

Chemical Analysis Report

NE-DIST-2018-05-02-02

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

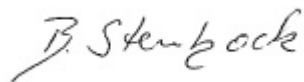
Event Description: **Suw 3_2018**
Request ID: **RQ-2018-04-23-22**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
NE ROC
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Jacksonville, FL 32256-7577
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 30-MAY-2018 17:09



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited 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: MONTEOCHA CR @ 340 (NE 153TH AVE)

Collection Date/Time: 05/01/2018 11:00

Field ID: 21030112

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989372	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P344509	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P344993	
		Sulfate	0.33	I	mg SO4/L	P344997	
	SM 2120 B	Color (true)	480		PCU	P344495	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P345072	
	SM 2540 C-97	TDS	106		mg/L	P345191	
	SM 2540 D-97	TSS	2	I	mg/L	P345184	
	SM 4500 F-C-97	Fluoride	0.059	I	mg F/L	P345076	
1989373	EPA 350.1 Rev. 2.0	Ammonia-N	0.063		mg N/L	P344953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P345521	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P344595	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P344698	
	SM 5310 B-00	Organic Carbon	51		mg C/L	P344911	
1989374	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P344570	
1989385	EPA 8321B	2,4-D	0.0020	U	ug/L	P344535	
		Bentazon	8.0E-04	U	ug/L	P344535	
		MCP	0.0020	U	ug/L	P344535	
		Triclopyr**	0.0040	U	ug/L	P344535	
		Imidacloprid	0.0020	U	ug/L	P344535	MS
		Diuron	0.0020	U	ug/L	P344535	
		Pyraclostrobin**	0.0020	U	ug/L	P344535	
		Primidone**	0.0040	U	ug/L	P344535	
		Linuron	0.0040	U	ug/L	P344535	
		Acetaminophen**	0.0080	U	ug/L	P344535	
		Fenuron	0.016	U	ug/L	P344535	
		Imazapyr**	0.017		ug/L	P344535	
		Carbamazepine**	4.0E-04	U	ug/L	P344535	
		Fluridone**	8.0E-04	U	ug/L	P344535	
		Hydrocodone**	8.0E-04	U	ug/L	P344535	
		Sucralose**	0.10	U	ug/L	P344477	

Ref. Method and Comment:

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

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

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: ROCKY CREEK AT 156TH AV

Collection Date/Time: 05/01/2018 11:25

Field ID: G1NE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989366	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P344509	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P344993	
		Sulfate	1.1		mg SO4/L	P344997	

Field ID: G1NE0020

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989366	SM 2120 B	Color (true)	530		PCU	P344494	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P345072	
	SM 2540 C-97	TDS	151		mg/L	P345191	
	SM 2540 D-97	TSS	3	I	mg/L	P345184	
	SM 4500 F-C-97	Fluoride	0.093	I	mg F/L	P345076	
1989367	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P344926	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P345521	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P344594	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P344698	
	SM 5310 B-00	Organic Carbon	44		mg C/L	P344911	
1989368	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.11		mg P/L	P344570	

Ref. Method and Comment:

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

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

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: HAGUE BRANCH TRIB @ US441 80M W 77TH TERR Collection Date/Time: 05/01/2018 11:50

Field ID: 21030152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989369	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P344509	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P344993	
		Sulfate	27		mg SO4/L	P344997	
	SM 2120 B	Color (true)	30	A	PCU	P344495	
	SM 2320 B-97	Total Alkalinity	161		mg CaCO3/L	P345072	
	SM 2540 C-97	TDS	291		mg/L	P345191	
	SM 2540 D-97	TSS	3	I	mg/L	P345184	
	SM 4500 F-C-97	Fluoride	0.31		mg F/L	P345076	
1989370	EPA 350.1 Rev. 2.0	Ammonia-N	0.070		mg N/L	P344953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64	J	mg N/L	P345521	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	5.7		mg N/L	P344595	
	EPA 365.1 Rev. 2.0	Total-P	0.52		mg P/L	P344698	
	SM 5310 B-00	Organic Carbon	6.9		mg C/L	P344911	
1989371	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.42		mg P/L	P344568	
1989383	EPA 8321B	Aldicarb	0.020	U	ug/L	P344535	
		Aldicarb Sulfone	0.0020	U	ug/L	P344535	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P344535	
		Carbaryl	0.0020	U	ug/L	P344535	
		Carbofuran	0.0020	U	ug/L	P344535	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P344535	
		Methiocarb	0.0020	U	ug/L	P344535	
		Methomyl	0.0020	U	ug/L	P344535	

Field ID: 21030152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989383	EPA 8321B	Oxamyl	0.0020	U	ug/L	P344535	
		Propoxur	0.0020	U	ug/L	P344535	
1989384		2,4-D	0.0020	U	ug/L	P344535	
		Bentazon	8.0E-04	U	ug/L	P344535	
		MCP	0.0020	U	ug/L	P344535	
		Triclopyr**	0.0040	U	ug/L	P344535	
		Imidacloprid	0.0020	U	ug/L	P344535	MS
		Diuron	0.0020	U	ug/L	P344535	
		Pyraclostrobin**	0.0020	U	ug/L	P344535	
		Primidone**	0.0040	U	ug/L	P344535	
		Linuron	0.0040	U	ug/L	P344535	
		Acetaminophen**	0.0080	U	ug/L	P344535	
		Fenuron	0.016	U	ug/L	P344535	
		Imazapyr**	0.044		ug/L	P344535	
		Carbamazepine**	4.0E-04	U	ug/L	P344535	
		Fluridone**	8.0E-04	U	ug/L	P344535	
		Hydrocodone**	8.0E-04	U	ug/L	P344535	
		Sucralose**	0.10	U	ug/L	P344477	
		Glyphosate**	0.16	I	ug/L	P344477	
		AMPA**	0.10	U	ug/L	P344477	
		Endothal**	0.10	U	ug/L	P344477	
		Glufosinate**	0.10	U	ug/L	P344477	MS
1989386	EPA 8270D	Aldrin	4.2	U	ng/L	P344637	
		Alpha-BHC	2.1	U	ng/L	P344637	
		Beta-BHC	4.2	U	ng/L	P344637	
		Delta-BHC	4.2	U	ng/L	P344637	
		Gamma-BHC	4.2	U	ng/L	P344637	
		Carbophenothion	4.2	U	ng/L	P344637	
		Chlorothalonil	2.1	UJ	ng/L	P344637	RPD
		Cypermethrin	21	U	ng/L	P344637	
		DDD-p,p'	3.1	U	ng/L	P344637	
		DDE-p,p'	3.1	U	ng/L	P344637	
		DDT-p,p'	3.1	U	ng/L	P344637	
		Dieldrin	4.2	U	ng/L	P344637	
		Endosulfan I	4.2	U	ng/L	P344637	
		Endosulfan II	4.2	U	ng/L	P344637	
		Endosulfan Sulfate	2.1	U	ng/L	P344637	
		Endrin	2.1	U	ng/L	P344637	
		Endrin Aldehyde	2.1	U	ng/L	P344637	
		Heptachlor	1.6	U	ng/L	P344637	
		Heptachlor Epoxide	2.1	U	ng/L	P344637	
		Methoxychlor	4.2	U	ng/L	P344637	
		Mirex	2.1	U	ng/L	P344637	
		Permethrin	10	U	ng/L	P344637	
		Trifluralin	1.0	U	ng/L	P344637	

Field ID: 21030152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989386	EPA 8270D	Alpha-Chlordane	1.0	U	ng/L	P344637	
		Gamma-Chlordane	1.0	U	ng/L	P344637	
		Endrin Ketone	2.1	U	ng/L	P344637	
		Dicofol	31	U	ng/L	P344637	
		Chlordane**	2.6	U	ng/L	P344637	
	EPA 8276	Toxaphene**	31	U	ng/L	P344637	
		Alachlor	0.25	U	ng/L	P344703	
		Ametryn	2.1		ng/L	P344703	
		Atrazine	18		ng/L	P344703	
		Atrazine Desethyl	2.6	IJ	ng/L	P344703	RPD
	EPA 8270D	Azinphos Methyl	2.2	UJ	ng/L	P344703	RPD
		Bromacil	3.6	J	ng/L	P344703	RPD
		Butylate	0.39	U	ng/L	P344703	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P344703	
		Chlorpyrifos Methyl	0.098	U	ng/L	P344703	
		Demeton	2.0	U	ng/L	P344703	RPD
		Diazinon	0.12	U	ng/L	P344703	
		Disulfoton	0.49	U	ng/L	P344703	RPD
		EPTC	1.2	U	ng/L	P344703	RPD
		Ethion	0.15	U	ng/L	P344703	
		Ethoprop	0.098	U	ng/L	P344703	
		Fenamiphos	0.25	UJ	ng/L	P344703	RPD
		Fipronil	0.25	U	ng/L	P344703	
		Fipronil Sulfide	0.15	U	ng/L	P344703	
		Fipronil Sulfone	0.15	U	ng/L	P344703	RPD
		Hexazinone	4.5	J	ng/L	P344703	LCS, RPD
		Malathion	0.34	U	ng/L	P344703	
		Metribuzin	0.20	UJ	ng/L	P344703	RPD
		Mevinphos	0.49	U	ng/L	P344703	RPD
		Molinate	0.29	U	ng/L	P344703	
		Norflurazon	0.49	UJ	ng/L	P344703	LCS, RPD
		Pendimethalin	0.98	U	ng/L	P344703	
		Phorate	0.25	U	ng/L	P344703	RPD
		Prometon	3.0	I	ng/L	P344703	
		Prometryn	0.20	U	ng/L	P344703	
		Simazine	0.49	U	ng/L	P344703	
		Terbufos	0.15	I	ng/L	P344703	RPD
		Terbuthylazine	0.42	U	ng/L	P344703	
		Fonofos	0.20	U	ng/L	P344703	RPD
		Metalaxyl	0.25	UJ	ng/L	P344703	RPD
		Metolachlor	0.25	U	ng/L	P344703	
		Acetochlor	0.25	U	ng/L	P344703	
		Cyanazine	0.49	UJ	ng/L	P344703	RPD
		Parathion Ethyl	0.25	U	ng/L	P344703	
		Parathion Methyl	0.25	U	ng/L	P344703	

Field ID: 21030152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989388	EPA 200.7 Rev. 4.4	Calcium	41.9		mg/L	P344563	
		Iron	180		ug/L	P344563	
		Magnesium	18.4		mg/L	P344563	
		Potassium	15.0		mg/L	P344563	
		Sodium	23.9		mg/L	P344563	
		Zinc	5.0	U	ug/L	P344563	
	EPA 200.8 Rev. 5.4	Arsenic	0.79		ug/L	P344563	
		Cadmium	0.604		ug/L	P344563	
		Chromium	0.63	I	ug/L	P344563	
		Copper	0.56	I	ug/L	P344563	
		Lead	0.18	I	ug/L	P344563	
		Nickel	2.08		ug/L	P344563	
		Silver	0.010	U	ug/L	P344563	

Ref. Method and Comment:

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

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

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 351.2 Rev. 2.0: Refer to the narrative for an explanation of QC Codes.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8270D: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Fivemile Creek @ SW 63rd

Collection Date/Time: 05/01/2018 09:15

Field ID: 21030301

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989392	EPA 180.1 Rev. 2.0	Turbidity	5.9	A	NTU	P344510	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P344993	
		Sulfate	0.21	I	mg SO4/L	P344997	
	SM 2120 B	Color (true)	650		PCU	P344495	
	SM 2320 B-97	Total Alkalinity	5.3		mg CaCO3/L	P345072	
	SM 2540 C-97	TDS	166		mg/L	P345191	
	SM 2540 D-97	TSS	9	I	mg/L	P345184	
	SM 4500 F-C-97	Fluoride	0.080	I	mg F/L	P345076	
1989395	EPA 350.1 Rev. 2.0	Ammonia-N	0.067		mg N/L	P344953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P345521	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P344691	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P344698	
	SM 5310 B-00	Organic Carbon	66		mg C/L	P344911	
1989398	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.10		mg P/L	P344570	

Field ID: 21030301

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.							
EPA 300.0 Rev. 2.1: Sulfate: : Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.							
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.							
EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							
SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							

Sample Location: Sunshine Lake Center

Collection Date/Time: 05/01/2018 10:10

Field ID: G1NE0857

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989393	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P344510	
	EPA 300.0 Rev. 2.1	Chloride	7.9		mg Cl/L	P344993	
		Sulfate	1.5		mg SO4/L	P344997	
	SM 2120 B	Color (true)	140		PCU	P344495	
	SM 2320 B-97	Total Alkalinity	15		mg CaCO3/L	P345072	
	SM 2540 C-97	TDS	81		mg/L	P345191	
	SM 2540 D-97	TSS	3	I	mg/L	P345184	
1989396	SM 4500 F-C-97	Fluoride	0.094	I	mg F/L	P345076	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.046		mg N/L	P344953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P345521	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P344691	
	EPA 365.1 Rev. 2.0	Total-P	0.31		mg P/L	P344698	
1989399	SM 5310 B-00	Organic Carbon	19		mg C/L	P344911	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.22		mg P/L	P344570	

Ref. Method and Comment:
 EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
 EPA 300.0 Rev. 2.1: Sulfate: : Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
 SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Rhuda Branch @ 192 st (NW 8th Way)

Collection Date/Time: 05/01/2018 10:35

Field ID: 21030146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989394	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P344510	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P344993	
		Sulfate	3.6		mg SO4/L	P344997	
	SM 2120 B	Color (true)	180		PCU	P344495	
	SM 2320 B-97	Total Alkalinity	9.3		mg CaCO3/L	P345072	
	SM 2540 C-97	TDS	73		mg/L	P345191	
	SM 2540 D-97	TSS	2	U	mg/L	P345184	
1989397	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P345076	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P344953	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49		mg N/L	P345521	MS

Field ID: 21030146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1989397	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		mg N/L	P344691	
	EPA 365.1 Rev. 2.0	Total-P	0.52		mg P/L	P344698	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P344911	
1989400	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.45		mg P/L	P344570	

Ref. Method and Comment:

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

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

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P344509

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P344510

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P344563

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P344563

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P344993

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344993

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344997

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344926

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344953

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345521

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344594

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344595

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344691

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344698

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344568

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344570

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

Reference Method: EPA 8270D
Batch ID: P344637

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	4.0	U	ng/L
Carbophenothion	4.0	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	3.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	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
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D
Batch ID: P344703

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P344703

Component	Result	Code	Units
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P344637

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B

Batch ID: P344477

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P344535

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	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	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P344494

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P344495

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P345072

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

Reference Method: SM 2540 C-97
Batch ID: P345191

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P345184

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345076

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P344911

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	102		P	85 - 115
Sodium	97.7		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	104		P	85 - 115
Cadmium	105		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.4		P	85 - 115
Lead	101		P	85 - 115
Nickel	103		P	85 - 115
Silver	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344993

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344997

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	93.7		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344926

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344953

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	106		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345521

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344594

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344595

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344691

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344698

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344568

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344570

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.6		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.3	60.4	P/P	24 - 89.0
Alpha-BHC	75.6	74.9	P/P	58 - 117
Alpha-Chlordane	83.2	77.5	P/P	56 - 115
Beta-BHC	124	112	P/P	55 - 137
Carbophenothion	113	105	P/P	37 - 145
Chlorothalonil	27.9	63.8	P/P	26 - 163
Cypermethrin	99.4	91.9	P/P	42 - 156
DDD-p,p'	112	95.2	P/P	59 - 129
DDE-p,p'	88.6	78.7	P/P	52 - 117
DDT-p,p'	95.2	74.9	P/P	48 - 128
Delta-BHC	122	131	P/P	59 - 158
Dicofol	82.5	79.8	P/P	19 - 124
Dieldrin	88.0	76.8	P/P	57 - 126
Endosulfan I	94.0	92.2	P/P	59 - 133
Endosulfan II	105	86.8	P/P	58 - 148
Endosulfan Sulfate	101	116	P/P	56 - 135
Endrin	93.3	80.3	P/P	50 - 140
Endrin Aldehyde	113	104	P/P	47 - 141
Endrin Ketone	102	99.7	P/P	63 - 123
Gamma-BHC	93.8	93.0	P/P	59 - 132
Gamma-Chlordane	81.9	75.9	P/P	55 - 112
Heptachlor	65.0	63.7	P/P	45 - 102
Heptachlor Epoxide	83.2	78.7	P/P	61 - 116
Methoxychlor	104	95.8	P/P	60 - 133
Mirex	75.9	67.9	P/P	40 - 98.0
Permethrin	84.8	83.4	P/P	45 - 131
Trifluralin	76.0	72.7	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P344703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	90.6	85.5	P/P	74 - 119
Alachlor	93.4	88.1	P/P	75 - 118
Ametryn	88.7	88.3	P/P	59 - 137
Atrazine	106	94.9	P/P	73 - 120
Atrazine Desethyl	110	51.0	P/P	19 - 129
Azinphos Methyl	127	90.9	P/P	65 - 181
Bromacil	78.3	50.0	P/P	43 - 123
Butylate	41.9	46.5	P/P	28 - 85.0
Chlorpyrifos Ethyl	101	94.6	P/P	55 - 112
Chlorpyrifos Methyl	99.8	82.4	P/P	35 - 124
Cyanazine	188	93.7	P/P	26 - 262
Demeton	67.2	68.2	P/P	43 - 122
Diazinon	97.7	87.5	P/P	72 - 120
Disulfoton	92.6	93.3	P/P	45 - 137
EPTC	41.4	47.4	P/P	28 - 95.0
Ethion	97.5	88.6	P/P	63 - 127
Ethoprop	83.5	82.3	P/P	63 - 109
Fenamiphos	102	66.4	P/P	66 - 136
Fipronil	87.1	74.2	P/P	63 - 126
Fipronil Sulfide	84.3	81.2	P/P	59 - 123

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P344703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fipronil Sulfone	77.5	75.0	P/P	56 - 122
Fonofos	84.6	69.8	P/P	64 - 114
Hexazinone	101	31.3	P/F	49 - 144
Malathion	104	99.1	P/P	68 - 131
Metalaxyl	95.5	60.5	P/P	57 - 126
Metolachlor	92.7	92.1	P/P	75 - 118
Metribuzin	154	109	P/P	46 - 169
Mevinphos	71.3	59.2	P/P	34 - 126
Molinate	49.5	55.1	P/P	37 - 101
Norflurazon	86.8	46.7	P/F	63 - 127
Parathion Ethyl	93.9	82.9	P/P	78 - 109
Parathion Methyl	99.6	82.6	P/P	74 - 123
Pendimethalin	116	98.9	P/P	51 - 130
Phorate	77.7	65.7	P/P	53 - 116
Prometon	88.1	79.2	P/P	66 - 124
Prometryn	90.5	85.4	P/P	66 - 124
Simazine	104	84.9	P/P	62 - 134
Terbufos	89.7	74.8	P/P	59 - 115
Terbutylazine	98.6	85.3	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P344637

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.3	68.3	P/P	47 - 125
Toxaphene	81.1	78.2	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P344477

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	105		P	40 - 140
Endothall	104		P	40 - 140
Glufosinate	113		P	40 - 140
Glyphosate	117		P	40 - 140
Sucralose	85.7		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P344535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	80.3		P	40 - 150
3-Hydroxycarbofuran	102		P	40 - 150
Acetaminophen	127		P	30 - 150
Aldicarb	66.0		P	30 - 150
Aldicarb Sulfone	101		P	40 - 150
Aldicarb Sulfoxide	99.0		P	40 - 150
Bentazon	108		P	30 - 150
Carbamazepine	107		P	40 - 150
Carbaryl	89.5		P	40 - 150
Carbofuran	91.4		P	40 - 150
Diuron	90.1		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P344535

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	124		P	40 - 150
Fluridone	103		P	40 - 150
Hydrocodone	129		P	40 - 150
Imazapyr	108		P	40 - 150
Imidacloprid	114		P	40 - 160
Linuron	89.7		P	40 - 150
MCPP	92.2		P	40 - 150
Methiocarb	89.9		P	40 - 150
Methomyl	100		P	40 - 150
Oxamyl	93.3		P	40 - 150
Primidone	99.8		P	40 - 150
Propoxur	91.5		P	40 - 150
Pyraclostrobin	96.2		P	40 - 150
Triclopyr	98.3		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P345072

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P345076

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P344911

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988828	Calcium	103		P	80 - 120
1988828	Iron	105		P	80 - 120
1988828	Magnesium	105		P	80 - 120
1988828	Potassium	98.1		P	80 - 120
1988828	Sodium	99.0		P	80 - 120
1988828	Zinc	100		P	80 - 120
1989433	Calcium	99.0		P	80 - 120
1989433	Iron	103	104	P/P	80 - 120
1989433	Magnesium	101		P	80 - 120
1989433	Potassium	95.9	97.3	P/P	80 - 120
1989433	Sodium	95.0		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989433	Zinc	98.0	98.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988828	Arsenic	106		P	80 - 120
1988828	Cadmium	104		P	80 - 120
1988828	Chromium	102		P	80 - 120
1988828	Copper	99.0		P	80 - 120
1988828	Lead	102		P	80 - 120
1988828	Nickel	103		P	80 - 120
1988828	Silver	104		P	80 - 120
1989433	Arsenic	103	104	P/P	80 - 120
1989433	Cadmium	104	104	P/P	80 - 120
1989433	Chromium	99.2	99.7	P/P	80 - 120
1989433	Copper	95.3	95.9	P/P	80 - 120
1989433	Lead	99.7	100	P/P	80 - 120
1989433	Nickel	98.3	99.6	P/P	80 - 120
1989433	Silver	105	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989206	Chloride	95.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344997

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989296	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989396	Ammonia-N	104	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989370	Kjeldahl Nitrogen	85.9	91.7	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344594

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989297	NO2NO3-N	100	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344595

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989373	NO2NO3-N	94.0	93.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989395	NO2NO3-N	93.6	94.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344568

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989160	O-Phosphate-P	97.3	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344570

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989398	O-Phosphate-P	94.7	93.5	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989939	Aldrin	59.0	56.9	P/P	26 - 96.0
1989939	Alpha-BHC	73.4	71.3	P/P	51 - 123
1989939	Alpha-Chlordane	79.9	75.6	P/P	45 - 120
1989939	Beta-BHC	114	105	P/P	43 - 146
1989939	Carbophenothion	111	124	P/P	26 - 179
1989939	Chlorothalonil	125	95.5	P/P	10 - 215
1989939	Cypermethrin	98.4	99.1	P/P	35 - 169
1989939	DDD-p,p'	95.8	93.8	P/P	49 - 131
1989939	DDE-p,p'	81.4	76.3	P/P	39 - 127
1989939	DDT-p,p'	80.5	78.2	P/P	49 - 120
1989939	Delta-BHC	130	122	P/P	49 - 187
1989939	Dicofol	74.7	73.7	P/P	10 - 129
1989939	Dieldrin	93.8	89.2	P/P	46 - 132
1989939	Endosulfan I	101	89.8	P/P	57 - 130
1989939	Endosulfan II	107	98.2	P/P	52 - 148
1989939	Endosulfan Sulfate	81.9	79.8	P/P	55 - 129
1989939	Endrin	84.8	63.0	P/P	45 - 133
1989939	Endrin Aldehyde	82.8	74.5	P/P	26 - 140
1989939	Endrin Ketone	95.1	95.9	P/P	60 - 125
1989939	Gamma-BHC	96.8	81.7	P/P	50 - 145
1989939	Gamma-Chlordane	78.5	74.2	P/P	44 - 118
1989939	Heptachlor	61.5	59.5	P/P	35 - 106
1989939	Heptachlor Epoxide	81.4	78.1	P/P	52 - 123
1989939	Methoxychlor	90.2	86.5	P/P	54 - 132
1989939	Mirex	69.1	71.6	P/P	36 - 107
1989939	Permethrin	82.6	84.3	P/P	47 - 135
1989939	Trifluralin	71.4	74.2	P/P	32 - 228

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P344703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1988813	Acetochlor	90.1	87.0	P/P	67 - 125
1988813	Alachlor	82.4	77.5	P/P	69 - 123
1988813	Ametryn	98.9	95.1	P/P	52 - 151
1988813	Atrazine Desethyl	57.9	103	P/P	10 - 129
1988813	Azinphos Methyl	106	123	P/P	48 - 200
1988813	Bromacil	64.3	78.7	P/P	46 - 130
1988813	Butylate	28.7	36.9	P/P	10 - 85.0
1988813	Chlorpyrifos Ethyl	101	102	P/P	54 - 115
1988813	Chlorpyrifos Methyl	94.2	105	P/P	44 - 117
1988813	Cyanazine	80.0	163	P/P	10 - 262
1988813	Demeton	56.5	82.8	P/P	24 - 145
1988813	Diazinon	93.0	102	P/P	66 - 129
1988813	Disulfoton	74.4	109	P/P	45 - 139
1988813	EPTC	27.6	37.5	P/P	10 - 86.0
1988813	Ethion	101	102	P/P	59 - 133
1988813	Ethoprop	78.1	100	P/P	54 - 116
1988813	Fenamiphos	77.2	95.9	P/P	55 - 140
1988813	Fipronil	64.4	71.9	P/P	37 - 142
1988813	Fipronil Sulfide	66.3	76.2	P/P	37 - 130
1988813	Fipronil Sulfone	30.3	65.0	P/P	18 - 143
1988813	Fonofos	78.7	108	P/P	55 - 118
1988813	Hexazinone	82.2	99.6	P/P	62 - 140
1988813	Malathion	110	109	P/P	64 - 132
1988813	Metalaxyl	88.9	91.0	P/P	55 - 129
1988813	Metolachlor	93.8	83.1	P/P	56 - 137
1988813	Metribuzin	153	190	P/P	16 - 218
1988813	Mevinphos	62.8	85.0	P/P	34 - 129
1988813	Molinate	39.9	48.7	P/P	16 - 99.0
1988813	Norflurazon	54.9	50.2	P/P	43 - 135
1988813	Parathion Ethyl	94.4	99.4	P/P	71 - 112
1988813	Parathion Methyl	99.7	111	P/P	65 - 127
1988813	Pendimethalin	118	116	P/P	35 - 159
1988813	Phorate	67.8	96.0	P/P	41 - 129
1988813	Prometon	90.7	90.3	P/P	56 - 140
1988813	Prometryn	91.6	88.4	P/P	65 - 130
1988813	Simazine	95.5	105	P/P	54 - 148
1988813	Terbufos	80.5	109	P/P	53 - 126
1988813	Terbutylazine	94.4	94.6	P/P	73 - 114

Reference Method: EPA 8276
Batch ID: P344637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989309	Chlordane	54.4	75.6	P/P	41 - 134
1989309	Toxaphene	73.6	69.4	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P344477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989270	AMPA	49.3	51.6	P/P	40 - 140
1989270	Endothall	106	111	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P344477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989270	Glufosinate	151	139	F/P	40 - 140
1989270	Glyphosate	65.0	61.2	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P344535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989526	2,4-D	81.6	86.2	P/P	40 - 150
1989526	3-Hydroxycarbofuran	110	113	P/P	40 - 150
1989526	Acetaminophen	126	124	P/P	30 - 150
1989526	Aldicarb	64.0	66.4	P/P	30 - 150
1989526	Aldicarb Sulfone	131	125	P/P	40 - 150
1989526	Aldicarb Sulfoxide	97.7	93.6	P/P	40 - 150
1989526	Bentazon	72.8	82.8	P/P	30 - 150
1989526	Carbamazepine	96.6	98.4	P/P	40 - 150
1989526	Carbaryl	63.4	65.2	P/P	40 - 150
1989526	Carbofuran	66.3	67.6	P/P	40 - 150
1989526	Diuron	70.9	78.9	P/P	40 - 150
1989526	Fenuron	103	103	P/P	40 - 150
1989526	Fluridone	83.9	82.7	P/P	40 - 150
1989526	Hydrocodone	142	139	P/P	40 - 150
1989526	Imazapyr	97.4	98.3	P/P	40 - 150
1989526	Imidacloprid	225	231	F/F	40 - 160
1989526	Linuron	91.2	87.8	P/P	40 - 150
1989526	MCP	69.1	74.0	P/P	40 - 150
1989526	Methiocarb	84.7	86.2	P/P	40 - 150
1989526	Methomyl	83.0	80.7	P/P	40 - 150
1989526	Oxamyl	85.5	84.1	P/P	40 - 150
1989526	Primidone	100	102	P/P	40 - 150
1989526	Propoxur	64.4	66.7	P/P	40 - 150
1989526	Pyraclostrobin	94.4	96.7	P/P	40 - 150
1989526	Triclopyr	80.8	88.3	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P345076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1989444	Fluoride	93.9	94.9	P/P	91 - 105

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P344509

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989275	Turbidity	0.180	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P344510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989392	Turbidity	1.18	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P344563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989433	Calcium	1.06	Spike	P	0 - 20
1989433	Iron	0.840	Spike	P	0 - 20
1989433	Magnesium	1.09	Spike	P	0 - 20
1989433	Potassium	0.992	Spike	P	0 - 20
1989433	Sodium	0.855	Spike	P	0 - 20
1989433	Zinc	0.883	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P344563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989433	Arsenic	0.720	Spike	P	0 - 20
1989433	Cadmium	0.157	Spike	P	0 - 20
1989433	Chromium	0.551	Spike	P	0 - 20
1989433	Copper	0.629	Spike	P	0 - 20
1989433	Lead	0.519	Spike	P	0 - 20
1989433	Nickel	1.32	Spike	P	0 - 20
1989433	Silver	0.386	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989206	Chloride	0.290	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P344997

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989206	Sulfate	0.477	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989235	Ammonia-N	0.0706	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P344953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989396	Ammonia-N	1.64	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989370	Kjeldahl Nitrogen	5.04	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989297	NO2NO3-N	0.348	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344595

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989373	NO2NO3-N	0.522	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P344691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989395	NO2NO3-N	0.859	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P344698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989370	Total-P	2.91	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344568

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989160	O-Phosphate-P	0.921	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P344570

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989398	O-Phosphate-P	0.609	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P344637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989939	Aldrin	3.58	Spike	P	0 - 30
1989939	Alpha-BHC	2.98	Spike	P	0 - 30
1989939	Alpha-Chlordane	5.60	Spike	P	0 - 30
1989939	Beta-BHC	8.42	Spike	P	0 - 30
1989939	Carbophenothion	11.0	Spike	P	0 - 30
1989939	Chlorothalonil	26.8	Spike	P	0 - 30
1989939	Cypermethrin	0.749	Spike	P	0 - 30
1989939	DDD-p,p'	2.17	Spike	P	0 - 30
1989939	DDE-p,p'	6.48	Spike	P	0 - 30
1989939	DDT-p,p'	2.96	Spike	P	0 - 30
1989939	Delta-BHC	6.81	Spike	P	0 - 30
1989939	Dicofol	1.32	Spike	P	0 - 30
1989939	Dieldrin	4.99	Spike	P	0 - 30
1989939	Endosulfan I	11.4	Spike	P	0 - 30
1989939	Endosulfan II	8.70	Spike	P	0 - 30
1989939	Endosulfan Sulfate	2.58	Spike	P	0 - 30
1989939	Endrin	29.5	Spike	P	0 - 30
1989939	Endrin Aldehyde	10.6	Spike	P	0 - 30
1989939	Endrin Ketone	0.857	Spike	P	0 - 30
1989939	Gamma-BHC	16.8	Spike	P	0 - 30
1989939	Gamma-Chlordane	5.54	Spike	P	0 - 30
1989939	Heptachlor	3.30	Spike	P	0 - 30
1989939	Heptachlor Epoxide	4.14	Spike	P	0 - 30
1989939	Methoxychlor	4.16	Spike	P	0 - 30
1989939	Mirex	3.62	Spike	P	0 - 30
1989939	Permethrin	2.06	Spike	P	0 - 30
1989939	Trifluralin	3.80	Spike	P	0 - 30
LFB	Aldrin	2.99	LCS	P	0 - 30
LFB	Alpha-BHC	0.887	LCS	P	0 - 30
LFB	Alpha-Chlordane	7.05	LCS	P	0 - 30
LFB	Beta-BHC	9.90	LCS	P	0 - 30
LFB	Carbophenothion	7.27	LCS	P	0 - 30
LFB	Chlorothalonil	78.3	LCS	F	0 - 30
LFB	Cypermethrin	7.80	LCS	P	0 - 30
LFB	DDD-p,p'	16.0	LCS	P	0 - 30
LFB	DDE-p,p'	11.9	LCS	P	0 - 30
LFB	DDT-p,p'	23.9	LCS	P	0 - 30
LFB	Delta-BHC	7.22	LCS	P	0 - 30
LFB	Dicofol	3.29	LCS	P	0 - 30
LFB	Dieldrin	13.6	LCS	P	0 - 30
LFB	Endosulfan I	1.88	LCS	P	0 - 30
LFB	Endosulfan II	19.3	LCS	P	0 - 30
LFB	Endosulfan Sulfate	14.1	LCS	P	0 - 30
LFB	Endrin	15.0	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.44	LCS	P	0 - 30
LFB	Endrin Ketone	1.97	LCS	P	0 - 30
LFB	Gamma-BHC	0.944	LCS	P	0 - 30
LFB	Gamma-Chlordane	7.55	LCS	P	0 - 30
LFB	Heptachlor	2.02	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.63	LCS	P	0 - 30
LFB	Methoxychlor	8.53	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P344637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	11.2	LCS	P	0 - 30
LFB	Permethrin	1.64	LCS	P	0 - 30
LFB	Trifluralin	4.46	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1988813	Acetochlor	3.49	Spike	P	0 - 30
1988813	Alachlor	6.09	Spike	P	0 - 30
1988813	Ametryn	2.95	Spike	P	0 - 30
1988813	Atrazine	8.28	Spike	P	0 - 30
1988813	Atrazine Desethyl	46.7	Spike	F	0 - 30
1988813	Azinphos Methyl	14.4	Spike	P	0 - 30
1988813	Bromacil	20.1	Spike	P	0 - 30
1988813	Butylate	25.0	Spike	P	0 - 30
1988813	Chlorpyrifos Ethyl	1.13	Spike	P	0 - 30
1988813	Chlorpyrifos Methyl	11.1	Spike	P	0 - 30
1988813	Cyanazine	68.6	Spike	F	0 - 30
1988813	Demeton	37.8	Spike	F	0 - 30
1988813	Diazinon	9.14	Spike	P	0 - 30
1988813	Disulfoton	37.4	Spike	F	0 - 30
1988813	EPTC	30.2	Spike	F	0 - 30
1988813	Ethion	0.494	Spike	P	0 - 30
1988813	Ethoprop	24.8	Spike	P	0 - 30
1988813	Fenamiphos	21.7	Spike	P	0 - 30
1988813	Fipronil	11.0	Spike	P	0 - 30
1988813	Fipronil Sulfide	13.9	Spike	P	0 - 30
1988813	Fipronil Sulfone	43.7	Spike	F	0 - 30
1988813	Fonofos	31.6	Spike	F	0 - 30
1988813	Hexazinone	19.2	Spike	P	0 - 30
1988813	Malathion	0.603	Spike	P	0 - 30
1988813	Metalaxyl	2.36	Spike	P	0 - 30
1988813	Metolachlor	11.8	Spike	P	0 - 30
1988813	Metribuzin	21.8	Spike	P	0 - 30
1988813	Mevinphos	30.1	Spike	F	0 - 30
1988813	Molinate	19.8	Spike	P	0 - 30
1988813	Norflurazon	8.91	Spike	P	0 - 30
1988813	Parathion Ethyl	5.12	Spike	P	0 - 30
1988813	Parathion Methyl	10.3	Spike	P	0 - 30
1988813	Pendimethalin	2.51	Spike	P	0 - 30
1988813	Phorate	34.4	Spike	F	0 - 30
1988813	Prometon	0.447	Spike	P	0 - 30
1988813	Prometryn	3.60	Spike	P	0 - 30
1988813	Simazine	9.03	Spike	P	0 - 30
1988813	Terbufos	30.1	Spike	F	0 - 30
1988813	Terbuthylazine	0.132	Spike	P	0 - 30
LFB	Acetochlor	5.74	LCS	P	0 - 30
LFB	Alachlor	5.80	LCS	P	0 - 30
LFB	Ametryn	0.383	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P344703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Atrazine	11.1	LCS	P	0 - 30
LFB	Atrazine Desethyl	73.3	LCS	F	0 - 30
LFB	Azinphos Methyl	32.7	LCS	F	0 - 30
LFB	Bromacil	44.1	LCS	F	0 - 30
LFB	Butylate	10.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.69	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	19.1	LCS	P	0 - 30
LFB	Cyanazine	66.9	LCS	F	0 - 30
LFB	Demeton	1.37	LCS	P	0 - 30
LFB	Diazinon	11.0	LCS	P	0 - 30
LFB	Disulfoton	0.789	LCS	P	0 - 30
LFB	EPTC	13.5	LCS	P	0 - 30
LFB	Ethion	9.60	LCS	P	0 - 30
LFB	Ethoprop	1.45	LCS	P	0 - 30
LFB	Fenamiphos	42.2	LCS	F	0 - 30
LFB	Fipronil	16.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.77	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.24	LCS	P	0 - 30
LFB	Fonofos	19.1	LCS	P	0 - 30
LFB	Hexazinone	105	LCS	F	0 - 30
LFB	Malathion	4.91	LCS	P	0 - 30
LFB	Metalaxyl	44.8	LCS	F	0 - 30
LFB	Metolachlor	0.654	LCS	P	0 - 30
LFB	Metribuzin	34.4	LCS	F	0 - 30
LFB	Mevinphos	18.5	LCS	P	0 - 30
LFB	Molinate	10.7	LCS	P	0 - 30
LFB	Norflurazon	60.1	LCS	F	0 - 30
LFB	Parathion Ethyl	12.5	LCS	P	0 - 30
LFB	Parathion Methyl	18.6	LCS	P	0 - 30
LFB	Pendimethalin	15.8	LCS	P	0 - 30
LFB	Phorate	16.7	LCS	P	0 - 30
LFB	Prometon	10.7	LCS	P	0 - 30
LFB	Prometryn	5.75	LCS	P	0 - 30
LFB	Simazine	20.2	LCS	P	0 - 30
LFB	Terbufos	18.2	LCS	P	0 - 30
LFB	Terbuthylazine	14.4	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P344637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989309	Chlordane	27.3	Spike	P	0 - 30
1989309	Toxaphene	5.88	Spike	P	0 - 30
LFB	Chlordane	11.1	LCS	P	0 - 30
LFB	Toxaphene	3.65	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P344477

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989270	AMPA	4.58	Spike	P	0 - 30
1989270	Endothall	4.70	Spike	P	0 - 30
1989270	Glufosinate	8.80	Spike	P	0 - 30
1989270	Glyphosate	6.03	Spike	P	0 - 30
1989270	Sucralose	19.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P344535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989526	2,4-D	5.51	Spike	P	0 - 30
1989526	3-Hydroxycarbofuran	2.35	Spike	P	0 - 30
1989526	Acetaminophen	1.46	Spike	P	0 - 30
1989526	Aldicarb	3.69	Spike	P	0 - 30
1989526	Aldicarb Sulfone	4.04	Spike	P	0 - 30
1989526	Aldicarb Sulfoxide	4.29	Spike	P	0 - 30
1989526	Bentazon	12.5	Spike	P	0 - 30
1989526	Carbamazepine	1.87	Spike	P	0 - 30
1989526	Carbaryl	2.85	Spike	P	0 - 30
1989526	Carbofuran	2.01	Spike	P	0 - 30
1989526	Diuron	10.7	Spike	P	0 - 30
1989526	Fenuron	0.0478	Spike	P	0 - 30
1989526	Fluridone	1.42	Spike	P	0 - 30
1989526	Hydrocodone	2.34	Spike	P	0 - 30
1989526	Imazapyr	0.674	Spike	P	0 - 30
1989526	Imidacloprid	2.32	Spike	P	0 - 30
1989526	Linuron	3.75	Spike	P	0 - 30
1989526	MCPP	6.89	Spike	P	0 - 30
1989526	Methiocarb	1.68	Spike	P	0 - 30
1989526	Methomyl	2.76	Spike	P	0 - 30
1989526	Oxamyl	1.63	Spike	P	0 - 30
1989526	Primidone	1.41	Spike	P	0 - 30
1989526	Propoxur	3.62	Spike	P	0 - 30
1989526	Pyraclostrobin	2.34	Spike	P	0 - 30
1989526	Triclopyr	8.83	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P344494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989272	Color (true)	12.3	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P344495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989369	Color (true)	0.640	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P345072

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989444	Total Alkalinity	0.358	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P345191

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989276	TDS	1.53	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P345076

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989444	Fluoride	0.943	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P344911

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1989235	Organic Carbon	0.126	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 1989383
Field Sample ID: 21030152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	70.6	P	30 - 160

Lab Sample ID: 1989384
Field Sample ID: 21030152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	73.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	109	P	30 - 160
EPA 8321B	Diuron-d6	77.3	P	30 - 160
EPA 8321B	Endothall-d6	103	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	59.5	P	40 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	70.2	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1989385
Field Sample ID: 21030112

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	55.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	149	P	30 - 160
EPA 8321B	Carbamazepine-d10	91.7	P	30 - 160
EPA 8321B	Diuron-d6	64.9	P	30 - 160
EPA 8321B	Primidone-d5	84.8	P	30 - 160
EPA 8321B	Sucralose-d6	44.5	P	40 - 160

Lab Sample ID: 1989386
Field Sample ID: 21030152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	48.9	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	36.7	P	34 - 101
EPA 8276	Decachlorobiphenyl	45.4	P	31 - 108
EPA 8276	PCNB	75.9	P	62 - 142

Lab Sample ID: 1989387
Field Sample ID: 21030152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	111	P	71 - 126
EPA 8270D	Terbufos-d10	118	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A83602
Included Lab Sample IDs: 1989366, 1989369, 1989372, 1989392, 1989393, 1989394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115
Color (true)	102	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A83605
Included Lab Sample IDs: 1989366, 1989369, 1989372, 1989392, 1989393, 1989394

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A83633
Included Lab Sample IDs: 1989368, 1989371, 1989374, 1989398, 1989399, 1989400

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.3	96.0	P/P	90 - 110
O-Phosphate-P	97.3	97.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83636

Included Lab Sample IDs: 1989367, 1989370, 1989373

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83674

Included Lab Sample IDs: 1989395, 1989396, 1989397

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83681

Included Lab Sample IDs: 1989388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	103	P/P	90 - 110
Cadmium	104	104	P/P	90 - 110
Chromium	102	102	P/P	90 - 110
Copper	100	99.9	P/P	90 - 110
Lead	101	102	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Silver	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83706

Included Lab Sample IDs: 1989367, 1989370, 1989373, 1989395, 1989396, 1989397

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83715

Included Lab Sample IDs: 1989388

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.4	99.8	P/P	90 - 110
Iron	101	100	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	98.5	96.6	P/P	90 - 110
Sodium	97.1	98.0	P/P	90 - 110
Zinc	99.7	99.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A83732

Included Lab Sample IDs: 1989366, 1989369, 1989372, 1989392, 1989393, 1989394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Chloride	102	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A83732

Included Lab Sample IDs: 1989366, 1989369, 1989372, 1989392, 1989393, 1989394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	101	97.7	P/P	90 - 110
Sulfate	98.7	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A83745

Included Lab Sample IDs: 1989367, 1989370, 1989373, 1989395, 1989396, 1989397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.3	99.0	P/P	90 - 110
Organic Carbon	99.0	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A83753

Included Lab Sample IDs: 1989384, 1989385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	107	110	P/P	50 - 150
Bentazon	144	141	P/P	50 - 150
MCP	99.2	105	P/P	50 - 150
Triclopyr	101	110	P/P	50 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83756

Included Lab Sample IDs: 1989367

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A83769

Included Lab Sample IDs: 1989383

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	106	109	P/P	60 - 150
Acetaminophen	108	112	P/P	60 - 150
Aldicarb	105	107	P/P	60 - 150
Aldicarb Sulfone	97.4	103	P/P	50 - 150
Aldicarb Sulfoxide	119	123	P/P	50 - 150
Carbamazepine	112	114	P/P	60 - 150
Carbaryl	115	116	P/P	60 - 150
Carbofuran	111	113	P/P	50 - 150
Diuron	116	109	P/P	60 - 150
Fenuron	116	117	P/P	60 - 150
Fluridone	112	115	P/P	60 - 160
Hydrocodone	121	125	P/P	60 - 150
Imazapyr	101	113	P/P	50 - 150
Imidacloprid	121	111	P/P	60 - 150
Linuron	112	109	P/P	60 - 150
Methiocarb	111	108	P/P	50 - 150
Methomyl	97.9	100	P/P	50 - 150
Oxamyl	98.7	100	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A83769

Included Lab Sample IDs: 1989384, 1989385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	90.8	107	P/P	60 - 150
Propoxur	105	110	P/P	50 - 150
Pyraclostrobin	118	118	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83773

Included Lab Sample IDs: 1989370, 1989373, 1989395, 1989396, 1989397

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

Reference Method: SM 2320 B-97

Run ID: A83812

Included Lab Sample IDs: 1989366, 1989369, 1989372, 1989392, 1989393, 1989394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83812

Included Lab Sample IDs: 1989366, 1989369, 1989372, 1989392, 1989393, 1989394

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	99.5	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A83873

Included Lab Sample IDs: 1989386

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.3		P	80 - 120
Toxaphene	94.3		P	80 - 120

Reference Method: EPA 8321B

Run ID: A83902

Included Lab Sample IDs: 1989384, 1989385

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	108	105	P/P	60 - 160
Endothall	106	101	P/P	60 - 160
Glufosinate	99.6	92.3	P/P	60 - 160
Glyphosate	107	119	P/P	60 - 160
Sucralose	91.5	116	P/P	60 - 160
Sucralose	92.3	103	P/P	60 - 160

Reference Method: EPA 8270D

Run ID: A83927

Included Lab Sample IDs: 1989386

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

Reference Method: EPA 8270D

Run ID: A83927

Included Lab Sample IDs: 1989386

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.2		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	97.2		P	80 - 120
Beta-BHC	93.1		P	80 - 120
Carbophenothion	100		P	80 - 120
Chlorothalonil	99.5		P	80 - 120
Cypermethrin	89.8		P	80 - 120
DDD-p,p'	99.7		P	80 - 120
DDE-p,p'	97.6		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	93.7		P	80 - 120
Dicofol	106		P	80 - 120
Dieldrin	90.0		P	80 - 120
Endosulfan I	93.6		P	80 - 120
Endosulfan II	89.7		P	80 - 120
Endosulfan Sulfate	92.7		P	80 - 120
Endrin	91.2		P	80 - 120
Endrin Aldehyde	93.4		P	80 - 120
Endrin Ketone	96.9		P	80 - 120
Gamma-BHC	98.2		P	80 - 120
Gamma-Chlordane	98.6		P	80 - 120
Heptachlor	94.8		P	80 - 120
Heptachlor Epoxide	99.0		P	80 - 120
Methoxychlor	105		P	80 - 120
Mirex	97.7		P	80 - 120
Permethrin	93.3		P	80 - 120
Trifluralin	99.1		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84009

Included Lab Sample IDs: 1989367, 1989370, 1989373, 1989395, 1989396, 1989397

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	106	P/P	90 - 110
Kjeldahl Nitrogen	106	108	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84167

Included Lab Sample IDs: 1989387

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	93.7		P	80 - 120
Alachlor	97.3		P	80 - 120
Ametryn	90.0		P	80 - 120
Atrazine	94.5		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	95.1		P	80 - 120
Bromacil	94.4		P	80 - 120
Butylate	94.9		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	96.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A84167
Included Lab Sample IDs: 1989387

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cyanazine	87.6		P	80 - 120
Demeton	95.5		P	80 - 120
Diazinon	94.5		P	80 - 120
Disulfoton	93.2		P	80 - 120
EPTC	95.2		P	80 - 120
Ethion	94.2		P	80 - 120
Ethoprop	96.7		P	80 - 120
Fenamiphos	98.2		P	80 - 120
Fipronil	92.9		P	80 - 120
Fipronil Sulfide	96.0		P	80 - 120
Fipronil Sulfone	96.1		P	80 - 120
Fonofos	96.1		P	80 - 120
Hexazinone	90.3		P	80 - 120
Malathion	98.5		P	80 - 120
Metalaxyl	98.9		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	99.0		P	80 - 120
Mevinphos	94.5		P	80 - 120
Molinate	94.9		P	80 - 120
Norflurazon	95.4		P	80 - 120
Parathion Ethyl	94.0		P	80 - 120
Parathion Methyl	98.4		P	80 - 120
Pendimethalin	98.9		P	80 - 120
Phorate	91.9		P	80 - 120
Prometon	95.1		P	80 - 120
Prometryn	97.6		P	80 - 120
Simazine	91.7		P	80 - 120
Terbufos	93.6		P	80 - 120
Terbutylazine	95.1		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 SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.180	
	Turbidity				1.18	
EPA 200.7 Rev. 4.4	Calcium	101	103	99.0		1.06
	Iron	107	105	103	104	0.840
	Magnesium	103	105	101		1.09
	Potassium	102	98.1	95.9	97.3	0.992
	Sodium	97.7	99.0	95.0		0.855
	Zinc	102	100	98.0	98.9	0.883
EPA 200.8 Rev. 5.4	Arsenic	104	106	103	104	0.720
	Cadmium	105	104	104	104	0.157
	Chromium	101	102	99.2	99.7	0.551

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	
								SMP	MS
EPA 200.8 Rev. 5.4	Copper	99.4		99.0	95.3	95.9			0.629
	Lead	101		102	99.7	100			0.519
	Nickel	103		103	98.3	99.6			1.32
	Silver	105		104	105	105			0.386
EPA 300.0 Rev. 2.1	Chloride	99.7		95.2				0.290	
	Sulfate	93.7		95.8				0.477	
EPA 350.1 Rev. 2.0	Ammonia-N	101							0.0706
	Ammonia-N	106		104	101				1.64
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.9		85.9	91.7				5.04
EPA 353.2 Rev. 2.0	NO2NO3-N	103		100	100				0.348
	NO2NO3-N	102		94.0	93.5				0.522
	NO2NO3-N	102		93.6	94.6				0.859
EPA 365.1 Rev. 2.0	Total-P	99.2							2.91
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		97.3	98.2				0.921
	O-Phosphate-P	99.6		94.7	93.5				0.609
EPA 8270D	Acetochlor	90.6	85.5	90.1	87.0		5.74		3.49
	Alachlor	93.4	88.1	82.4	77.5		5.80		6.09
	Aldrin	62.3	60.4	59.0	56.9		2.99		3.58
	Alpha-BHC	75.6	74.9	73.4	71.3		0.887		2.98
	Alpha-Chlordane	83.2	77.5	79.9	75.6		7.05		5.60
	Ametryn	88.7	88.3	98.9	95.1		0.383		2.95
	Atrazine	106	94.9				11.1		8.28
	Atrazine Desethyl	110	51.0	57.9	103		73.3		46.7
	Azinphos Methyl	127	90.9	106	123		32.7		14.4
	Beta-BHC	124	112	114	105		9.90		8.42
	Bromacil	78.3	50.0	64.3	78.7		44.1		20.1
	Butylate	41.9	46.5	28.7	36.9		10.4		25.0
	Carbophenothion	113	105	111	124		7.27		11.0
	Chlorothalonil	27.9	63.8	125	95.5		78.3		26.8
	Chlorpyrifos Ethyl	101	94.6	101	102		6.69		1.13
	Chlorpyrifos Methyl	99.8	82.4	94.2	105		19.1		11.1
	Cyanazine	188	93.7	80.0	163		66.9		68.6
	Cypermethrin	99.4	91.9	98.4	99.1		7.80		0.749
	DDD-p,p'	112	95.2	95.8	93.8		16.0		2.17
	DDE-p,p'	88.6	78.7	81.4	76.3		11.9		6.48
	DDT-p,p'	95.2	74.9	80.5	78.2		23.9		2.96
	Delta-BHC	122	131	130	122		7.22		6.81
	Demeton	67.2	68.2	56.5	82.8		1.37		37.8
	Diazinon	97.7	87.5	93.0	102		11.0		9.14
	Dicofol	82.5	79.8	74.7	73.7		3.29		1.32
	Dieldrin	88.0	76.8	93.8	89.2		13.6		4.99
	Disulfoton	92.6	93.3	74.4	109		0.789		37.4
	Endosulfan I	94.0	92.2	101	89.8		1.88		11.4
	Endosulfan II	105	86.8	107	98.2		19.3		8.70
	Endosulfan Sulfate	101	116	81.9	79.8		14.1		2.58
	Endrin	93.3	80.3	84.8	63.0		15.0		29.5
	Endrin Aldehyde	113	104	82.8	74.5		8.44		10.6
	Endrin Ketone	102	99.7	95.1	95.9		1.97		0.857
	EPTC	41.4	47.4	27.6	37.5		13.5		30.2
	Ethion	97.5	88.6	101	102		9.60		0.494
	Ethoprop	83.5	82.3	78.1	100		1.45		24.8
	Fenamiphos	102	66.4	77.2	95.9		42.2		21.7
	Fipronil	87.1	74.2	64.4	71.9		16.0		11.0
	Fipronil Sulfide	84.3	81.2	66.3	76.2		3.77		13.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Fipronil Sulfone	77.5	75.0	30.3	65.0	3.24	43.7
	Fonofos	84.6	69.8	78.7	108	19.1	31.6
	Gamma-BHC	93.8	93.0	96.8	81.7	0.944	16.8
	Gamma-Chlordane	81.9	75.9	78.5	74.2	7.55	5.54
	Heptachlor	65.0	63.7	61.5	59.5	2.02	3.30
	Heptachlor Epoxide	83.2	78.7	81.4	78.1	5.63	4.14
	Hexazinone	101	31.3	82.2	99.6	105	19.2
	Malathion	104	99.1	110	109	4.91	0.603
	Metalaxyl	95.5	60.5	88.9	91.0	44.8	2.36
	Methoxychlor	104	95.8	90.2	86.5	8.53	4.16
	Metolachlor	92.7	92.1	93.8	83.1	0.654	11.8
	Metribuzin	154	109	153	190	34.4	21.8
	Mevinphos	71.3	59.2	62.8	85.0	18.5	30.1
	Mirex	75.9	67.9	69.1	71.6	11.2	3.62
	Molinate	49.5	55.1	39.9	48.7	10.7	19.8
	Norflurazon	86.8	46.7	54.9	50.2	60.1	8.91
	Parathion Ethyl	93.9	82.9	94.4	99.4	12.5	5.12
	Parathion Methyl	99.6	82.6	99.7	111	18.6	10.3
	Pendimethalin	116	98.9	118	116	15.8	2.51
	Permethrin	84.8	83.4	82.6	84.3	1.64	2.06
	Phorate	77.7	65.7	67.8	96.0	16.7	34.4
	Prometon	88.1	79.2	90.7	90.3	10.7	0.447
	Prometryn	90.5	85.4	91.6	88.4	5.75	3.60
	Simazine	104	84.9	95.5	105	20.2	9.03
	Terbufos	89.7	74.8	80.5	109	18.2	30.1
	Terbuthylazine	98.6	85.3	94.4	94.6	14.4	0.132
	Trifluralin	76.0	72.7	71.4	74.2	4.46	3.80
EPA 8276	Chlordane	76.3	68.3	54.4	75.6	11.1	27.3
	Toxaphene	81.1	78.2	73.6	69.4	3.65	5.88
EPA 8321B	2,4-D	80.3		81.6	86.2		5.51
	3-Hydroxycarbofuran	102		110	113		2.35
	Acetaminophen	127		126	124		1.46
	Aldicarb	66.0		64.0	66.4		3.69
	Aldicarb Sulfone	101		131	125		4.04
	Aldicarb Sulfoxide	99.0		97.7	93.6		4.29
	AMPA	105		51.6	49.3		4.58
	Bentazon	108		72.8	82.8		12.5
	Carbamazepine	107		96.6	98.4		1.87
	Carbaryl	89.5		63.4	65.2		2.85
	Carbofuran	91.4		66.3	67.6		2.01
	Diuron	90.1		70.9	78.9		10.7
	Endothall	104		106	111		4.70
	Fenuron	124		103	103		0.0478
	Fluridone	103		83.9	82.7		1.42
	Glufosinate	113		151	139		8.80
	Glyphosate	117		61.2	65.0		6.03
	Hydrocodone	129		142	139		2.34
	Imazapyr	108		97.4	98.3		0.674
	Imidacloprid	114		225	231		2.32
	Linuron	89.7		91.2	87.8		3.75
	MCPP	92.2		69.1	74.0		6.89
	Methiocarb	89.9		84.7	86.2		1.68
	Methomyl	100		83.0	80.7		2.76
	Oxamyl	93.3		85.5	84.1		1.63

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Primidone	99.8	100	102		1.41
	Propoxur	91.5	64.4	66.7		3.62
	Pyraclostrobin	96.2	94.4	96.7		2.34
	Sucralose	85.7				19.5
	Triclopyr	98.3	80.8	88.3		8.83
SM 2120 B	Color (true)				12.3	
	Color (true)				0.640	
SM 2320 B-97	Total Alkalinity	103			0.358	
SM 2540 C-97	TDS				1.53	
SM 4500 F-C-97	Fluoride	95.1	93.9	94.9		0.943
SM 5310 B-00	Organic Carbon	98.8				0.126

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1989388
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1989388
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1989367, 1989370, 1989373, 1989395, 1989396, 1989397
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1989367, 1989370, 1989373, 1989395, 1989396, 1989397
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1989367, 1989370, 1989373, 1989395, 1989396, 1989397
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1989367, 1989370, 1989373, 1989395, 1989396, 1989397
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1989368, 1989371, 1989374, 1989398, 1989399, 1989400
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1989386
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1989387
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1989386
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1989383
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1989384, 1989385
SM 2120 B / E31780	True Color measured at 450 nm	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1989366, 1989369, 1989372, 1989392, 1989393, 1989394
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1989367, 1989370, 1989373, 1989395, 1989396, 1989397

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	05/02/2018			05/02/2018 17:27	William L. Brown IV	1989366, 1989369, 1989372
EPA 200.7 Rev. 4.4	05/02/2018	05/03/2018 14:30	Elliott D. Healy	05/07/2018 15:00	Betina Topolski	1989388
EPA 200.8 Rev. 5.4	05/02/2018	05/03/2018 14:30	Elliott D. Healy	05/04/2018 21:23	Nadine Brooks	1989388
EPA 300.0 Rev. 2.1	05/02/2018			05/08/2018 18:02	Lipi Saha	1989366
	05/02/2018			05/08/2018 18:14	Lipi Saha	1989369
	05/02/2018			05/08/2018 18:50	Lipi Saha	1989372
	05/02/2018			05/08/2018 19:02	Lipi Saha	1989392
	05/02/2018			05/08/2018 19:14	Lipi Saha	1989393
	05/02/2018			05/08/2018 19:26	Lipi Saha	1989394
EPA 350.1 Rev. 2.0	05/02/2018			05/08/2018 15:13	Ping Hua	1989367
	05/02/2018			05/09/2018 12:19	Ping Hua	1989396
	05/02/2018			05/09/2018 12:23	Ping Hua	1989370
	05/02/2018			05/09/2018 12:25	Ping Hua	1989373
	05/02/2018			05/09/2018 12:32	Ping Hua	1989395
	05/02/2018			05/09/2018 12:35	Ping Hua	1989397
EPA 351.2 Rev. 2.0	05/02/2018	05/17/2018 11:00	Adrian Shelby	05/18/2018 11:40	Joseph Suarez	1989367
	05/02/2018	05/17/2018 11:00	Adrian Shelby	05/18/2018 11:42	Joseph Suarez	1989370
	05/02/2018	05/17/2018 11:00	Adrian Shelby	05/18/2018 11:49	Joseph Suarez	1989373
	05/02/2018	05/17/2018 11:00	Adrian Shelby	05/18/2018 11:50	Joseph Suarez	1989395
	05/02/2018	05/17/2018 11:00	Adrian Shelby	05/18/2018 11:52	Joseph Suarez	1989396
	05/02/2018	05/17/2018 11:00	Adrian Shelby	05/18/2018 11:53	Joseph Suarez	1989397
EPA 353.2 Rev. 2.0	05/02/2018			05/03/2018 14:58	Lauren Bottorf	1989367
	05/02/2018			05/03/2018 15:17	Lauren Bottorf	1989373
	05/02/2018			05/03/2018 15:34	Lauren Bottorf	1989370
	05/02/2018			05/04/2018 11:43	Lauren Bottorf	1989395
	05/02/2018			05/04/2018 11:51	Lauren Bottorf	1989396
	05/02/2018			05/04/2018 11:52	Lauren Bottorf	1989397
EPA 365.1 Rev. 2.0	05/02/2018	05/04/2018 13:37	Sima Feizi	05/07/2018 12:27	Beverly Y. Sanders	1989370
	05/02/2018	05/04/2018 13:37	Sima Feizi	05/07/2018 12:35	Beverly Y. Sanders	1989367
	05/02/2018	05/04/2018 13:37	Sima Feizi	05/07/2018 12:36	Beverly Y. Sanders	1989373
	05/02/2018	05/04/2018 13:37	Sima Feizi	05/07/2018 12:37	Beverly Y. Sanders	1989395
	05/02/2018	05/04/2018 13:37	Sima Feizi	05/07/2018 12:38	Beverly Y. Sanders	1989396
	05/02/2018	05/04/2018 13:37	Sima Feizi	05/07/2018 12:39	Beverly Y. Sanders	1989397
EPA 365.1 Rev. 2.0 dissolved	05/02/2018			05/02/2018 16:22	Megan Treadwell	1989398
	05/02/2018			05/02/2018 16:25	Megan Treadwell	1989368, 1989374
	05/02/2018			05/02/2018 16:26	Megan Treadwell	1989399
	05/02/2018			05/02/2018 16:32	Megan Treadwell	1989400
	05/02/2018			05/02/2018 16:34	Megan Treadwell	1989371
EPA 8270D	05/02/2018	05/04/2018 08:42	Dinesh Mishra	05/16/2018 21:02	Marek Topolski	1989387
	05/02/2018	05/04/2018 12:51	Rasheda Ghaffari	05/08/2018 23:41	Vandana T. Nagar	1989386

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8276	05/02/2018	05/04/2018 12:51	Rasheda Ghaffari	05/08/2018 23:30	John P. Burgos	1989386
EPA 8321B	05/02/2018	05/03/2018 17:00	Hoor Shaik	05/04/2018 06:34	Juyoung Kim	1989384
	05/02/2018	05/03/2018 17:00	Hoor Shaik	05/04/2018 23:53	Juyoung Kim	1989385
	05/02/2018	05/04/2018 10:00	Hoor Shaik	05/05/2018 21:27	Juyoung Kim	1989384
	05/02/2018	05/04/2018 10:00	Hoor Shaik	05/05/2018 22:01	Juyoung Kim	1989385
	05/02/2018	05/04/2018 10:00	Hoor Shaik	05/07/2018 19:37	Juyoung Kim	1989383
	05/02/2018	05/04/2018 10:00	Hoor Shaik	05/08/2018 00:14	Juyoung Kim	1989384
	05/02/2018	05/04/2018 10:00	Hoor Shaik	05/08/2018 00:49	Juyoung Kim	1989385
SM 2120 B	05/02/2018			05/02/2018 16:16	Tanya Welborn	1989369
	05/02/2018			05/02/2018 16:18	Tanya Welborn	1989393
	05/02/2018			05/02/2018 16:26	Tanya Welborn	1989366
	05/02/2018			05/02/2018 16:27	Tanya Welborn	1989372
	05/02/2018			05/02/2018 16:28	Tanya Welborn	1989392
	05/02/2018			05/02/2018 16:29	Tanya Welborn	1989394
SM 2320 B-97	05/02/2018			05/10/2018 04:49	Dale L. Simmons	1989366
	05/02/2018			05/10/2018 04:59	Dale L. Simmons	1989369
	05/02/2018			05/10/2018 05:08	Dale L. Simmons	1989372
	05/02/2018			05/10/2018 05:18	Dale L. Simmons	1989392
	05/02/2018			05/10/2018 05:27	Dale L. Simmons	1989393
	05/02/2018			05/10/2018 05:38	Dale L. Simmons	1989394
SM 2540 C-97	05/02/2018			05/05/2018 23:12	Yijie Li	1989366, 1989369, 1989372
SM 2540 D-97	05/02/2018			05/05/2018 23:12	Yijie Li	1989366, 1989369, 1989372
SM 4500 F-C-97	05/02/2018			05/10/2018 04:49	Dale L. Simmons	1989366
	05/02/2018			05/10/2018 04:59	Dale L. Simmons	1989369
	05/02/2018			05/10/2018 05:08	Dale L. Simmons	1989372
	05/02/2018			05/10/2018 05:18	Dale L. Simmons	1989392
	05/02/2018			05/10/2018 05:27	Dale L. Simmons	1989393
	05/02/2018			05/10/2018 05:38	Dale L. Simmons	1989394
SM 5310 B-00	05/02/2018			05/07/2018 20:09	Megan Treadwell	1989367
	05/02/2018			05/07/2018 20:22	Megan Treadwell	1989370
	05/02/2018			05/07/2018 20:34	Megan Treadwell	1989373
	05/02/2018			05/07/2018 21:12	Megan Treadwell	1989395
	05/02/2018			05/07/2018 21:24	Megan Treadwell	1989396
	05/02/2018			05/07/2018 21:37	Megan Treadwell	1989397