540 C-2015	02/23/2024			02/26/2024 15:21	Yijie Li	2471318
SM 2540 D-2015	02/23/2024			02/26/2024 15:21	Yijie Li	2471318
SM 4500-F- C-2011	02/23/2024			03/01/2024 19:46	Dale L. Simmons	2471318
SM 5310 B-2014	02/23/2024			02/26/2024 19:53	Khloe J Berg	2471319