

Chemical Analysis Report

SE-DIST-2021-03-16-03

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

Event Description: **SMP - 3205B pickup**
Request ID: **RQ-2021-03-15-44**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 05-APR-2021 16:47



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: Taylor Creek @ 70

Collection Date/Time: 03/15/2021 11:30

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2231749	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P395036	
	EPA 300.0 Rev. 2.1	Chloride	67		mg Cl/L	P395298	
		Sulfate	36		mg SO4/L	P395302	
	SM 2120 B-2011	Color (true)	120		PCU	P395051	
	SM 2320 B-2011	Total Alkalinity	170		mg CaCO3/L	P395226	
	SM 2540 C-2011	TDS	392		mg/L	P395591	
	SM 2540 D-2011	TSS	4	I	mg/L	P395599	
	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P395232	
2231750	EPA 350.1 Rev. 2.0	Ammonia-N	0.053		mg N/L	P395448	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.8		mg N/L	P395343	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.56		mg N/L	P395078	
	EPA 365.1 Rev. 2.0	Total-P	0.20		mg P/L	P395212	
	SM 5310 B-2011	Organic Carbon	25		mg C/L	P395520	
2231751	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.087		mg P/L	P395044	
2231755	EPA 8270E	Aldrin	0.83	U	ng/L	P395065	
		Dieldrin	0.44	U	ng/L	P395065	
		Alpha-BHC	2.2	U	ng/L	P395065	
		Kepone**	6.1	U	ng/L	P395065	
		Alpha-Chlordane	1.1	U	ng/L	P395065	
		Beta-BHC	8.8	UJ	ng/L	P395065	CCV
		Beta-Cyfluthrin**	17	U	ng/L	P395065	
		Bifenthrin**	4.4	U	ng/L	P395065	
		Delta-BHC	8.8	U	ng/L	P395065	
		Gamma-BHC	8.8	U	ng/L	P395065	
		Carbophenothion	11	U	ng/L	P395065	
		Chlorothalonil	2.2	UJ	ng/L	P395065	CCV, RPD
		Cis-Nonachlor**	1.1	U	ng/L	P395065	
		Cypermethrin	22	U	ng/L	P395065	RPD
		Dacthal**	1.1	U	ng/L	P395065	
		DDD-p,p'	5.5	U	ng/L	P395065	
		DDE-p,p'	5.5	U	ng/L	P395065	
		DDT-p,p'	6.6	U	ng/L	P395065	
		Deltamethrin**	22	U	ng/L	P395065	
		Dicofol	33	UJ	ng/L	P395065	CCV
		Endosulfan I	4.4	U	ng/L	P395065	
		Endosulfan II	4.4	U	ng/L	P395065	
		Endosulfan Sulfate	2.2	U	ng/L	P395065	
		Endrin	2.2	U	ng/L	P395065	
		Endrin Aldehyde	2.2	U	ng/L	P395065	
		Endrin Ketone	2.2	U	ng/L	P395065	
		Ethalfuralin**	3.3	U	ng/L	P395065	
		Gamma-Chlordane	1.1	U	ng/L	P395065	
		Dichlobenil**	2.2	U	ng/L	P395065	

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2231755	EPA 8270E	Esfenvalerate**	22	U	ng/L	P395065	MS, RPD
		Fenpropathrin**	11	U	ng/L	P395065	
		Heptachlor	1.7	U	ng/L	P395065	
		Heptachlor Epoxide	2.2	U	ng/L	P395065	
		Hexachlorobenzene	2.2	U	ng/L	P395065	
		Lambda-Cyhalothrin**	17	U	ng/L	P395065	
		Methoxychlor	4.4	U	ng/L	P395065	
		Mirex	2.2	U	ng/L	P395065	
		MGK-264**	3.3	U	ng/L	P395065	
		Permethrin	11	U	ng/L	P395065	
		Phenothrin**	33	U	ng/L	P395065	MS
		Piperonyl Butoxide**	1.7	U	ng/L	P395065	
		Prallethrin**	28	U	ng/L	P395065	
		Tau-Fluvalinate**	3.9	U	ng/L	P395065	
		Tetramethrin**	8.8	U	ng/L	P395065	
		Trans-Nonachlor**	1.1	U	ng/L	P395065	
		Triclosan Methyl**	1.1	U	ng/L	P395065	
		Trifluralin	2.8	U	ng/L	P395065	
		Chlordane	5.5	U	ng/L	P395065	
		Toxaphene	33	U	ng/L	P395065	
2231756	EPA 8321B	2,4-D	0.059		ug/L	P395071	MS
		Acesulfame K	0.31	I	ug/L	P395125	
		AMPA	0.69		ug/L	P395125	
		2,4,5-T	0.0040	U	ug/L	P395071	
		Sucralose	0.32		ug/L	P395125	
		Acetaminophen	0.0080	U	ug/L	P395071	
		Endothall	0.25	U	ug/L	P395125	
		Acetamiprid	0.0020	U	ug/L	P395071	
		Glufosinate	0.10	U	ug/L	P395125	
		Glyphosate	1.5	J	ug/L	P395125	LCS
		Afidopyropen	0.0020	U	ug/L	P395071	
		Bentazon	0.0019	I	ug/L	P395071	
		Benzovindiflupyr	0.0020	U	ug/L	P395071	
		Carbamazepine	9.1E-04	I	ug/L	P395071	
		Clothianidin	0.0044	I	ug/L	P395071	
		Dinotefuran	0.0042	I	ug/L	P395071	
		Diuron	0.0020	U	ug/L	P395071	
		Fenuron	0.016	U	ug/L	P395071	
		Fluridone	8.0E-04	U	ug/L	P395071	
		Imazapyr	0.25		ug/L	P395071	
		Hydrocodone	0.0020	U	ug/L	P395071	
		Ibuprofen	0.020	U	ug/L	P395071	
		Imidacloprid	0.0038	I	ug/L	P395071	
		Linuron	0.0040	U	ug/L	P395071	
		Mandestrobin	0.0020	U	ug/L	P395071	

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2231756	EPA 8321B	MCPP	0.0020	U	ug/L	P395071	
		Naproxen	0.0080	U	ug/L	P395071	
		Primidone	0.0040	U	ug/L	P395071	
		Pyraclostrobin	0.0020	U	ug/L	P395071	
		Thiamethoxam	0.0020	U	ug/L	P395071	
		Tolfenpyrad	0.0020	U	ug/L	P395071	
		Triclopyr	0.0040	U	ug/L	P395071	

Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395036

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395298

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395448

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395343

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395078

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395212

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395044

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P395065

Component	Result	Code	Units
Aldrin	0.75	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P395065

Component	Result	Code	Units
Beta-Cyfluthrin	15	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Esfenvalerate	20	U	ng/L
Ethalfuralin	3.0	U	ng/L
Fenpropathrin	10	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Kepone	5.5	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276

Batch ID: P395065

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P395071

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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	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
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P395125

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 2120 B-2011

Batch ID: P395051

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P395226

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P395591

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P395599

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P395232

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P395520

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395298

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395343

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395078

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395212

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395044

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

Reference Method: EPA 8270E
Batch ID: P395065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	47.6	45.4	P/P	20 - 110
Alpha-BHC	81.3	76.5	P/P	58 - 130
Alpha-Chlordane	75.5	69.3	P/P	61 - 105
Beta-BHC	67.8	90.9	P/P	53 - 164
Beta-Cyfluthrin	96.7	82.4	P/P	40 - 140
Bifenthrin	77.7	71.0	P/P	44 - 122
Carbophenothion	57.9	52.3	P/P	20 - 161
Chlorothalonil	80.4	51.1	P/P	20 - 201
Cis-Nonachlor	78.7	75.5	P/P	60 - 110
Cypermethrin	88.5	87.7	P/P	43 - 131

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P395065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dacthal	88.8	85.2	P/P	76 - 108
DDD-p,p'	82.1	79.2	P/P	68 - 118
DDE-p,p'	72.3	65.7	P/P	56 - 107
DDT-p,p'	76.8	69.1	P/P	55 - 122
Delta-BHC	98.8	114	P/P	60 - 181
Deltamethrin	98.3	103	P/P	51 - 139
Dichlobenil	44.5	54.8	P/P	20 - 106
Dicofol	76.4	65.5	P/P	56 - 130
Dieldrin	71.6	72.2	P/P	58 - 112
Endosulfan I	92.7	80.6	P/P	68 - 115
Endosulfan II	99.8	98.7	P/P	69 - 133
Endosulfan Sulfate	93.9	90.4	P/P	65 - 126
Endrin	87.5	73.6	P/P	66 - 118
Endrin Aldehyde	117	94.3	P/P	60 - 132
Endrin Ketone	89.4	86.9	P/P	68 - 121
Esfenvalerate	79.1	77.3	P/P	42 - 116
Ethalfuralin	74.2	65.9	P/P	50 - 118
Fenpropathrin	78.5	75.3	P/P	55 - 132
Gamma-BHC	74.6	86.1	P/P	65 - 147
Gamma-Chlordane	71.1	66.0	P/P	56 - 103
Heptachlor	60.4	53.6	P/P	47 - 95.0
Heptachlor Epoxide	81.6	75.6	P/P	67 - 107
Hexachlorobenzene	50.9	54.4	P/P	45 - 99.0
Kepone	99.3	105	P/P	28 - 128
Lambda-Cyhalothrin	105	94.4	P/P	41 - 135
Methoxychlor	90.2	84.5	P/P	61 - 138
MGK-264	59.7	60.8	P/P	20 - 109
Mirex	58.6	52.5	P/P	36 - 92.0
Permethrin	72.6	68.7	P/P	45 - 111
Phenothrin	47.3	47.1	P/P	22 - 88.0
Piperonyl Butoxide	101	98.8	P/P	67 - 120
Prallethrin	57.4	57.3	P/P	28 - 92.0
Tau-Fluvalinate	109	102	P/P	38 - 145
Tetramethrin	104	99.3	P/P	29 - 150
Trans-Nonachlor	69.4	63.7	P/P	54 - 105
Triclosan Methyl	90.5	83.9	P/P	76 - 115
Trifluralin	69.0	63.6	P/P	53 - 111

Reference Method: EPA 8276
Batch ID: P395065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	96.3	91.8	P/P	56 - 117
Toxaphene	108	106	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P395071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	30 - 160
2,4,5-T	103		P	30 - 160
Acetaminophen	92.2		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P395071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetamiprid	109		P	30 - 160
Afidopyropen	79.1		P	30 - 160
Bentazon	91.2		P	30 - 160
Benzovindiflupyr	92.0		P	30 - 160
Carbamazepine	105		P	30 - 160
Clothianidin	103		P	30 - 160
Dinotefuran	106		P	30 - 160
Diuron	78.3		P	30 - 160
Fenuron	107		P	30 - 160
Fluridone	101		P	30 - 160
Hydrocodone	105		P	30 - 160
Ibuprofen	102		P	30 - 160
Imazapyr	112		P	30 - 160
Imidacloprid	112		P	30 - 160
Linuron	85.5		P	30 - 160
Mandestrobin	96.1		P	30 - 160
MCPP	123		P	30 - 160
Naproxen	56.1		P	30 - 160
Primidone	99.7		P	30 - 160
Pyraclostrobin	89.1		P	30 - 160
Thiamethoxam	110		P	30 - 160
Tolfenpyrad	62.8		P	30 - 160
Triclopyr	107		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	115		P	40 - 150
AMPA	104		P	40 - 150
Endothall	87.4		P	40 - 150
Glufosinate	125		P	40 - 150
Glyphosate	148		F	40 - 140
Sucralose	93.5		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P395051

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

Reference Method: SM 2320 B-2011

Batch ID: P395226

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P395232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	90 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P395520

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P395298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231575	Chloride	101		P	90 - 110
2231693	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P395302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231575	Sulfate	97.3		P	90 - 110
2231693	Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P395448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231863	Ammonia-N	97.2	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P395343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231665	Kjeldahl Nitrogen	99.2	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P395078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231665	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P395212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231696	Total-P	105	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P395044

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231698	O-Phosphate-P	100	101	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P395065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231763	Alpha-BHC	81.5	75.6	P/P	53 - 147
2231763	Alpha-Chlordane	73.0	60.7	P/P	56 - 107
2231763	Beta-BHC	93.9	74.5	P/P	43 - 182
2231763	Beta-Cyfluthrin	95.2	71.0	P/P	42 - 157
2231763	Bifenthrin	71.0	54.5	P/P	52 - 124
2231763	Carbophenothion	75.3	64.0	P/P	40 - 172
2231763	Chlorothalonil	77.1	65.3	P/P	10 - 265
2231763	Cis-Nonachlor	79.1	63.0	P/P	55 - 112

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P395065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231763	Cypermethrin	91.6	65.2	P/P	46 - 144
2231763	Dacthal	90.3	83.2	P/P	72 - 110
2231763	DDD-p,p'	82.1	69.8	P/P	58 - 123
2231763	DDE-p,p'	70.2	57.4	P/P	52 - 106
2231763	DDT-p,p'	72.3	61.0	P/P	50 - 127
2231763	Delta-BHC	120	93.2	P/P	56 - 222
2231763	Deltamethrin	84.9	67.9	P/P	47 - 152
2231763	Dichlobenil	41.0	39.8	P/P	22 - 99.0
2231763	Dicofol	68.4	65.1	P/P	38 - 145
2231763	Endosulfan I	91.8	81.9	P/P	64 - 124
2231763	Endosulfan II	92.8	82.0	P/P	52 - 159
2231763	Endosulfan Sulfate	84.8	98.5	P/P	62 - 136
2231763	Endrin	84.8	77.6	P/P	57 - 126
2231763	Endrin Aldehyde	97.2	101	P/P	41 - 128
2231763	Endrin Ketone	94.0	83.2	P/P	67 - 129
2231763	Esfenvalerate	73.9	59.1	P/P	50 - 120
2231763	Ethalfuralin	67.4	60.9	P/P	41 - 125
2231763	Fenpropathrin	80.7	62.7	P/P	40 - 202
2231763	Gamma-BHC	91.4	72.1	P/P	58 - 180
2231763	Gamma-Chlordane	69.8	55.7	P/P	54 - 103
2231763	Heptachlor	55.5	46.2	P/P	46 - 94.0
2231763	Heptachlor Epoxide	79.6	72.6	P/P	62 - 111
2231763	Hexachlorobenzene	52.0	36.7	P/F	42 - 95.0
2231763	Lambda-Cyhalothrin	105	78.0	P/P	37 - 162
2231763	Methoxychlor	86.4	78.0	P/P	52 - 143
2231763	MGK-264	66.4	66.7	P/P	37 - 102
2231763	Mirex	56.9	42.4	P/F	43 - 91.0
2231763	Permethrin	68.1	52.7	P/P	48 - 113
2231763	Phenothrin	52.2	39.1	P/P	30 - 104
2231763	Piperonyl Butoxide	107	92.1	P/P	67 - 127
2231763	Prallethrin	61.5	52.2	P/P	28 - 102
2231763	Tau-Fluvalinate	93.9	75.1	P/P	46 - 174
2231763	Tetramethrin	100	84.0	P/P	28 - 176
2231763	Trans-Nonachlor	68.5	55.9	P/P	51 - 103
2231763	Triclosan Methyl	88.2	79.3	P/P	67 - 116
2231763	Trifluralin	65.5	55.8	P/P	47 - 118
2232109	Aldrin	44.6	50.3	P/P	22 - 127
2232109	Dieldrin	59.8	68.1	P/P	52 - 123
2232109	Kepone	103	120	P/P	18 - 138

Reference Method: EPA 8276
Batch ID: P395065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2232109	Chlordane	87.2	99.8	P/P	47 - 128
2232109	Toxaphene	115	120	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P395071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231596	2,4-D	116	124	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P395071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231596	2,4,5-T	98.9	103	P/P	30 - 160
2231596	Acetaminophen	94.8	103	P/P	30 - 160
2231596	Acetamiprid	107	97.0	P/P	30 - 160
2231596	Afidopyropen	78.5	65.5	P/P	30 - 160
2231596	Bentazon	67.7	70.4	P/P	30 - 160
2231596	Benzovindiflupyr	89.4	92.9	P/P	30 - 160
2231596	Carbamazepine	95.3	91.9	P/P	30 - 160
2231596	Clothianidin	113	101	P/P	30 - 160
2231596	Dinotefuran	109	95.4	P/P	30 - 160
2231596	Diuron	64.9	67.1	P/P	30 - 160
2231596	Fenuron	93.9	97.0	P/P	30 - 160
2231596	Fluridone	87.5	90.0	P/P	30 - 160
2231596	Hydrocodone	108	104	P/P	30 - 160
2231596	Ibuprofen	82.1	83.6	P/P	30 - 160
2231596	Imazapyr	118	113	P/P	30 - 160
2231596	Imidacloprid	137	135	P/P	30 - 160
2231596	Linuron	74.3	73.9	P/P	30 - 160
2231596	Mandestrobin	86.6	88.4	P/P	30 - 160
2231596	MCPP	107	112	P/P	30 - 160
2231596	Naproxen	73.6	80.1	P/P	30 - 160
2231596	Primidone	101	99.6	P/P	30 - 160
2231596	Pyraclostrobin	85.7	84.9	P/P	30 - 160
2231596	Thiamethoxam	135	126	P/P	30 - 160
2231596	Tolfenpyrad	58.0	59.2	P/P	30 - 160
2231596	Triclopyr	102	103	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P395125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231596	Acesulfame K	177	145	F/P	40 - 150
2231596	AMPA	120	127	P/P	40 - 150
2231596	Endothall	82.1	109	P/P	40 - 150
2231596	Glufosinate	134	135	P/P	40 - 150
2231596	Glyphosate	105	92.0	P/P	40 - 140
2231596	Sucralose	105	103	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P395232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231841	Fluoride	99.4	99.4	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P395520

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2231897	Organic Carbon	94.3	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P395036

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231707	Turbidity	4.47	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231575	Chloride	0.468	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P395302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231575	Sulfate	0.723	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P395448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231863	Ammonia-N	2.44	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P395343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231665	Kjeldahl Nitrogen	4.10	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P395078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231665	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P395212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231696	Total-P	1.44	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P395044

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231698	O-Phosphate-P	1.39	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P395065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231763	Alpha-BHC	7.48	Spike	P	0 - 30
2231763	Alpha-Chlordane	18.5	Spike	P	0 - 30
2231763	Beta-BHC	23.1	Spike	P	0 - 30
2231763	Beta-Cyfluthrin	29.2	Spike	P	0 - 30
2231763	Bifenthrin	26.3	Spike	P	0 - 30
2231763	Carbophenothion	16.3	Spike	P	0 - 30
2231763	Chlorothalonil	16.6	Spike	P	0 - 30
2231763	Cis-Nonachlor	22.6	Spike	P	0 - 30
2231763	Cypermethrin	33.6	Spike	F	0 - 30
2231763	Dacthal	8.23	Spike	P	0 - 30
2231763	DDD-p,p'	16.1	Spike	P	0 - 30
2231763	DDE-p,p'	20.1	Spike	P	0 - 30
2231763	DDT-p,p'	17.0	Spike	P	0 - 30
2231763	Delta-BHC	25.1	Spike	P	0 - 30
2231763	Deltamethrin	22.2	Spike	P	0 - 30
2231763	Dichlobenil	2.98	Spike	P	0 - 30
2231763	Dicofol	4.95	Spike	P	0 - 30
2231763	Endosulfan I	11.4	Spike	P	0 - 30
2231763	Endosulfan II	12.3	Spike	P	0 - 30
2231763	Endosulfan Sulfate	15.0	Spike	P	0 - 30
2231763	Endrin	8.88	Spike	P	0 - 30
2231763	Endrin Aldehyde	3.53	Spike	P	0 - 30
2231763	Endrin Ketone	12.2	Spike	P	0 - 30
2231763	Esfenvalerate	22.2	Spike	P	0 - 30
2231763	Ethalfuralin	10.1	Spike	P	0 - 30
2231763	Fenpropathrin	25.1	Spike	P	0 - 30
2231763	Gamma-BHC	23.7	Spike	P	0 - 30
2231763	Gamma-Chlordane	22.5	Spike	P	0 - 30
2231763	Heptachlor	18.4	Spike	P	0 - 30
2231763	Heptachlor Epoxide	9.18	Spike	P	0 - 30
2231763	Hexachlorobenzene	34.4	Spike	F	0 - 30
2231763	Lambda-Cyhalothrin	29.8	Spike	P	0 - 30
2231763	Methoxychlor	10.3	Spike	P	0 - 30
2231763	MGK-264	0.418	Spike	P	0 - 30
2231763	Mirex	29.2	Spike	P	0 - 30
2231763	Permethrin	25.6	Spike	P	0 - 30
2231763	Phenothrin	28.7	Spike	P	0 - 30
2231763	Piperonyl Butoxide	14.9	Spike	P	0 - 30
2231763	Prallethrin	16.4	Spike	P	0 - 30
2231763	Tau-Fluvalinate	22.2	Spike	P	0 - 30
2231763	Tetramethrin	17.5	Spike	P	0 - 30
2231763	Trans-Nonachlor	20.3	Spike	P	0 - 30
2231763	Triclosan Methyl	10.6	Spike	P	0 - 30
2231763	Trifluralin	16.0	Spike	P	0 - 30
2232109	Aldrin	12.0	Spike	P	0 - 30
2232109	Dieldrin	13.1	Spike	P	0 - 30
2232109	Kepone	15.0	Spike	P	0 - 30
LFB	Aldrin	4.87	LCS	P	0 - 30
LFB	Alpha-BHC	6.19	LCS	P	0 - 30
LFB	Alpha-Chlordane	8.63	LCS	P	0 - 30
LFB	Beta-BHC	29.1	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P395065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-Cyfluthrin	16.0	LCS	P	0 - 30
LFB	Bifenthrin	9.03	LCS	P	0 - 30
LFB	Carbophenothion	10.2	LCS	P	0 - 30
LFB	Chlorothalonil	44.6	LCS	F	0 - 30
LFB	Cis-Nonachlor	4.08	LCS	P	0 - 30
LFB	Cypermethrin	0.897	LCS	P	0 - 30
LFB	Dacthal	4.19	LCS	P	0 - 30
LFB	DDD-p,p'	3.53	LCS	P	0 - 30
LFB	DDE-p,p'	9.59	LCS	P	0 - 30
LFB	DDT-p,p'	10.6	LCS	P	0 - 30
LFB	Delta-BHC	14.1	LCS	P	0 - 30
LFB	Deltamethrin	4.87	LCS	P	0 - 30
LFB	Dichlobenil	20.6	LCS	P	0 - 30
LFB	Dicofol	15.4	LCS	P	0 - 30
LFB	Dieldrin	0.773	LCS	P	0 - 30
LFB	Endosulfan I	14.0	LCS	P	0 - 30
LFB	Endosulfan II	1.09	LCS	P	0 - 30
LFB	Endosulfan Sulfate	3.86	LCS	P	0 - 30
LFB	Endrin	17.3	LCS	P	0 - 30
LFB	Endrin Aldehyde	21.8	LCS	P	0 - 30
LFB	Endrin Ketone	2.85	LCS	P	0 - 30
LFB	Esfenvalerate	2.33	LCS	P	0 - 30
LFB	Ethalfuralin	11.7	LCS	P	0 - 30
LFB	Fenpropathrin	4.15	LCS	P	0 - 30
LFB	Gamma-BHC	14.3	LCS	P	0 - 30
LFB	Gamma-Chlordane	7.52	LCS	P	0 - 30
LFB	Heptachlor	11.9	LCS	P	0 - 30
LFB	Heptachlor Epoxide	7.66	LCS	P	0 - 30
LFB	Hexachlorobenzene	6.64	LCS	P	0 - 30
LFB	Kepone	5.98	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	11.1	LCS	P	0 - 30
LFB	Methoxychlor	6.56	LCS	P	0 - 30
LFB	MGK-264	1.83	LCS	P	0 - 30
LFB	Mirex	10.9	LCS	P	0 - 30
LFB	Permethrin	5.51	LCS	P	0 - 30
LFB	Phenothrin	0.326	LCS	P	0 - 30
LFB	Piperonyl Butoxide	1.78	LCS	P	0 - 30
LFB	Prallethrin	0.283	LCS	P	0 - 30
LFB	Tau-Fluvalinate	6.44	LCS	P	0 - 30
LFB	Tetramethrin	4.88	LCS	P	0 - 30
LFB	Trans-Nonachlor	8.52	LCS	P	0 - 30
LFB	Triclosan Methyl	7.52	LCS	P	0 - 30
LFB	Trifluralin	8.11	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P395065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2232109	Chlordane	13.5	Spike	P	0 - 30
2232109	Toxaphene	4.49	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P395065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	4.79	LCS	P	0 - 30
LFB	Toxaphene	2.16	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231596	2,4-D	7.04	Spike	P	0 - 30
2231596	2,4,5-T	3.76	Spike	P	0 - 30
2231596	Acetaminophen	7.94	Spike	P	0 - 30
2231596	Acetamiprid	9.90	Spike	P	0 - 30
2231596	Afidopyropen	18.0	Spike	P	0 - 30
2231596	Bentazon	3.94	Spike	P	0 - 30
2231596	Benzovindiflupyr	3.90	Spike	P	0 - 30
2231596	Carbamazepine	3.55	Spike	P	0 - 30
2231596	Clothianidin	10.8	Spike	P	0 - 30
2231596	Dinotefuran	12.9	Spike	P	0 - 30
2231596	Diuron	3.40	Spike	P	0 - 30
2231596	Fenuron	3.30	Spike	P	0 - 30
2231596	Fluridone	2.78	Spike	P	0 - 30
2231596	Hydrocodone	4.03	Spike	P	0 - 30
2231596	Ibuprofen	1.90	Spike	P	0 - 30
2231596	Imazapyr	4.41	Spike	P	0 - 30
2231596	Imidacloprid	1.59	Spike	P	0 - 30
2231596	Linuron	0.482	Spike	P	0 - 30
2231596	Mandestrobin	2.10	Spike	P	0 - 30
2231596	MCP	5.39	Spike	P	0 - 30
2231596	Naproxen	8.42	Spike	P	0 - 30
2231596	Primidone	1.68	Spike	P	0 - 30
2231596	Pyraclostrobin	0.919	Spike	P	0 - 30
2231596	Thiamethoxam	6.85	Spike	P	0 - 30
2231596	Tolfenpyrad	2.03	Spike	P	0 - 30
2231596	Triclopyr	1.54	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P395125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231596	Acesulfame K	19.8	Spike	P	0 - 30
2231596	AMPA	6.11	Spike	P	0 - 30
2231596	Endothall	28.3	Spike	P	0 - 30
2231596	Glufosinate	0.981	Spike	P	0 - 30
2231596	Glyphosate	13.5	Spike	P	0 - 30
2231596	Sucralose	1.82	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P395051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231732	Color (true)	0.0267	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P395226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231841	Total Alkalinity	0.340	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P395591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231707	TDS	4.44	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P395232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231841	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P395520

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2231897	Organic Carbon	0.927	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2231755
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	68.9	P	40 - 123
EPA 8270E	Decachlorobiphenyl	81.3	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	44.9	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	45.8	P	33 - 102
EPA 8276	Decachlorobiphenyl	64.4	P	29 - 92.0
EPA 8276	PCNB	70.8	P	43 - 134

Lab Sample ID: 2231756
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	103	P	30 - 160
EPA 8321B	Acetaminophen-d4	98.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.3	P	30 - 160
EPA 8321B	Diuron-d6	49.4	P	30 - 160
EPA 8321B	Endothall-d6	121	P	40 - 160
EPA 8321B	Endothall-d6	121	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	40 - 160
EPA 8321B	Ibuprofen-d3	80.1	P	30 - 160
EPA 8321B	Primidone-d5	72.9	P	30 - 160
EPA 8321B	Sucralose-d6	87.9	P	30 - 160
EPA 8321B	Sucralose-d6	87.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A104090

Included Lab Sample IDs: 2231749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A104091

Included Lab Sample IDs: 2231751

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.1	99.2	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A104092

Included Lab Sample IDs: 2231749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	104	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A104102

Included Lab Sample IDs: 2231750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	97.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A104153

Included Lab Sample IDs: 2231749

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

Reference Method: SM 2320 B-2011

Run ID: A104172

Included Lab Sample IDs: 2231749

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.6	96.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A104172

Included Lab Sample IDs: 2231749

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

Reference Method: EPA 8321B

Run ID: A104192

Included Lab Sample IDs: 2231756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.9	112	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A104192
 Included Lab Sample IDs: 2231756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	122	121	P/P	60 - 160
Endothall	122	91.1	P/P	60 - 160
Glufosinate	117	115	P/P	60 - 160
Glyphosate	108	117	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0
 Run ID: A104194
 Included Lab Sample IDs: 2231750

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

Reference Method: EPA 8270E
 Run ID: A104213
 Included Lab Sample IDs: 2231755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	99.1		P	80 - 120
Beta-BHC	73.7*		F	80 - 120
Beta-Cyfluthrin	87.5		P	80 - 120
Bifenthrin	95.1		P	80 - 120
Carbophenothion	90.5		P	80 - 120
Chlorothalonil	121*		F	80 - 120
Cis-Nonachlor	96.5		P	80 - 120
Cypermethrin	90.9		P	80 - 120
Dacthal	100		P	80 - 120
DDD-p,p'	99.5		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	83.4		P	80 - 120
Deltamethrin	96.8		P	80 - 120
Dichlobenil	86.3		P	80 - 120
Dicofol	79.3*		F	80 - 120
Endosulfan I	103		P	80 - 120
Endosulfan II	106		P	80 - 120
Endosulfan Sulfate	87.8		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	114		P	80 - 120
Endrin Ketone	94.4		P	80 - 120
Esfenvalerate	89.6		P	80 - 120
Ethalfuralin	104		P	80 - 120
Fenpropathrin	92.2		P	80 - 120
Gamma-BHC	82.8		P	80 - 120
Gamma-Chlordane	98.9		P	80 - 120
Heptachlor	97.5		P	80 - 120
Heptachlor Epoxide	99.3		P	80 - 120
Hexachlorobenzene	86.2		P	80 - 120
Lambda-Cyhalothrin	93.8		P	80 - 120
Methoxychlor	105		P	80 - 120
MGK-264	98.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A104213
Included Lab Sample IDs: 2231755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mirex	99.0		P	80 - 120
Permethrin	86.6		P	80 - 120
Phenothrin	84.4		P	80 - 120
Piperonyl Butoxide	93.6		P	80 - 120
Prallethrin	88.1		P	80 - 120
Tau-Fluvalinate	98.4		P	80 - 120
Tetramethrin	100		P	80 - 120
Trans-Nonachlor	100		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	98.0		P	80 - 120

Reference Method: EPA 8270E
Run ID: A104223
Included Lab Sample IDs: 2231755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120
Dieldrin	101		P	80 - 120

Reference Method: EPA 8276
Run ID: A104239
Included Lab Sample IDs: 2231755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.6		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A104259
Included Lab Sample IDs: 2231750

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

Reference Method: EPA 8321B
Run ID: A104272
Included Lab Sample IDs: 2231756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	101	99.1	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A104279
Included Lab Sample IDs: 2231750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.2	95.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A104292

Included Lab Sample IDs: 2231750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.9	96.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A104293

Included Lab Sample IDs: 2231755

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kepone	99.7		P	80 - 120

Reference Method: EPA 8321B

Run ID: A104297

Included Lab Sample IDs: 2231756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	116	107	P/P	50 - 150
2,4,5-T	100	99.6	P/P	50 - 150
Acetaminophen	106	111	P/P	60 - 160
Acetamiprid	107	108	P/P	50 - 150
Afidopyropen	103	85.5	P/P	50 - 150
Bentazon	117	104	P/P	50 - 160
Benzovindiflupyr	115	114	P/P	50 - 160
Carbamazepine	104	106	P/P	60 - 150
Clothianidin	113	107	P/P	60 - 150
Dinotefuran	108	113	P/P	50 - 150
Diuron	107	109	P/P	60 - 160
Fenuron	105	104	P/P	60 - 150
Fluridone	101	105	P/P	60 - 160
Hydrocodone	114	111	P/P	60 - 150
Ibuprofen	117	89.1	P/P	50 - 160
Imazapyr	97.3	104	P/P	50 - 160
Imidacloprid	103	101	P/P	60 - 150
Linuron	97.2	102	P/P	60 - 150
Mandestrobin	108	107	P/P	50 - 150
MCP	107	106	P/P	50 - 150
Naproxen	98.6	99.0	P/P	50 - 160
Primidone	97.1	98.8	P/P	60 - 150
Pyraclostrobin	110	108	P/P	60 - 150
Thiamethoxam	110	115	P/P	50 - 150
Tolfenpyrad	106	108	P/P	60 - 150
Triclopyr	117	94.6	P/P	50 - 150

* 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	
EPA 180.1 Rev. 2.0	Turbidity						4.47	
EPA 300.0 Rev. 2.1	Chloride	99.9		101	100		0.468	
	Sulfate	97.6		97.3	97.5		0.723	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4		97.2	99.6			2.44
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101		99.2	105			4.10
EPA 353.2 Rev. 2.0	NO2NO3-N	104		104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	104		105	107			1.44
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		100	101			1.39
EPA 8270E	Aldrin	47.6	45.4	44.6	50.3	4.87		12.0
	Alpha-BHC	81.3	76.5	81.5	75.6	6.19		7.48
	Alpha-Chlordane	75.5	69.3	73.0	60.7	8.63		18.5
	Beta-BHC	67.8	90.9	93.9	74.5	29.1		23.1
	Beta-Cyfluthrin	96.7	82.4	95.2	71.0	16.0		29.2
	Bifenthrin	77.7	71.0	71.0	54.5	9.03		26.3
	Carbophenothion	57.9	52.3	75.3	64.0	10.2		16.3
	Chlorothalonil	80.4	51.1	77.1	65.3	44.6		16.6
	Cis-Nonachlor	78.7	75.5	79.1	63.0	4.08		22.6
	Cypermethrin	88.5	87.7	91.6	65.2	0.897		33.6
	Dacthal	88.8	85.2	90.3	83.2	4.19		8.23
	DDD-p,p'	82.1	79.2	82.1	69.8	3.53		16.1
	DDE-p,p'	72.3	65.7	70.2	57.4	9.59		20.1
	DDT-p,p'	76.8	69.1	72.3	61.0	10.6		17.0
	Delta-BHC	98.8	114	120	93.2	14.1		25.1
	Deltamethrin	98.3	103	84.9	67.9	4.87		22.2
	Dichlobenil	44.5	54.8	41.0	39.8	20.6		2.98
	Dicofol	76.4	65.5	68.4	65.1	15.4		4.95
	Dieldrin	71.6	72.2	59.8	68.1	0.773		13.1
	Endosulfan I	92.7	80.6	91.8	81.9	14.0		11.4
	Endosulfan II	99.8	98.7	92.8	82.0	1.09		12.3
	Endosulfan Sulfate	93.9	90.4	84.8	98.5	3.86		15.0
	Endrin	87.5	73.6	84.8	77.6	17.3		8.88
	Endrin Aldehyde	117	94.3	97.2	101	21.8		3.53
	Endrin Ketone	89.4	86.9	94.0	83.2	2.85		12.2
	Esfenvalerate	79.1	77.3	73.9	59.1	2.33		22.2
	Ethalfuralin	74.2	65.9	67.4	60.9	11.7		10.1
	Fenpropathrin	78.5	75.3	80.7	62.7	4.15		25.1
	Gamma-BHC	74.6	86.1	91.4	72.1	14.3		23.7
	Gamma-Chlordane	71.1	66.0	69.8	55.7	7.52		22.5
	Heptachlor	60.4	53.6	55.5	46.2	11.9		18.4
	Heptachlor Epoxide	81.6	75.6	79.6	72.6	7.66		9.18
	Hexachlorobenzene	50.9	54.4	52.0	36.7	6.64		34.4
	Kepone	99.3	105	103	120	5.98		15.0
	Lambda-Cyhalothrin	105	94.4	105	78.0	11.1		29.8
	Methoxychlor	90.2	84.5	86.4	78.0	6.56		10.3
	MGK-264	59.7	60.8	66.4	66.7	1.83		0.418
	Mirex	58.6	52.5	56.9	42.4	10.9		29.2
	Permethrin	72.6	68.7	68.1	52.7	5.51		25.6
	Phenothrin	47.3	47.1	52.2	39.1	0.326		28.7
	Piperonyl Butoxide	101	98.8	107	92.1	1.78		14.9
	Prallethrin	57.4	57.3	61.5	52.2	0.283		16.4
	Tau-Fluvalinate	109	102	93.9	75.1	6.44		22.2
	Tetramethrin	104	99.3	100	84.0	4.88		17.5
	Trans-Nonachlor	69.4	63.7	68.5	55.9	8.52		20.3
	Triclosan Methyl	90.5	83.9	88.2	79.3	7.52		10.6

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270E	Trifluralin	69.0	63.6	65.5	55.8	8.11	16.0
EPA 8276	Chlordane	96.3	91.8	87.2	99.8	4.79	13.5
	Toxaphene	108	106	115	120	2.16	4.49
EPA 8321B	2,4-D	133		116	124		7.04
	2,4,5-T	103		98.9	103		3.76
	Acesulfame K	115		177	145		19.8
	Acetaminophen	92.2		94.8	103		7.94
	Acetamiprid	109		107	97.0		9.90
	Afidopyropen	79.1		78.5	65.5		18.0
	AMPA	104		120	127		6.11
	Bentazon	91.2		67.7	70.4		3.94
	Benzovindiflupyr	92.0		89.4	92.9		3.90
	Carbamazepine	105		95.3	91.9		3.55
	Clothianidin	103		113	101		10.8
	Dinotefuran	106		109	95.4		12.9
	Diuron	78.3		64.9	67.1		3.40
	Endothall	87.4		82.1	109		28.3
	Fenuron	107		93.9	97.0		3.30
	Fluridone	101		87.5	90.0		2.78
	Glufosinate	125		134	135		0.981
	Glyphosate	148		105	92.0		13.5
	Hydrocodone	105		108	104		4.03
	Ibuprofen	102		82.1	83.6		1.90
	Imazapyr	112		118	113		4.41
	Imidacloprid	112		137	135		1.59
	Linuron	85.5		74.3	73.9		0.482
	Mandestrobin	96.1		86.6	88.4		2.10
	MCPP	123		107	112		5.39
	Naproxen	56.1		73.6	80.1		8.42
	Primidone	99.7		101	99.6		1.68
	Pyraclostrobin	89.1		85.7	84.9		0.919
	Sucralose	93.5		105	103		1.82
	Thiamethoxam	110		135	126		6.85
	Tolfenpyrad	62.8		58.0	59.2		2.03
	Triclopyr	107		102	103		1.54
SM 2120 B-2011	Color (true)	103				0.0267	
SM 2320 B-2011	Total Alkalinity	101				0.340	
SM 2540 C-2011	TDS					4.44	
SM 4500 F-C-2011	Fluoride	102		99.4	99.4		0.0
SM 5310 B-2011	Organic Carbon	95.0		94.3	95.5		0.927

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2231749
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2231749
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2231749
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2231750
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2231750
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2231750
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2231750
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2231751

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2231755
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2231755
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2231755
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2231756
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2231756
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2231749
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2231749
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2231749
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2231749
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2231749
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2231750

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/16/2021			03/16/2021 16:11	Yen Ta	2231749
EPA 300.0 Rev. 2.1	03/16/2021			03/19/2021 23:48	Lipi Saha	2231749
EPA 350.1 Rev. 2.0	03/16/2021			03/24/2021 17:10	Ping Hua	2231750
EPA 351.2 Rev. 2.0	03/16/2021	03/23/2021 13:04	Benjamin T. Nordmann	03/24/2021 20:30	Julia Storbeck	2231750
EPA 353.2 Rev. 2.0	03/16/2021			03/17/2021 10:50	Beverly Y. Sanders	2231750
EPA 365.1 Rev. 2.0	03/16/2021	03/19/2021 12:46	Yen Ta	03/22/2021 12:16	Shengyu Ding	2231750
EPA 365.1 Rev. 2.0 dissolved	03/16/2021			03/16/2021 15:41	Patrick M. Roche	2231751
EPA 8270E	03/16/2021	03/19/2021 08:00	Fe-Val Siddell	03/22/2021 21:24	Michael Poppell	2231755
	03/16/2021	03/19/2021 08:00	Fe-Val Siddell	03/23/2021 03:05	Arthur Maknenko	2231755
	03/16/2021	03/19/2021 08:00	Fe-Val Siddell	03/25/2021 19:57	Michael Poppell	2231755
EPA 8276	03/16/2021	03/19/2021 08:00	Fe-Val Siddell	03/23/2021 03:00	Julie Wi	2231755
EPA 8321B	03/16/2021	03/18/2021 09:00	Hoor Shaik	03/26/2021 05:22	Juyoung Kim	2231756
	03/16/2021	03/18/2021 10:30	Rebecca Ware	03/18/2021 14:35	Rebecca Ware	2231756
	03/16/2021	03/18/2021 10:30	Rebecca Ware	03/24/2021 17:54	Rebecca Ware	2231756
SM 2120 B-2011	03/16/2021			03/16/2021 18:46	Benjamin T. Nordmann	2231749
SM 2320 B-2011	03/16/2021			03/19/2021 04:15	Dale L. Simmons	2231749
SM 2540 C-2011	03/16/2021			03/19/2021 15:21	Yijie Li	2231749
SM 2540 D-2011	03/16/2021			03/19/2021 15:21	Yijie Li	2231749
SM 4500 F-C-2011	03/16/2021			03/19/2021 04:15	Dale L. Simmons	2231749
SM 5310 B-2011	03/16/2021			03/26/2021 06:05	Madeline Gruver	2231750