

Chemical Analysis Report

CEN-DIST-2018-04-10-01

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

Event Description: **Chain / Winn / Gleason / Marie**

Request ID: **RQ-2018-04-09-44**

Customer: **CEN-DIST**

Project ID: **SMP**

Send Reports to:

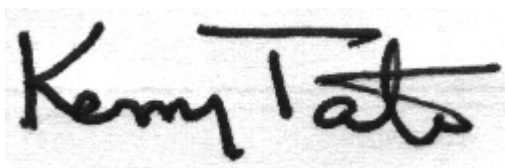
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Michael Linger

For additional information please contact

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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 15-MAY-2018 13:16

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: Lake Winnemissett @ 375m North of Center

Collection Date/Time: 04/09/2018 11:03

Field ID: G2CE0185

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1982997	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P343151	
	EPA 300.0 Rev. 2.1	Chloride	29		mg Cl/L	P343433	
		Sulfate	26		mg SO4/L	P343436	
	SM 2120 B	Color (true)	5.8	I	PCU	P343124	
	SM 2320 B-97	Total Alkalinity	4.5		mg CaCO3/L	P343804	
	SM 2540 C-97	TDS	97		mg/L	P343465	
	SM 2540 D-97	TSS	2	I	mg/L	P343861	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343807	
1983001	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343554	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.091	I	mg N/L	P343176	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P343476	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P343285	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P343397	
1983005	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343137	
1983042	EPA 200.7 Rev. 4.4	Calcium	9.17		mg/L	P343282	
		Iron	30	U	ug/L	P343282	
		Magnesium	2.34		mg/L	P343282	
		Potassium	2.2		mg/L	P343282	
		Sodium	18.3		mg/L	P343282	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P343282	
		Arsenic	1.21		ug/L	P343282	
		Cadmium	0.020	U	ug/L	P343282	
		Chromium	0.40	U	ug/L	P343282	
		Copper	0.20	U	ug/L	P343282	
		Lead	0.064	I	ug/L	P343768	
		Nickel	0.20	U	ug/L	P343282	
		Silver	0.010	U	ug/L	P343282	

Ref. Method and Comment:

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

Sample Location: Lake Winnemissett @ Center

Collection Date/Time: 04/09/2018 11:13

Field ID: G2CE0184

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1982998	EPA 180.1 Rev. 2.0	Turbidity	0.50		NTU	P343151	
	EPA 300.0 Rev. 2.1	Chloride	29		mg Cl/L	P343433	
		Sulfate	25		mg SO4/L	P343436	
	SM 2120 B	Color (true)	5.0	I	PCU	P343125	
	SM 2320 B-97	Total Alkalinity	4.3		mg CaCO3/L	P343804	
	SM 2540 C-97	TDS	102		mg/L	P343465	
	SM 2540 D-97	TSS	2	I	mg/L	P343861	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343807	
1983002	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343554	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27		mg N/L	P343176	

Field ID: G2CE0184

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983002	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P343476	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P343285	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P343397	
1983006	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343137	
1983043	EPA 200.7 Rev. 4.4	Calcium	9.26		mg/L	P343282	
		Iron	30	U	ug/L	P343282	
		Magnesium	2.40		mg/L	P343282	
		Potassium	2.2		mg/L	P343282	
		Sodium	18.8		mg/L	P343282	
		Zinc	5.0	U	ug/L	P343282	
	EPA 200.8 Rev. 5.4	Arsenic	1.21		ug/L	P343282	
		Cadmium	0.020	U	ug/L	P343282	
		Chromium	0.40	U	ug/L	P343282	
		Copper	0.20	U	ug/L	P343282	
		Lead	0.067	I	ug/L	P343768	
		Nickel	0.20	U	ug/L	P343282	
		Silver	0.010	U	ug/L	P343282	

Ref. Method and Comment:

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

Sample Location: Lake Winnemissett @ 350m South of Center

Collection Date/Time: 04/09/2018 11:24

Field ID: G2CE0186

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1982999	EPA 180.1 Rev. 2.0	Turbidity	0.45		NTU	P343151	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P343433	
		Sulfate	25		mg SO4/L	P343436	
		Color (true)	5.6	I	PCU	P343125	
	SM 2320 B-97	Total Alkalinity	4.2	A	mg CaCO3/L	P343804	
	SM 2540 C-97	TDS	97		mg/L	P343465	
	SM 2540 D-97	TSS	3	I	mg/L	P343861	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P343807	
1983003	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P343554	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P343176	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P343476	
	EPA 365.1 Rev. 2.0	Total-P	0.006		mg P/L	P343874	
	SM 5310 B-00	Organic Carbon	3.8		mg C/L	P343397	
1983007	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343137	
1983044	EPA 200.7 Rev. 4.4	Calcium	9.15		mg/L	P343282	
		Iron	30	U	ug/L	P343282	
		Magnesium	2.37		mg/L	P343282	
		Potassium	2.2		mg/L	P343282	
		Sodium	18.4		mg/L	P343282	
		Zinc	5.0	U	ug/L	P343282	
	EPA 200.8 Rev. 5.4	Arsenic	1.17		ug/L	P343282	

Field ID: G2CE0186

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983044	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P343282	
		Chromium	0.40	U	ug/L	P343282	
		Copper	0.20	U	ug/L	P343282	
		Lead	0.063	I	ug/L	P343768	
		Nickel	0.20	U	ug/L	P343282	
		Silver	0.010	U	ug/L	P343282	

Ref. Method and Comment:

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

Sample Location: Three Island Lake @ Center of S Lobe

Collection Date/Time: 04/09/2018 12:30

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983000	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P343151	
	EPA 300.0 Rev. 2.1	Chloride	23		mg Cl/L	P343433	
		Sulfate	9.2		mg SO4/L	P343436	
	SM 2120 B	Color (true)	200		PCU	P343125	
	SM 2320 B-97	Total Alkalinity	5.0		mg CaCO3/L	P343804	
	SM 2540 C-97	TDS	124		mg/L	P343465	
	SM 2540 D-97	TSS	2	I	mg/L	P343861	
	SM 4500 F-C-97	Fluoride	0.040	I	mg F/L	P343807	
1983004	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P343555	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P343176	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014		mg N/L	P343477	
	EPA 365.1 Rev. 2.0	Total-P	0.017		mg P/L	P343285	
	SM 5310 B-00	Organic Carbon	26		mg C/L	P343397	
1983008	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343137	
1983045	EPA 200.7 Rev. 4.4	Calcium	6.70		mg/L	P343282	
		Iron	200		ug/L	P343282	
		Magnesium	1.91		mg/L	P343282	
		Potassium	2.8		mg/L	P343282	
		Sodium	14.4		mg/L	P343282	
		Zinc	5.0	U	ug/L	P343282	
	EPA 200.8 Rev. 5.4	Arsenic	1.34		ug/L	P343282	
		Cadmium	0.020	U	ug/L	P343282	
		Chromium	0.68	I	ug/L	P343282	
		Copper	0.62	I	ug/L	P343282	
		Lead	0.33		ug/L	P343768	
		Nickel	0.51	I	ug/L	P343768	
		Silver	0.010	U	ug/L	P343282	

Ref. Method and Comment:

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

Sample Location: Three Island Lake @ Center of S Lobe

Collection Date/Time: 04/09/2018 12:30

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983037	EPA 8321B	Aldicarb	0.020	U	ug/L	P342880	
		Aldicarb Sulfone	0.0020	U	ug/L	P342880	MS
		Aldicarb Sulfoxide	0.0020	U	ug/L	P342880	
		Carbaryl	0.0020	U	ug/L	P342880	
		Carbofuran	0.0020	U	ug/L	P342880	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P342880	
		Methiocarb	0.0020	U	ug/L	P342880	
		Methomyl	0.0020	U	ug/L	P342880	
		Oxamyl	0.0020	U	ug/L	P342880	
		Propoxur	0.0020	U	ug/L	P342880	
1983038		2,4-D	0.0026	I	ug/L	P342880	
		Bentazon	0.0033		ug/L	P342880	
		MCPP	0.0020	U	ug/L	P342880	
		Triclopyr**	0.0040	U	ug/L	P342880	
		Imidacloprid	0.0020	UJ	ug/L	P342880	MS
		Diuron	0.14		ug/L	P342880	
		Pyraclostrobin**	0.0020	U	ug/L	P342880	
		Primidone**	0.0040	U	ug/L	P342880	
		Linuron	0.0040	U	ug/L	P342880	
		Acetaminophen**	0.0080	UJ	ug/L	P342880	MS
		Fenuron	0.016	U	ug/L	P342880	
		Imazapyr**	0.0091	I	ug/L	P342880	
		Carbamazepine**	4.0E-04	U	ug/L	P342880	
		Fluridone**	8.0E-04	U	ug/L	P342880	
		Hydrocodone**	8.0E-04	U	ug/L	P342880	
		Sucralose**	0.66		ug/L	P343078	
		Glyphosate**	0.10	U	ug/L	P343078	
		AMPA**	0.10	U	ug/L	P343078	
		Endothal**	0.10	U	ug/L	P343078	
		Glufosinate**	0.10	U	ug/L	P343078	
1983040	EPA 8270D	Aldrin	4.5	U	ng/L	P343276	
		Alpha-BHC	2.2	U	ng/L	P343276	
		Beta-BHC	4.5	U	ng/L	P343276	
		Delta-BHC	4.5	U	ng/L	P343276	
		Gamma-BHC	4.5	U	ng/L	P343276	
		Carbophenothion	4.5	U	ng/L	P343276	
		Chlorothalonil	2.2	U	ng/L	P343276	RPD
		Cypermethrin	22	U	ng/L	P343276	
		DDD-p,p'	3.3	U	ng/L	P343276	
		DDE-p,p'	3.3	U	ng/L	P343276	
		DDT-p,p'	3.3	U	ng/L	P343276	
		Dieldrin	4.5	U	ng/L	P343276	
		Endosulfan I	4.5	U	ng/L	P343276	
		Endosulfan II	4.5	U	ng/L	P343276	
		Endosulfan Sulfate	2.2	U	ng/L	P343276	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983040	EPA 8270D	Endrin	2.2	U	ng/L	P343276	
		Endrin Aldehyde	2.2	U	ng/L	P343276	RPD
		Heptachlor	1.7	U	ng/L	P343276	
		Heptachlor Epoxide	2.2	U	ng/L	P343276	
		Methoxychlor	4.5	U	ng/L	P343276	
		Mirex	2.2	U	ng/L	P343276	
		Permethrin	11	U	ng/L	P343276	
		Trifluralin	1.1	U	ng/L	P343276	
		Alpha-Chlordane	1.1	U	ng/L	P343276	
		Gamma-Chlordane	1.1	U	ng/L	P343276	
		Endrin Ketone	2.2	U	ng/L	P343276	
		Dicofol	33	U	ng/L	P343276	
	EPA 8276	Chlordane**	4.2	I	ng/L	P343276	
		Toxaphene**	33	U	ng/L	P343276	
1983041	EPA 8270D	Alachlor	0.27	U	ng/L	P343441	
		Ametryn	0.35	UJ	ng/L	P343441	MS
		Atrazine	5.2		ng/L	P343441	
		Atrazine Desethyl	1.6	U	ng/L	P343441	
		Azinphos Methyl	2.4	U	ng/L	P343441	
		Bromacil	0.53	U	ng/L	P343441	
		Butylate	0.43	U	ng/L	P343441	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P343441	
		Chlorpyrifos Methyl	0.11	U	ng/L	P343441	
		Demeton	2.1	U	ng/L	P343441	
		Diazinon	0.13	U	ng/L	P343441	
		Disulfoton	0.53	UJ	ng/L	P343441	RPD
		EPTC	1.3	U	ng/L	P343441	
		Ethion	0.16	U	ng/L	P343441	
		Ethoprop	0.11	U	ng/L	P343441	
		Fenamiphos	0.27	U	ng/L	P343441	
		Fipronil	0.27	U	ng/L	P343441	
		Fipronil Sulfide	0.16	U	ng/L	P343441	
		Fipronil Sulfone	0.16	U	ng/L	P343441	
		Hexazinone	0.53	U	ng/L	P343441	
		Malathion	0.37	U	ng/L	P343441	
		Metribuzin	0.21	UJ	ng/L	P343441	CCV
		Mevinphos	0.53	U	ng/L	P343441	
		Molinate	0.32	U	ng/L	P343441	
		Norflurazon	0.53	UJ	ng/L	P343441	RPD
		Pendimethalin	1.1	U	ng/L	P343441	
		Phorate	0.27	U	ng/L	P343441	
		Prometon	0.96	U	ng/L	P343441	
		Prometryn	0.21	U	ng/L	P343441	
		Simazine	0.53	U	ng/L	P343441	
		Terbufos	0.11	U	ng/L	P343441	

Field ID: G2CE0085

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983041	EPA 8270D	Terbuthylazine	0.45	U	ng/L	P343441	
		Fonofos	0.21	U	ng/L	P343441	
		Metalaxyl	0.27	UJ	ng/L	P343441	RPD
		Metolachlor	0.57	I	ng/L	P343441	
		Acetochlor	0.27	U	ng/L	P343441	
		Cyanazine	0.53	UJ	ng/L	P343441	CCV
		Parathion Ethyl	0.27	U	ng/L	P343441	
		Parathion Methyl	0.27	U	ng/L	P343441	

Ref. Method and Comment:

EPA 8321B: 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: Lake Marie @ Center

Collection Date/Time: 04/09/2018 13:25

Field ID: G2CE0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983012	EPA 180.1 Rev. 2.0	Turbidity	0.90		NTU	P343151	
	EPA 300.0 Rev. 2.1	Chloride	61		mg Cl/L	P343433	
		Sulfate	5.2		mg SO4/L	P343436	
	SM 2120 B	Color (true)	37	A	PCU	P343125	
	SM 2320 B-97	Total Alkalinity	52		mg CaCO3/L	P343804	
	SM 2540 C-97	TDS	184		mg/L	P343465	
	SM 2540 D-97	TSS	2	I	mg/L	P343861	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P343807	
1983013	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P343555	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P343176	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P343477	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P343286	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P343397	
1983014	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343138	
1983039	EPA 8321B	2,4-D	0.0045	I	ug/L	P342880	
		Bentazon	8.0E-04	U	ug/L	P342880	
		MCP	0.0020	U	ug/L	P342880	
		Triclopyr**	0.0040	U	ug/L	P342880	
		Imidacloprid	0.0020	U	ug/L	P342880	MS
		Diuron	0.0020	U	ug/L	P342880	
		Pyraclostrobin**	0.0020	U	ug/L	P342880	
		Primidone**	0.0040	U	ug/L	P342880	
		Linuron	0.0040	U	ug/L	P342880	
		Acetaminophen**	0.0080	U	ug/L	P342880	MS
		Fenuron	0.016	U	ug/L	P342880	
		Imazapyr**	0.011	I	ug/L	P342880	
		Carbamazepine**	4.0E-04	U	ug/L	P342880	
		Fluridone**	0.26		ug/L	P342880	
		Hydrocodone**	8.0E-04	U	ug/L	P342880	

Field ID: G2CE0084

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983039	EPA 8321B	Sucralose**	0.75		ug/L	P343078	

Ref. Method and Comment:

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

Sample Location: Lake Gleason @ Center

Collection Date/Time: 04/09/2018 14:00

Field ID: G2CE0114

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1983009	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P343151	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P343433	
		Sulfate	4.0		mg SO4/L	P343436	
	SM 2120 B	Color (true)	29		PCU	P343125	
	SM 2320 B-97	Total Alkalinity	50		mg CaCO3/L	P343804	
	SM 2540 C-97	TDS	113		mg/L	P343465	
	SM 2540 D-97	TSS	2	I	mg/L	P343861	
	SM 4500 F-C-97	Fluoride	0.086	I	mg F/L	P343807	
1983010	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P343555	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.82		mg N/L	P343176	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P343477	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P343285	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P343397	
1983011	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P343137	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P343151

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P343282

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: P343282

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343282

Component	Result	Code	Units
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Nickel	0.37	I	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343768

Component	Result	Code	Units
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343433

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343436

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343554

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343555

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343176

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343476

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343477

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343477

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343285

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343286

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343874

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343137

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343138

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

Reference Method: EPA 8270D
Batch ID: P343276

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P343276

Component	Result	Code	Units
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: P343441

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D
Batch ID: P343441

Component	Result	Code	Units
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P343276

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

Reference Method: EPA 8321B
Batch ID: P342880

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	0.021	I	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: EPA 8321B
Batch ID: P343078

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: SM 2120 B
Batch ID: P343124

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P343125

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P343804

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

Reference Method: SM 2540 C-97
Batch ID: P343465

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P343861

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P343807

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P343397

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: P343282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	104		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	101		P	85 - 115
Sodium	99.4		P	85 - 115
Zinc	98.6		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343282

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	104		P	85 - 115
Copper	96.6		P	85 - 115
Nickel	96.1		P	85 - 115
Silver	110		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	95.8		P	85 - 115
Nickel	99.5		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343555

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343176

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343476

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343477

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: P343285

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343286

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343874

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343137

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343138

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

Reference Method: EPA 8270D
Batch ID: P343276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	33.3	33.3	P/P	24 - 89.0
Alpha-BHC	81.3	89.0	P/P	58 - 117
Alpha-Chlordane	79.6	80.9	P/P	56 - 115
Beta-BHC	89.8	97.5	P/P	55 - 137
Carbophenothion	98.5	110	P/P	37 - 145
Chlorothalonil	68.3	68.9	P/P	26 - 163
Cypermethrin	78.8	81.2	P/P	42 - 156
DDD-p,p'	91.2	93.5	P/P	59 - 129
DDE-p,p'	81.9	84.2	P/P	52 - 117
DDT-p,p'	87.9	89.8	P/P	48 - 128
Delta-BHC	91.0	97.9	P/P	59 - 158
Dicofol	78.2	80.3	P/P	19 - 124
Dieldrin	79.0	87.0	P/P	57 - 126
Endosulfan I	82.6	80.9	P/P	59 - 133
Endosulfan II	91.8	86.6	P/P	58 - 148
Endosulfan Sulfate	93.0	83.5	P/P	56 - 135

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P343276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	79.8	90.6	P/P	50 - 140
Endrin Aldehyde	73.3	71.2	P/P	47 - 141
Endrin Ketone	87.2	85.0	P/P	63 - 123
Gamma-BHC	83.6	87.0	P/P	59 - 132
Gamma-Chlordane	76.2	77.4	P/P	55 - 112
Heptachlor	66.6	67.0	P/P	45 - 102
Heptachlor Epoxide	77.7	79.0	P/P	61 - 116
Methoxychlor	89.0	92.4	P/P	60 - 133
Mirex	75.7	77.2	P/P	40 - 98.0
Permethrin	81.8	82.4	P/P	45 - 131
Trifluralin	79.7	82.0	P/P	38 - 179

Reference Method: EPA 8270D

Batch ID: P343441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.5	90.2	P/P	74 - 119
Alachlor	103	91.1	P/P	75 - 118
Ametryn	71.3	65.7	P/P	59 - 137
Atrazine	98.9	90.2	P/P	73 - 120
Atrazine Desethyl	83.0	92.5	P/P	19 - 129
Azinphos Methyl	131	120	P/P	65 - 181
Bromacil	94.0	91.3	P/P	43 - 123
Butylate	52.8	68.1	P/P	28 - 85.0
Chlorpyrifos Ethyl	84.9	98.9	P/P	55 - 112
Chlorpyrifos Methyl	93.8	99.6	P/P	35 - 124
Cyanazine	192	201	P/P	26 - 262
Demeton	56.2	60.6	P/P	43 - 122
Diazinon	101	103	P/P	72 - 120
Disulfoton	70.6	87.9	P/P	45 - 137
EPTC	46.2	58.4	P/P	28 - 95.0
Ethion	103	92.7	P/P	63 - 127
Ethoprop	71.8	92.3	P/P	63 - 109
Fenamiphos	88.3	96.8	P/P	66 - 136
Fipronil	90.1	84.9	P/P	63 - 126
Fipronil Sulfide	73.1	70.3	P/P	59 - 123
Fipronil Sulfone	78.8	67.2	P/P	56 - 122
Fonofos	76.7	88.1	P/P	64 - 114
Hexazinone	98.7	88.8	P/P	49 - 144
Malathion	87.4	95.9	P/P	68 - 131
Metalaxyl	86.9	82.0	P/P	57 - 126
Metolachlor	94.5	98.9	P/P	75 - 118
Metribuzin	97.6	120	P/P	46 - 169
Mevinphos	65.7	73.7	P/P	34 - 126
Molinate	60.4	72.8	P/P	37 - 101
Norflurazon	94.9	77.8	P/P	63 - 127
Parathion Ethyl	85.0	85.8	P/P	78 - 109
Parathion Methyl	116	99.4	P/P	74 - 123
Pendimethalin	97.0	92.2	P/P	51 - 130
Phorate	75.5	87.8	P/P	53 - 116
Prometon	95.0	88.7	P/P	66 - 124
Prometryn	91.7	69.2	P/P	66 - 124

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P343441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Simazine	88.5	93.2	P/P	62 - 134
Terbufos	81.0	95.3	P/P	59 - 115
Terbutylazine	94.0	86.7	P/P	76 - 113

Reference Method: EPA 8276

Batch ID: P343276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	108	92.2	P/P	47 - 125
Toxaphene	75.9	82.4	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P342880

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	100		P	40 - 150
3-Hydroxycarbofuran	112		P	40 - 150
Acetaminophen	120		P	30 - 150
Aldicarb	82.6		P	30 - 150
Aldicarb Sulfone	119		P	40 - 150
Aldicarb Sulfoxide	118		P	40 - 150
Bentazon	109		P	30 - 150
Carbamazepine	84.9		P	40 - 150
Carbaryl	73.1		P	40 - 150
Carbofuran	71.6		P	40 - 150
Diuron	65.1		P	40 - 150
Fenuron	124		P	40 - 150
Fluridone	60.3		P	40 - 150
Hydrocodone	112		P	40 - 150
Imazapyr	88.7		P	40 - 150
Imidacloprid	115		P	40 - 160
Linuron	78.1		P	40 - 150
MCPP	92.3		P	40 - 150
Methiocarb	74.5		P	40 - 150
Methomyl	121		P	40 - 150
Oxamyl	102		P	40 - 150
Primidone	108		P	40 - 150
Propoxur	74.7		P	40 - 150
Pyraclostrobin	70.8		P	40 - 150
Triclopyr	91.0		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P343078

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	89.0		P	40 - 140
Endothall	105		P	40 - 140
Glufosinate	68.6		P	40 - 140
Glyphosate	65.6		P	40 - 140
Sucralose	114		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
 Batch ID: P343804

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	98 - 107

Reference Method: SM 4500 F-C-97
 Batch ID: P343807

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

Reference Method: SM 5310 B-00
 Batch ID: P343397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P343282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982123	Calcium	101		P	80 - 120
1982123	Iron	103		P	80 - 120
1982123	Magnesium	103		P	80 - 120
1982123	Potassium	97.7		P	80 - 120
1982123	Sodium	100		P	80 - 120
1982123	Zinc	99.0		P	80 - 120
1983042	Calcium	99.0		P	80 - 120
1983042	Iron	103	105	P/P	80 - 120
1983042	Magnesium	104	106	P/P	80 - 120
1983042	Potassium	98.0	100	P/P	80 - 120
1983042	Sodium	99.5		P	80 - 120
1983042	Zinc	97.3	98.2	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P343282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982123	Arsenic	103		P	80 - 120
1982123	Cadmium	106		P	80 - 120
1982123	Chromium	106		P	80 - 120
1982123	Copper	98.2		P	80 - 120
1982123	Nickel	97.8		P	80 - 120
1982123	Silver	109		P	80 - 120
1983042	Arsenic	102	101	P/P	80 - 120
1983042	Cadmium	104	103	P/P	80 - 120
1983042	Chromium	104	104	P/P	80 - 120
1983042	Copper	99.6	99.7	P/P	80 - 120
1983042	Nickel	97.5	97.8	P/P	80 - 120
1983042	Silver	107	107	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343768

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982981	Lead	98.2	97.1	P/P	80 - 120
1982981	Nickel	98.0	97.0	P/P	80 - 120
1983044	Lead	96.6		P	80 - 120
1983044	Nickel	96.0		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343433

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982932	Chloride	94.1		P	90 - 110
1982998	Chloride	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982932	Sulfate	91.0		P	90 - 110
1982998	Sulfate	98.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982963	Ammonia-N	94.4	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983004	Ammonia-N	96.3	96.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983002	Kjeldahl Nitrogen	99.6	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982964	NO2NO3-N	101		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343477

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983004	NO2NO3-N	97.6	97.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983010	Total-P	101	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343286

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983103	Total-P	97.4	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1986142	Total-P	101	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343137

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983011	O-Phosphate-P	94.5	95.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P343138

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983219	O-Phosphate-P	96.9	96.6	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P343276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984036	Aldrin	48.9	49.3	P/P	26 - 96.0
1984036	Alpha-BHC	92.5	88.9	P/P	51 - 123
1984036	Alpha-Chlordane	78.5	81.8	P/P	45 - 120
1984036	Beta-BHC	109	106	P/P	43 - 146
1984036	Carbophenothion	112	120	P/P	26 - 179
1984036	Chlorothalonil	80.4	56.8	P/P	10 - 215
1984036	Cypermethrin	79.7	78.4	P/P	35 - 169
1984036	DDD-p,p'	91.6	91.5	P/P	49 - 131
1984036	DDE-p,p'	83.4	85.7	P/P	39 - 127
1984036	DDT-p,p'	92.8	86.0	P/P	49 - 120
1984036	Delta-BHC	127	115	P/P	49 - 187
1984036	Dicofol	86.1	82.3	P/P	10 - 129
1984036	Dieldrin	80.6	89.2	P/P	46 - 132
1984036	Endosulfan I	80.6	84.3	P/P	57 - 130
1984036	Endosulfan II	82.8	92.4	P/P	52 - 148
1984036	Endosulfan Sulfate	90.7	88.2	P/P	55 - 129
1984036	Endrin	89.5	82.2	P/P	45 - 133
1984036	Endrin Aldehyde	68.2	48.9	P/P	26 - 140
1984036	Endrin Ketone	98.7	95.4	P/P	60 - 125
1984036	Gamma-BHC	101	74.8	P/P	50 - 145
1984036	Gamma-Chlordane	77.4	80.7	P/P	44 - 118
1984036	Heptachlor	63.2	63.6	P/P	35 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P343276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1984036	Heptachlor Epoxide	80.6	83.8	P/P	52 - 123
1984036	Methoxychlor	82.2	88.0	P/P	54 - 132
1984036	Mirex	74.8	74.8	P/P	36 - 107
1984036	Permethrin	83.2	83.9	P/P	47 - 135
1984036	Trifluralin	81.2	79.8	P/P	32 - 228

Reference Method: EPA 8270D

Batch ID: P343441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983041	Acetochlor	88.1	113	P/P	67 - 125
1983041	Alachlor	91.3	114	P/P	69 - 123
1983041	Ametryn	206	165	F/F	52 - 151
1983041	Atrazine Desethyl	83.4	76.7	P/P	10 - 129
1983041	Azinphos Methyl	118	140	P/P	48 - 200
1983041	Bromacil	79.2	88.0	P/P	46 - 130
1983041	Butylate	50.3	54.4	P/P	10 - 85.0
1983041	Chlorpyrifos Ethyl	77.1	75.9	P/P	54 - 115
1983041	Chlorpyrifos Methyl	93.2	95.1	P/P	44 - 117
1983041	Cyanazine	177	183	P/P	10 - 262
1983041	Demeton	88.3	73.1	P/P	24 - 145
1983041	Diazinon	104	121	P/P	66 - 129
1983041	Disulfoton	92.7	65.9	P/P	45 - 139
1983041	EPTC	43.2	45.6	P/P	10 - 86.0
1983041	Ethion	92.5	93.7	P/P	59 - 133
1983041	Ethoprop	88.9	92.3	P/P	54 - 116
1983041	Fenamiphos	76.2	82.0	P/P	55 - 140
1983041	Fipronil	78.1	74.6	P/P	37 - 142
1983041	Fipronil Sulfide	57.0	50.4	P/P	37 - 130
1983041	Fipronil Sulfone	67.0	50.1	P/P	18 - 143
1983041	Fonofos	88.9	85.8	P/P	55 - 118
1983041	Hexazinone	73.7	88.6	P/P	62 - 140
1983041	Malathion	75.3	79.9	P/P	64 - 132
1983041	Metalaxyl	65.1	94.5	P/P	55 - 129
1983041	Metolachlor	72.7	95.3	P/P	56 - 137
1983041	Metribuzin	173	199	P/P	16 - 218
1983041	Mevinphos	81.9	66.8	P/P	34 - 129
1983041	Molinate	69.0	76.1	P/P	16 - 99.0
1983041	Norflurazon	48.9	72.4	P/P	43 - 135
1983041	Parathion Ethyl	75.5	88.1	P/P	71 - 112
1983041	Parathion Methyl	97.7	120	P/P	65 - 127
1983041	Pendimethalin	80.6	107	P/P	35 - 159
1983041	Phorate	88.0	69.2	P/P	41 - 129
1983041	Prometon	89.9	102	P/P	56 - 140
1983041	Prometryn	74.8	95.6	P/P	65 - 130
1983041	Simazine	86.3	112	P/P	54 - 148
1983041	Terbufos	91.9	88.4	P/P	53 - 126
1983041	Terbutylazine	89.0	108	P/P	73 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P343276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983745	Chlordane	83.6	74.8	P/P	41 - 134
1983745	Toxaphene	57.2	50.9	P/P	39 - 158

Reference Method: EPA 8321B

Batch ID: P342880

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983038	2,4-D	103	106	P/P	40 - 150
1983038	3-Hydroxycarbofuran	146	133	P/P	40 - 150
1983038	Acetaminophen	162	156	F/F	30 - 150
1983038	Aldicarb	96.5	98.4	P/P	30 - 150
1983038	Aldicarb Sulfone	160	163	F/F	40 - 150
1983038	Aldicarb Sulfoxide	102	108	P/P	40 - 150
1983038	Bentazon	36.3	30.2	P/P	30 - 150
1983038	Carbamazepine	105	108	P/P	40 - 150
1983038	Carbaryl	56.0	53.6	P/P	40 - 150
1983038	Carbofuran	72.8	69.8	P/P	40 - 150
1983038	Diuron	73.9	71.7	P/P	40 - 150
1983038	Fenuron	110	104	P/P	40 - 150
1983038	Fluridone	47.2	56.1	P/P	40 - 150
1983038	Hydrocodone	123	116	P/P	40 - 150
1983038	Imazapyr	109	92.7	P/P	40 - 150
1983038	Imidacloprid	248	233	F/F	40 - 160
1983038	Linuron	82.0	91.2	P/P	40 - 150
1983038	MCP	75.1	83.1	P/P	40 - 150
1983038	Methiocarb	76.7	81.3	P/P	40 - 150
1983038	Methomyl	99.3	97.8	P/P	40 - 150
1983038	Oxamyl	119	107	P/P	40 - 150
1983038	Primidone	108	113	P/P	40 - 150
1983038	Propoxur	69.6	68.0	P/P	40 - 150
1983038	Pyraclostrobin	53.9	65.6	P/P	40 - 150
1983038	Triclopyr	78.5	83.4	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P343078

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1981837	AMPA	88.5	82.1	P/P	40 - 140
1981837	Endothall	95.6	98.7	P/P	40 - 140
1981837	Glufosinate	72.8	75.6	P/P	40 - 140
1981837	Glyphosate	79.2	86.0	P/P	40 - 140
1981837	Sucralose	91.5	86.4	P/P	40 - 150

Reference Method: SM 4500 F-C-97

Batch ID: P343807

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1982999	Fluoride	102	102	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P343397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1983001	Organic Carbon	97.6	96.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P343151

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982985	Turbidity	4.85	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P343282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983042	Calcium	1.36	Spike	P	0 - 20
1983042	Iron	1.65	Spike	P	0 - 20
1983042	Magnesium	1.47	Spike	P	0 - 20
1983042	Potassium	1.47	Spike	P	0 - 20
1983042	Sodium	0.562	Spike	P	0 - 20
1983042	Zinc	0.893	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983042	Arsenic	1.10	Spike	P	0 - 20
1983042	Cadmium	0.927	Spike	P	0 - 20
1983042	Chromium	0.255	Spike	P	0 - 20
1983042	Copper	0.0948	Spike	P	0 - 20
1983042	Nickel	0.330	Spike	P	0 - 20
1983042	Silver	0.600	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P343768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982981	Lead	1.15	Spike	P	0 - 20
1982981	Nickel	0.945	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982932	Chloride	0.00132	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P343436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982932	Sulfate	0.107	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982963	Ammonia-N	0.695	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P343555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983004	Ammonia-N	0.0933	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P343176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983002	Kjeldahl Nitrogen	0.384	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982964	NO2NO3-N	0.535	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P343477

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983004	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983010	Total-P	1.90	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P343286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983103	Total-P	2.60	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P343874

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1986142	Total-P	1.93	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P343137

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983011	O-Phosphate-P	0.738	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P343138

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983219	O-Phosphate-P	0.251	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P343276

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1984036	Aldrin	0.984	Spike	P	0 - 30
1984036	Alpha-BHC	4.04	Spike	P	0 - 30
1984036	Alpha-Chlordane	4.14	Spike	P	0 - 30
1984036	Beta-BHC	3.28	Spike	P	0 - 30
1984036	Carbophenothion	6.96	Spike	P	0 - 30
1984036	Chlorothalonil	34.3	Spike	F	0 - 30
1984036	Cypermethrin	1.53	Spike	P	0 - 30
1984036	DDD-p,p'	0.169	Spike	P	0 - 30
1984036	DDE-p,p'	2.70	Spike	P	0 - 30
1984036	DDT-p,p'	7.59	Spike	P	0 - 30
1984036	Delta-BHC	10.6	Spike	P	0 - 30
1984036	Dicofol	4.60	Spike	P	0 - 30
1984036	Dieldrin	5.31	Spike	P	0 - 30
1984036	Endosulfan I	4.54	Spike	P	0 - 30
1984036	Endosulfan II	11.0	Spike	P	0 - 30
1984036	Endosulfan Sulfate	2.78	Spike	P	0 - 30
1984036	Endrin	8.53	Spike	P	0 - 30
1984036	Endrin Aldehyde	32.9	Spike	F	0 - 30
1984036	Endrin Ketone	3.41	Spike	P	0 - 30
1984036	Gamma-BHC	29.4	Spike	P	0 - 30
1984036	Gamma-Chlordane	4.22	Spike	P	0 - 30
1984036	Heptachlor	0.540	Spike	P	0 - 30
1984036	Heptachlor Epoxide	3.89	Spike	P	0 - 30
1984036	Methoxychlor	6.83	Spike	P	0 - 30
1984036	Mirex	0.00301	Spike	P	0 - 30
1984036	Permethrin	0.828	Spike	P	0 - 30
1984036	Trifluralin	1.71	Spike	P	0 - 30
LFB	Aldrin	0.0278	LCS	P	0 - 30
LFB	Alpha-BHC	9.11	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.55	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270D

Batch ID: P343276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-BHC	8.31	LCS	P	0 - 30
LFB	Carbophenothion	10.9	LCS	P	0 - 30
LFB	Chlorothalonil	0.889	LCS	P	0 - 30
LFB	Cypermethrin	3.10	LCS	P	0 - 30
LFB	DDD-p,p'	2.50	LCS	P	0 - 30
LFB	DDE-p,p'	2.74	LCS	P	0 - 30
LFB	DDT-p,p'	2.09	LCS	P	0 - 30
LFB	Delta-BHC	7.38	LCS	P	0 - 30
LFB	Dicofol	2.71	LCS	P	0 - 30
LFB	Dieldrin	9.63	LCS	P	0 - 30
LFB	Endosulfan I	2.16	LCS	P	0 - 30
LFB	Endosulfan II	5.79	LCS	P	0 - 30
LFB	Endosulfan Sulfate	10.8	LCS	P	0 - 30
LFB	Endrin	12.8	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.84	LCS	P	0 - 30
LFB	Endrin Ketone	2.55	LCS	P	0 - 30
LFB	Gamma-BHC	4.03	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.64	LCS	P	0 - 30
LFB	Heptachlor	0.680	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.64	LCS	P	0 - 30
LFB	Methoxychlor	3.72	LCS	P	0 - 30
LFB	Mirex	1.92	LCS	P	0 - 30
LFB	Permethrin	0.738	LCS	P	0 - 30
LFB	Trifluralin	2.82	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P343441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983041	Acetochlor	24.6	Spike	P	0 - 30
1983041	Alachlor	21.7	Spike	P	0 - 30
1983041	Ametryn	21.9	Spike	P	0 - 30
1983041	Atrazine	14.6	Spike	P	0 - 30
1983041	Atrazine Desethyl	8.29	Spike	P	0 - 30
1983041	Azinphos Methyl	16.5	Spike	P	0 - 30
1983041	Bromacil	10.5	Spike	P	0 - 30
1983041	Butylate	7.87	Spike	P	0 - 30
1983041	Chlorpyrifos Ethyl	1.55	Spike	P	0 - 30
1983041	Chlorpyrifos Methyl	1.99	Spike	P	0 - 30
1983041	Cyanazine	3.42	Spike	P	0 - 30
1983041	Demeton	18.8	Spike	P	0 - 30
1983041	Diazinon	15.1	Spike	P	0 - 30
1983041	Disulfoton	33.7	Spike	F	0 - 30
1983041	EPTC	5.45	Spike	P	0 - 30
1983041	Ethion	1.25	Spike	P	0 - 30
1983041	Ethoprop	3.80	Spike	P	0 - 30
1983041	Fenamiphos	7.25	Spike	P	0 - 30
1983041	Fipronil	4.58	Spike	P	0 - 30
1983041	Fipronil Sulfide	12.2	Spike	P	0 - 30
1983041	Fipronil Sulfone	28.8	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P343441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983041	Fonofos	3.60	Spike	P	0 - 30
1983041	Hexazinone	18.4	Spike	P	0 - 30
1983041	Malathion	5.86	Spike	P	0 - 30
1983041	Metalaxyl	36.8	Spike	F	0 - 30
1983041	Metolachlor	25.5	Spike	P	0 - 30
1983041	Metribuzin	14.2	Spike	P	0 - 30
1983041	Mevinphos	20.2	Spike	P	0 - 30
1983041	Molinate	9.77	Spike	P	0 - 30
1983041	Norflurazon	38.7	Spike	F	0 - 30
1983041	Parathion Ethyl	15.4	Spike	P	0 - 30
1983041	Parathion Methyl	20.6	Spike	P	0 - 30
1983041	Pendimethalin	28.1	Spike	P	0 - 30
1983041	Phorate	24.0	Spike	P	0 - 30
1983041	Prometon	12.2	Spike	P	0 - 30
1983041	Prometryn	24.4	Spike	P	0 - 30
1983041	Simazine	26.3	Spike	P	0 - 30
1983041	Terbufos	3.87	Spike	P	0 - 30
1983041	Terbutylazine	19.1	Spike	P	0 - 30
LFB	Acetochlor	5.79	LCS	P	0 - 30
LFB	Alachlor	11.8	LCS	P	0 - 30
LFB	Ametryn	8.12	LCS	P	0 - 30
LFB	Atrazine	9.17	LCS	P	0 - 30
LFB	Atrazine Desethyl	10.7	LCS	P	0 - 30
LFB	Azinphos Methyl	8.77	LCS	P	0 - 30
LFB	Bromacil	2.88	LCS	P	0 - 30
LFB	Butylate	25.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	15.3	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.04	LCS	P	0 - 30
LFB	Cyanazine	4.59	LCS	P	0 - 30
LFB	Demeton	7.54	LCS	P	0 - 30
LFB	Diazinon	2.32	LCS	P	0 - 30
LFB	Disulfoton	21.9	LCS	P	0 - 30
LFB	EPTC	23.3	LCS	P	0 - 30
LFB	Ethion	10.1	LCS	P	0 - 30
LFB	Ethoprop	25.0	LCS	P	0 - 30
LFB	Fenamiphos	9.22	LCS	P	0 - 30
LFB	Fipronil	5.90	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.90	LCS	P	0 - 30
LFB	Fipronil Sulfone	15.9	LCS	P	0 - 30
LFB	Fonofos	13.8	LCS	P	0 - 30
LFB	Hexazinone	10.6	LCS	P	0 - 30
LFB	Malathion	9.20	LCS	P	0 - 30
LFB	Metalaxyl	5.70	LCS	P	0 - 30
LFB	Metolachlor	4.62	LCS	P	0 - 30
LFB	Metribuzin	20.4	LCS	P	0 - 30
LFB	Mevinphos	11.5	LCS	P	0 - 30
LFB	Molinate	18.7	LCS	P	0 - 30
LFB	Norflurazon	19.7	LCS	P	0 - 30
LFB	Parathion Ethyl	0.892	LCS	P	0 - 30
LFB	Parathion Methyl	15.6	LCS	P	0 - 30
LFB	Pendimethalin	5.11	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P343441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	15.0	LCS	P	0 - 30
LFB	Prometon	6.94	LCS	P	0 - 30
LFB	Prometryn	28.0	LCS	P	0 - 30
LFB	Simazine	5.20	LCS	P	0 - 30
LFB	Terbufos	16.2	LCS	P	0 - 30
LFB	Terbutylazine	8.06	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P343276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983745	Chlordane	11.1	Spike	P	0 - 30
1983745	Toxaphene	11.7	Spike	P	0 - 30
LFB	Chlordane	15.7	LCS	P	0 - 30
LFB	Toxaphene	8.24	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P342880

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983038	2,4-D	2.47	Spike	P	0 - 30
1983038	3-Hydroxycarbofuran	9.60	Spike	P	0 - 30
1983038	Acetaminophen	3.67	Spike	P	0 - 30
1983038	Aldicarb	1.92	Spike	P	0 - 30
1983038	Aldicarb Sulfone	1.78	Spike	P	0 - 30
1983038	Aldicarb Sulfoxide	5.92	Spike	P	0 - 30
1983038	Bentazon	16.4	Spike	P	0 - 30
1983038	Carbamazepine	3.18	Spike	P	0 - 30
1983038	Carbaryl	4.27	Spike	P	0 - 30
1983038	Carbofuran	4.35	Spike	P	0 - 30
1983038	Diuron	0.849	Spike	P	0 - 30
1983038	Fenuron	6.05	Spike	P	0 - 30
1983038	Fluridone	17.3	Spike	P	0 - 30
1983038	Hydrocodone	6.02	Spike	P	0 - 30
1983038	Imazapyr	14.2	Spike	P	0 - 30
1983038	Imidacloprid	6.33	Spike	P	0 - 30
1983038	Linuron	10.7	Spike	P	0 - 30
1983038	MCPP	10.1	Spike	P	0 - 30
1983038	Methiocarb	5.79	Spike	P	0 - 30
1983038	Methomyl	1.54	Spike	P	0 - 30
1983038	Oxamyl	10.2	Spike	P	0 - 30
1983038	Primidone	4.90	Spike	P	0 - 30
1983038	Propoxur	2.27	Spike	P	0 - 30
1983038	Pyraclostrobin	19.5	Spike	P	0 - 30
1983038	Triclopyr	5.98	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P343078

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1981837	AMPA	7.57	Spike	P	0 - 30
1981837	Endothall	3.11	Spike	P	0 - 30
1981837	Glufosinate	3.78	Spike	P	0 - 30
1981837	Glyphosate	8.27	Spike	P	0 - 30
1981837	Sucralose	5.76	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P343124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982961	Color (true)	1.70	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P343125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983012	Color (true)	1.28	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P343804

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982999	Total Alkalinity	1.09	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P343465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982986	TDS	0.371	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P343807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1982999	Fluoride	0.479	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P343397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1983001	Organic Carbon	1.17	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: 1983037
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	60.7	P	30 - 160

Lab Sample ID: 1983038
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	157	P	30 - 160
EPA 8321B	Acetaminophen-d4	157	P	30 - 160
EPA 8321B	Carbamazepine-d10	129	P	30 - 160
EPA 8321B	Carbamazepine-d10	129	P	30 - 160
EPA 8321B	Diuron-d6	83.6	P	30 - 160
EPA 8321B	Diuron-d6	83.6	P	30 - 160
EPA 8321B	Endothall-d6	105	P	40 - 160
EPA 8321B	Endothall-d6	105	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	58.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	58.0	P	40 - 160
EPA 8321B	Primidone-d5	136	P	30 - 160
EPA 8321B	Primidone-d5	136	P	30 - 160
EPA 8321B	Sucralose-d6	46.2	P	40 - 160
EPA 8321B	Sucralose-d6	46.2	P	40 - 160

Lab Sample ID: 1983039
Field Sample ID: G2CE0084

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	75.6	P	30 - 160
EPA 8321B	2,4-D-d3	75.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Acetaminophen-d4	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	77.4	P	30 - 160
EPA 8321B	Diuron-d6	77.4	P	30 - 160
EPA 8321B	Primidone-d5	98.7	P	30 - 160
EPA 8321B	Primidone-d5	98.7	P	30 - 160
EPA 8321B	Sucralose-d6	83.2	P	40 - 160
EPA 8321B	Sucralose-d6	83.2	P	40 - 160

Lab Sample ID: 1983040
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	73.1	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	54.9	P	34 - 101
EPA 8276	Decachlorobiphenyl	74.2	P	31 - 108
EPA 8276	PCNB	105	P	62 - 142

Quality Assurance Report Surrogates

Lab Sample ID: 1983041
Field Sample ID: G2CE0085

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	105	P	71 - 126
EPA 8270D	Terbufos-d10	115	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A83147

Included Lab Sample IDs: 1982997, 1982998, 1982999, 1983000, 1983009, 1983012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	90 - 115
Color (true)	102	101	P/P	90 - 115
Color (true)	96.1	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A83150

Included Lab Sample IDs: 1983005, 1983006, 1983007, 1983008, 1983011, 1983014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.0	99.9	P/P	90 - 110
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A83154

Included Lab Sample IDs: 1982997, 1982998, 1982999, 1983000, 1983009, 1983012

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

Reference Method: EPA 8321B

Run ID: A83192

Included Lab Sample IDs: 1983038, 1983039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	90.3	103	P/P	60 - 150
Endothall	99.7	105	P/P	60 - 150
Glufosinate	81.9	105	P/P	60 - 150
Glyphosate	106	126	P/P	60 - 150
Sucralose	106	107	P/P	60 - 130
Sucralose	110	103	P/P	60 - 130

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A83219

Included Lab Sample IDs: 1983001, 1983002, 1983003, 1983004, 1983010, 1983013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A83234

Included Lab Sample IDs: 1982997, 1982998, 1982999, 1983000, 1983009, 1983012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	101	P/P	90 - 110
Chloride	99.6	99.3	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A83237

Included Lab Sample IDs: 1983001, 1983002, 1983003, 1983004, 1983010, 1983013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	93.9	97.1	P/P	90 - 110
Organic Carbon	96.7	93.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A83243

Included Lab Sample IDs: 1983042, 1983043, 1983044, 1983045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.7	95.5	P/P	90 - 110
Iron	98.0	97.5	P/P	90 - 110
Magnesium	98.5	97.8	P/P	90 - 110
Potassium	98.4	97.9	P/P	90 - 110
Sodium	97.8	97.6	P/P	90 - 110
Zinc	98.2	99.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83258

Included Lab Sample IDs: 1983001, 1983002, 1983003, 1983004, 1983010, 1983013

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

Reference Method: EPA 8321B

Run ID: A83283

Included Lab Sample IDs: 1983038, 1983039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	85.4	88.6	P/P	50 - 150
2,4-D	89.6	85.4	P/P	50 - 150
3-Hydroxycarbofuran	112	115	P/P	60 - 150
Acetaminophen	99.5	114	P/P	60 - 150
Aldicarb	98.4	108	P/P	60 - 150
Aldicarb Sulfone	119	106	P/P	50 - 150
Aldicarb Sulfoxide	109	104	P/P	50 - 150
Bentazon	82.9	79.3	P/P	50 - 150
Bentazon	88.0	82.9	P/P	50 - 150
Carbamazepine	104	99.4	P/P	60 - 150
Carbaryl	115	110	P/P	60 - 150
Carbofuran	113	112	P/P	50 - 150
Diuron	106	111	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A83283

Included Lab Sample IDs: 1983038, 1983039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	110	119	P/P	60 - 150
Fluridone	98.9	92.0	P/P	60 - 160
Hydrocodone	113	112	P/P	60 - 150
Imazapyr	87.5	99.1	P/P	50 - 150
Imidacloprid	108	111	P/P	60 - 150
Linuron	104	107	P/P	60 - 150
MCPPP	102	94.2	P/P	50 - 150
MCPPP	94.2	94.2	P/P	50 - 150
Methiocarb	107	108	P/P	50 - 150
Methomyl	115	116	P/P	50 - 150
Oxamyl	120	116	P/P	50 - 150
Primidone	105	98.8	P/P	60 - 150
Propoxur	112	113	P/P	50 - 150
Pyraclostrobin	113	107	P/P	60 - 150
Triclopyr	90.9	95.7	P/P	50 - 150
Triclopyr	95.7	96.4	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A83285

Included Lab Sample IDs: 1983001, 1983002, 1983003, 1983004, 1983010, 1983013

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83294

Included Lab Sample IDs: 1983042, 1983043, 1983044, 1983045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	100	P/P	90 - 110
Cadmium	98.3	99.8	P/P	90 - 110
Chromium	97.4	99.0	P/P	90 - 110
Copper	99.8	99.2	P/P	90 - 110
Nickel	99.5	99.1	P/P	90 - 110
Silver	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83316

Included Lab Sample IDs: 1983001, 1983002, 1983004, 1983010, 1983013

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

Reference Method: EPA 8270D

Run ID: A83344

Included Lab Sample IDs: 1983040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A83344

Included Lab Sample IDs: 1983040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	98.6		P	80 - 120
Alpha-Chlordane	96.9		P	80 - 120
Beta-BHC	96.8		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cypermethrin	87.3		P	80 - 120
DDD-p,p'	98.3		P	80 - 120
DDE-p,p'	99.1		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	100		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	96.2		P	80 - 120
Endosulfan I	91.0		P	80 - 120
Endosulfan II	91.9		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	97.1		P	80 - 120
Endrin Ketone	97.6		P	80 - 120
Gamma-BHC	97.5		P	80 - 120
Gamma-Chlordane	96.4		P	80 - 120
Heptachlor	93.8		P	80 - 120
Heptachlor Epoxide	96.1		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	96.1		P	80 - 120
Permethrin	93.0		P	80 - 120
Trifluralin	96.4		P	80 - 120

Reference Method: SM 2320 B-97

Run ID: A83368

Included Lab Sample IDs: 1982997, 1982998, 1982999, 1983000, 1983009, 1983012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.8	P/P	90 - 110
Total Alkalinity	99.8	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A83368

Included Lab Sample IDs: 1982997, 1982998, 1982999, 1983000, 1983009, 1983012

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	99.1	P/P	90 - 110
Fluoride	99.1	98.1	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A83411

Included Lab Sample IDs: 1983041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	94.0		P	80 - 120
Alachlor	94.8		P	80 - 120
Ametryn	92.4		P	80 - 120
Atrazine	95.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A83411

Included Lab Sample IDs: 1983041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine Desethyl	86.6		P	80 - 120
Azinphos Methyl	82.9		P	80 - 120
Bromacil	89.6		P	80 - 120
Butylate	93.6		P	80 - 120
Chlorpyrifos Ethyl	86.3		P	80 - 120
Chlorpyrifos Methyl	95.3		P	80 - 120
Cyanazine	65.4*		F	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	93.5		P	80 - 120
Disulfoton	93.5		P	80 - 120
EPTC	93.9		P	80 - 120
Ethion	89.7		P	80 - 120
Ethoprop	95.9		P	80 - 120
Fenamiphos	100		P	80 - 120
Fipronil	98.3		P	80 - 120
Fipronil Sulfide	90.8		P	80 - 120
Fipronil Sulfone	100		P	80 - 120
Fonofos	91.8		P	80 - 120
Hexazinone	94.6		P	80 - 120
Malathion	90.7		P	80 - 120
Metalaxyl	92.5		P	80 - 120
Metolachlor	92.2		P	80 - 120
Metribuzin	76.9*		F	80 - 120
Mevinphos	98.6		P	80 - 120
Molinate	93.0		P	80 - 120
Norflurazon	100		P	80 - 120
Parathion Ethyl	88.1		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	91.6		P	80 - 120
Phorate	82.2		P	80 - 120
Prometon	95.3		P	80 - 120
Prometryn	90.2		P	80 - 120
Simazine	89.6		P	80 - 120
Terbufos	94.2		P	80 - 120
Terbuthylazine	95.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A83412

Included Lab Sample IDs: 1983042, 1983043, 1983044, 1983045

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	97.8	97.7	P/P	90 - 110
Lead	98.7	97.8	P/P	90 - 110
Nickel	97.2	96.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A83423

Included Lab Sample IDs: 1983003

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A83441
Included Lab Sample IDs: 1983040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Aldehyde	92.0		P	80 - 120

Reference Method: EPA 8276
Run ID: A83448
Included Lab Sample IDs: 1983040

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	99.8		P	80 - 120

Reference Method: EPA 8321B
Run ID: A83600
Included Lab Sample IDs: 1983038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	118	139	P/P	60 - 150
Carbamazepine	134	144	P/P	60 - 150
Diuron	124	131	P/P	60 - 150
Fenuron	130	137	P/P	60 - 150
Fluridone	107	102	P/P	60 - 160
Hydrocodone	112	124	P/P	60 - 150
Imazapyr	126	111	P/P	50 - 150
Imidacloprid	128	132	P/P	60 - 150
Linuron	107	116	P/P	60 - 150
Primidone	116	122	P/P	60 - 150
Pyraclostrobin	95.0	91.0	P/P	60 - 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			Precision SMP	MS
					LCS		
EPA 180.1 Rev. 2.0	Turbidity					4.85	
EPA 200.7 Rev. 4.4	Calcium	100	101	99.0			1.36
	Iron	104	103	103	105		1.65
	Magnesium	107	103	104	106		1.47
	Potassium	101	97.7	98.0	100		1.47
	Sodium	99.4	100	99.5			0.562
	Zinc	98.6	99.0	97.3	98.2		0.893
EPA 200.8 Rev. 5.4	Arsenic	103	103	102	101		1.10
	Cadmium	103	106	104	103		0.927
	Chromium	104	106	104	104		0.255
	Copper	96.6	98.2	99.6	99.7		0.0948
	Lead	95.8	97.1	98.2	96.6		1.15
	Nickel	96.1	97.8	97.5	97.8		0.330
	Nickel	99.5	98.0	97.0	96.0		0.945

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision	
							LCS	SMP
EPA 200.8 Rev. 5.4	Silver	110		109	107	107		
EPA 300.0 Rev. 2.1	Chloride	99.0		94.1	99.6			0.0013
	Sulfate	97.8		91.0	98.3			0.107
EPA 350.1 Rev. 2.0	Ammonia-N	95.0		94.4	95.4			
	Ammonia-N	94.4		96.3	96.1			0.0933
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.2		99.6	99.2			0.384
EPA 353.2 Rev. 2.0	NO2NO3-N	101		101				0.535
	NO2NO3-N	102		97.6	97.6			0.0
EPA 365.1 Rev. 2.0	Total-P	104		101	103			1.90
	Total-P	103		97.4	102			2.60
	Total-P	103		101	99.4			1.93
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5		94.5	95.2			0.738
	O-Phosphate-P	100		96.9	96.6			0.251
EPA 8270D	Acetochlor	90.2	95.5	88.1	113	5.79		24.6
	Alachlor	91.1	103	114	91.3	11.8		21.7
	Aldrin	33.3	33.3	48.9	49.3	0.0278		0.984
	Alpha-BHC	81.3	89.0	92.5	88.9	9.11		4.04
	Alpha-Chlordane	79.6	80.9	78.5	81.8	1.55		4.14
	Ametryn	71.3	65.7	206	165	8.12		21.9
	Atrazine	90.2	98.9			9.17		14.6
	Atrazine Desethyl	92.5	83.0	83.4	76.7	10.7		8.29
	Azinphos Methyl	131	120	118	140	8.77		16.5
	Beta-BHC	89.8	97.5	109	106	8.31		3.28
	Bromacil	94.0	91.3	79.2	88.0	2.88		10.5
	Butylate	52.8	68.1	50.3	54.4	25.3		7.87
	Carbophenothion	98.5	110	112	120	10.9		6.96
	Chlorothalonil	68.3	68.9	80.4	56.8	0.889		34.3
	Chlorpyrifos Ethyl	84.9	98.9	77.1	75.9	15.3		1.55
	Chlorpyrifos Methyl	93.8	99.6	93.2	95.1	6.04		1.99
	Cyanazine	201	192	177	183	4.59		3.42
	Cypermethrin	78.8	81.2	79.7	78.4	3.10		1.53
	DDD-p,p'	91.2	93.5	91.6	91.5	2.50		0.169
	DDE-p,p'	81.9	84.2	83.4	85.7	2.74		2.70
	DDT-p,p'	87.9	89.8	92.8	86.0	2.09		7.59
	Delta-BHC	91.0	97.9	127	115	7.38		10.6
	Demeton	56.2	60.6	73.1	88.3	7.54		18.8
	Diazinon	103	101	121	104	2.32		15.1
	Dicofol	78.2	80.3	86.1	82.3	2.71		4.60
	Dieldrin	79.0	87.0	80.6	89.2	9.63		5.31
	Disulfoton	87.9	70.6	65.9	92.7	21.9		33.7
	Endosulfan I	82.6	80.9	80.6	84.3	2.16		4.54
	Endosulfan II	91.8	86.6	82.8	92.4	5.79		11.0
	Endosulfan Sulfate	93.0	83.5	90.7	88.2	10.8		2.78
	Endrin	79.8	90.6	89.5	82.2	12.8		8.53
	Endrin Aldehyde	73.3	71.2	68.2	48.9	2.84		32.9
	Endrin Ketone	87.2	85.0	98.7	95.4	2.55		3.41
	EPTC	58.4	46.2	45.6	43.2	23.3		5.45
	Ethion	92.7	103	93.7	92.5	10.1		1.25
	Ethoprop	92.3	71.8	92.3	88.9	25.0		3.80
	Fenamiphos	96.8	88.3	82.0	76.2	9.22		7.25
	Fipronil	84.9	90.1	74.6	78.1	5.90		4.58
	Fipronil Sulfide	70.3	73.1	50.4	57.0	3.90		12.2
	Fipronil Sulfone	67.2	78.8	67.0	50.1	15.9		28.8
	Fonofos	88.1	76.7	88.9	85.8	13.8		3.60

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Gamma-BHC	83.6	87.0	101	74.8	4.03	29.4
	Gamma-Chlordane	76.2	77.4	77.4	80.7	1.64	4.22
	Heptachlor	66.6	67.0	63.2	63.6	0.680	0.540
	Heptachlor Epoxide	77.7	79.0	80.6	83.8	1.64	3.89
	Hexazinone	88.8	98.7	73.7	88.6	10.6	18.4
	Malathion	95.9	87.4	75.3	79.9	9.20	5.86
	Metalaxyl	82.0	86.9	65.1	94.5	5.70	36.8
	Methoxychlor	89.0	92.4	82.2	88.0	3.72	6.83
	Metolachlor	98.9	94.5	72.7	95.3	4.62	25.5
	Metribuzin	120	97.6	173	199	20.4	14.2
	Mevinphos	73.7	65.7	81.9	66.8	11.5	20.2
	Mirex	75.7	77.2	74.8	74.8	1.92	0.0030
	Molinate	72.8	60.4	69.0	76.1	18.7	9.77
	Norflurazon	77.8	94.9	48.9	72.4	19.7	38.7
	Parathion Ethyl	85.8	85.0	75.5	88.1	0.892	15.4
	Parathion Methyl	99.4	116	97.7	120	15.6	20.6
	Pendimethalin	92.2	97.0	80.6	107	5.11	28.1
	Permethrin	81.8	82.4	83.2	83.9	0.738	0.828
	Phorate	87.8	75.5	88.0	69.2	15.0	24.0
	Prometon	88.7	95.0	89.9	102	6.94	12.2
	Prometryn	69.2	91.7	74.8	95.6	28.0	24.4
	Simazine	93.2	88.5	86.3	112	5.20	26.3
	Terbufos	95.3	81.0	91.9	88.4	16.2	3.87
	Terbutylazine	86.7	94.0	89.0	108	8.06	19.1
	Trifluralin	79.7	82.0	81.2	79.8	2.82	1.71
EPA 8276	Chlordane	108	92.2	74.8	83.6	15.7	11.1
	Toxaphene	75.9	82.4	57.2	50.9	8.24	11.7
EPA 8321B	2,4-D	100		103	106		2.47
	3-Hydroxycarbofuran	112		146	133		9.60
	Acetaminophen	120		162	156		3.67
	Aldicarb	82.6		96.5	98.4		1.92
	Aldicarb Sulfone	119		160	163		1.78
	Aldicarb Sulfoxide	118		102	108		5.92
	AMPA	89.0		88.5	82.1		7.57
	Bentazon	109		36.3	30.2		16.4
	Carbamazepine	84.9		108	105		3.18
	Carbaryl	73.1		56.0	53.6		4.27
	Carbofuran	71.6		72.8	69.8		4.35
	Diuron	65.1		73.9	71.7		0.849
	Endothall	105		95.6	98.7		3.11
	Fenuron	124		110	104		6.05
	Fluridone	60.3		56.1	47.2		17.3
	Glufosinate	68.6		72.8	75.6		3.78
	Glyphosate	65.6		79.2	86.0		8.27
	Hydrocodone	112		123	116		6.02
	Imazapyr	88.7		109	92.7		14.2
	Imidacloprid	115		248	233		6.33
	Linuron	78.1		82.0	91.2		10.7
	MCPP	92.3		75.1	83.1		10.1
	Methiocarb	74.5		76.7	81.3		5.79
	Methomyl	121		99.3	97.8		1.54
	Oxamyl	102		119	107		10.2
	Primidone	108		108	113		4.90
	Propoxur	74.7		69.6	68.0		2.27

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Pyraclostrobin	70.8	53.9	65.6		19.5
	Sucralose	114	91.5	86.4		5.76
	Triclopyr	91.0	78.5	83.4		5.98
SM 2120 B	Color (true)				1.70	
	Color (true)				1.28	
SM 2320 B-97	Total Alkalinity	100			1.09	
SM 2540 C-97	TDS				0.371	
SM 4500 F-C-97	Fluoride	95.1	102	102		0.479
SM 5310 B-00	Organic Carbon	97.6	97.6	96.3		1.17

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1983042, 1983043, 1983044, 1983045
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1983042, 1983043, 1983044, 1983045
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1983001, 1983002, 1983003, 1983004, 1983010, 1983013
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1983001, 1983002, 1983003, 1983004, 1983010, 1983013
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1983001, 1983002, 1983003, 1983004, 1983010, 1983013
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1983001, 1983002, 1983003, 1983004, 1983010, 1983013
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1983005, 1983006, 1983007, 1983008, 1983011, 1983014
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1983040
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1983041
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1983040
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1983037
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1983038, 1983039
SM 2120 B / E31780	True Color measured at 450 nm	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1983001, 1983002, 1983003, 1983004, 1983010, 1983013

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	04/10/2018			04/10/2018 18:04	William L. Brown IV	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
EPA 200.7 Rev. 4.4	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/13/2018 16:51	Betina Topolski	1983042
	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/13/2018 17:17	Betina Topolski	1983043
	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/13/2018 17:25	Betina Topolski	1983044
	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/13/2018 17:32	Betina Topolski	1983045
EPA 200.8 Rev. 5.4	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/16/2018 16:56	Nadine Brooks	1983042
	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/16/2018 17:25	Nadine Brooks	1983043
	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/16/2018 17:35	Nadine Brooks	1983044
	04/10/2018	04/12/2018 14:50	Elliott D. Healy	04/16/2018 17:44	Nadine Brooks	1983045
	04/10/2018	04/20/2018 08:59	Allison Taylor	04/23/2018 19:24	Nadine Brooks	1983044
	04/10/2018	04/20/2018 08:59	Allison Taylor	04/23/2018 20:11	Nadine Brooks	1983042
	04/10/2018	04/20/2018 08:59	Allison Taylor	04/23/2018 20:18	Nadine Brooks	1983043
	04/10/2018	04/20/2018 08:59	Allison Taylor	04/23/2018 20:24	Nadine Brooks	1983045
EPA 300.0 Rev. 2.1	04/10/2018			04/13/2018 17:18	Lipi Saha	1982998
	04/10/2018			04/13/2018 19:41	Lipi Saha	1982997
	04/10/2018			04/13/2018 19:53	Lipi Saha	1982999
	04/10/2018			04/13/2018 20:05	Lipi Saha	1983000
	04/10/2018			04/13/2018 20:17	Lipi Saha	1983009
	04/10/2018			04/13/2018 20:29	Lipi Saha	1983012
EPA 350.1 Rev. 2.0	04/10/2018			04/16/2018 12:35	Ping Hua	1983001
	04/10/2018			04/16/2018 12:36	Ping Hua	1983002
	04/10/2018			04/16/2018 12:38	Ping Hua	1983003
	04/10/2018			04/16/2018 12:48	Ping Hua	1983004
	04/10/2018			04/16/2018 12:53	Ping Hua	1983010
	04/10/2018			04/16/2018 12:54	Ping Hua	1983013
EPA 351.2 Rev. 2.0	04/10/2018	04/11/2018 10:30	Adrian Shelby	04/13/2018 10:59	Joseph Suarez	1983001
	04/10/2018	04/11/2018 10:30	Adrian Shelby	04/13/2018 11:01	Joseph Suarez	1983002
	04/10/2018	04/11/2018 10:30	Adrian Shelby	04/13/2018 11:05	Joseph Suarez	1983003
	04/10/2018	04/11/2018 10:30	Adrian Shelby	04/13/2018 11:07	Joseph Suarez	1983004
	04/10/2018	04/11/2018 10:30	Adrian Shelby	04/13/2018 11:08	Joseph Suarez	1983010
	04/10/2018	04/11/2018 10:30	Adrian Shelby	04/13/2018 11:10	Joseph Suarez	1983013
EPA 353.2 Rev. 2.0	04/10/2018			04/16/2018 13:22	Lauren Bottorf	1983001
	04/10/2018			04/16/2018 13:23	Lauren Bottorf	1983002
	04/10/2018			04/16/2018 13:24	Lauren Bottorf	1983003
	04/10/2018			04/16/2018 13:31	Lauren Bottorf	1983004
	04/10/2018			04/16/2018 13:39	Lauren Bottorf	1983010
	04/10/2018			04/16/2018 13:41	Lauren Bottorf	1983013
EPA 365.1 Rev. 2.0	04/10/2018	04/12/2018 12:40	Sima Feizi	04/18/2018 12:29	Beverly Y. Sanders	1983001
	04/10/2018	04/12/2018 12:40	Sima Feizi	04/18/2018 12:30	Beverly Y. Sanders	1983002

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	04/10/2018	04/12/2018 12:40	Sima Feizi	04/18/2018 12:31	Beverly Y. Sanders	1983004
	04/10/2018	04/12/2018 12:40	Sima Feizi	04/18/2018 12:32	Beverly Y. Sanders	1983010
	04/10/2018	04/12/2018 12:40	Sima Feizi	04/18/2018 12:41	Beverly Y. Sanders	1983013
	04/10/2018	04/23/2018 13:56	Sima Feizi	04/24/2018 13:33	Beverly Y. Sanders	1983003
EPA 365.1 Rev. 2.0 dissolved	04/10/2018			04/10/2018 15:12	Megan Treadwell	1983011
	04/10/2018			04/10/2018 15:29	Megan Treadwell	1983005
	04/10/2018			04/10/2018 15:30	Megan Treadwell	1983006
	04/10/2018			04/10/2018 15:35	Megan Treadwell	1983007
	04/10/2018			04/10/2018 15:36	Megan Treadwell	1983008
	04/10/2018			04/10/2018 15:37	Megan Treadwell	1983014
EPA 8270D	04/10/2018	04/13/2018 09:00	Fe-Val Siddell	04/18/2018 20:03	Dinesh Mishra	1983040
	04/10/2018	04/16/2018 10:00	John Kaba	04/23/2018 15:22	Vandana T. Nagar	1983041
EPA 8276	04/10/2018	04/13/2018 09:00	Fe-Val Siddell	04/24/2018 02:28	Vandana T. Nagar	1983040
EPA 8321B	04/10/2018	04/10/2018 13:00	Julie Michelle Frank	04/10/2018 16:13	Julie Michelle Frank	1983039
	04/10/2018	04/10/2018 13:00	Julie Michelle Frank	04/11/2018 15:24	Julie Michelle Frank	1983038
	04/10/2018	04/11/2018 09:00	Hoor Shaik	04/13/2018 01:10	Julie Michelle Frank	1983037
	04/10/2018	04/11/2018 09:00	Hoor Shaik	04/13/2018 11:33	Julie Michelle Frank	1983039
	04/10/2018	04/11/2018 09:00	Hoor Shaik	04/13/2018 14:26	Julie Michelle Frank	1983039
	04/10/2018	04/11/2018 09:00	Hoor Shaik	04/13/2018 17:54	Julie Michelle Frank	1983038
	04/10/2018	04/11/2018 09:00	Hoor Shaik	04/14/2018 03:42	Julie Michelle Frank	1983039
	04/10/2018	04/11/2018 09:00	Hoor Shaik	04/20/2018 20:44	Julie Michelle Frank	1983038
SM 2120 B	04/10/2018			04/10/2018 15:49	Tanya Welborn	1982997
	04/10/2018			04/10/2018 15:52	Tanya Welborn	1982998, 1982999
	04/10/2018			04/10/2018 15:54	Tanya Welborn	1983009
	04/10/2018			04/10/2018 15:55	Tanya Welborn	1983012
	04/10/2018			04/10/2018 16:06	Tanya Welborn	1983000
SM 2320 B-97	04/10/2018			04/18/2018 18:30	Dale L. Simmons	1982999
	04/10/2018			04/18/2018 20:40	Dale L. Simmons	1982997
	04/10/2018			04/18/2018 20:52	Dale L. Simmons	1982998
	04/10/2018			04/18/2018 21:02	Dale L. Simmons	1983000
	04/10/2018			04/18/2018 21:12	Dale L. Simmons	1983009
	04/10/2018			04/18/2018 21:22	Dale L. Simmons	1983012
SM 2540 C-97	04/10/2018			04/11/2018 15:02	Yijie Li	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 2540 D-97	04/10/2018			04/11/2018 15:02	Yijie Li	1982997, 1982998, 1982999, 1983000, 1983009, 1983012
SM 4500 F-C-97	04/10/2018			04/18/2018 18:23	Dale L. Simmons	1982999
	04/10/2018			04/18/2018 20:40	Dale L. Simmons	1982997
	04/10/2018			04/18/2018 20:52	Dale L. Simmons	1982998
	04/10/2018			04/18/2018 21:02	Dale L. Simmons	1983000

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	04/10/2018			04/18/2018 21:12	Dale L. Simmons	1983009
	04/10/2018			04/18/2018 21:22	Dale L. Simmons	1983012
SM 5310 B-00	04/10/2018			04/13/2018 03:30	Julia Storbeck	1983001
	04/10/2018			04/13/2018 05:01	Julia Storbeck	1983002
	04/10/2018			04/13/2018 05:16	Julia Storbeck	1983003
	04/10/2018			04/13/2018 05:30	Julia Storbeck	1983004
	04/10/2018			04/13/2018 05:46	Julia Storbeck	1983010
	04/10/2018			04/13/2018 06:00	Julia Storbeck	1983013