

Chemical Analysis Report

NE-DIST-2018-02-02-02

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

Event Description: **Gainesville South**
Request ID: **RQ-2018-01-22-09**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way W
Suite 100
Jacksonville, FL 32256-7577
Attn: Nicole Frederick

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 26-FEB-2018 16:53

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light gray rectangular background.

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: Lochloosa Slough at SE 225

Collection Date/Time: 02/01/2018 12:30

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964142	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P339263	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P339699	
		Sulfate	0.62		mg SO4/L	P339704	
	SM 2120 B	Color (true)	360		PCU	P339258	
	SM 2320 B-97	Total Alkalinity	5.9		mg CaCO3/L	P339979	
	SM 2540 C-97	TDS	126		mg/L	P339747	
	SM 2540 D-97	TSS	2	I	mg/L	P339686	
	SM 4500 F-C-97	Fluoride	0.056	I	mg F/L	P340472	
1964143	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P339679	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P339277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P339338	
	EPA 365.1 Rev. 2.0	Total-P	0.073		mg P/L	P339577	
	SM 5310 B-00	Organic Carbon	36		mg C/L	P340071	
1964144	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.054		mg P/L	P339314	
1964169	EPA 200.7 Rev. 4.4	Calcium	6.78		mg/L	P339412	
		Iron	580		ug/L	P339412	
		Magnesium	1.94		mg/L	P339412	
		Potassium	0.80	I	mg/L	P339412	
		Sodium	5.7		mg/L	P339412	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P339412	
		Arsenic	0.44		ug/L	P339412	
		Cadmium	0.020	U	ug/L	P339412	
		Chromium	7.5		ug/L	P339412	
		Copper	0.31	I	ug/L	P339412	
		Lead	0.25		ug/L	P339412	
		Nickel	3.32		ug/L	P339412	
		Silver	0.010	U	ug/L	P339412	

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: Lochloosa Slough at SE 225

Collection Date/Time: 02/01/2018 12:30

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964165	EPA 8321B	2,4-D	0.0020	U	ug/L	P339218	
		Sucralose**	0.010	U	ug/L	P339296	
		Bentazon	8.0E-04	U	ug/L	P339218	
		MCP	0.0020	U	ug/L	P339218	
		Triclopyr**	0.0040	U	ug/L	P339218	
		Imidacloprid	0.0073	I	ug/L	P339218	
		Diuron	0.0020	U	ug/L	P339218	
		Pyraclostrobin**	0.0020	U	ug/L	P339218	
		Primidone**	0.0040	U	ug/L	P339218	
		Linuron	0.0040	U	ug/L	P339218	

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964165	EPA 8321B	Acetaminophen**	0.0080	U	ug/L	P339218	
		Fenuron	0.0080	U	ug/L	P339218	
		Carbamazepine**	4.0E-04	U	ug/L	P339218	
		Fluridone**	0.0012	I	ug/L	P339218	
		Glyphosate**	0.59		ug/L	P339377	
		AMPA**	0.10	U	ug/L	P339377	
		Aldicarb	0.020	U	ug/L	P339218	
		Aldicarb Sulfone	0.0020	U	ug/L	P339218	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P339218	
		Carbaryl	0.0020	U	ug/L	P339218	
		Carbofuran	0.0020	U	ug/L	P339218	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P339218	
		Methiocarb	0.0020	U	ug/L	P339218	
		Methomyl	0.0020	U	ug/L	P339218	
		Oxamyl	0.0020	U	ug/L	P339218	
1964166	EPA 8270D	Propoxur	0.0020	U	ug/L	P339218	
		Aldrin	4.2	U	ng/L	P339743	
		Alpha-BHC	2.1	U	ng/L	P339743	
		Beta-BHC	4.2	U	ng/L	P339743	
		Delta-BHC	4.2	U	ng/L	P339743	
		Gamma-BHC	4.2	U	ng/L	P339743	
		Carbophenothion	4.2	U	ng/L	P339743	
		Chlorothalonil	2.1	UJ	ng/L	P339743	MS, RPD
		Cypermethrin	21	U	ng/L	P339743	
		DDD-p,p'	3.2	U	ng/L	P339743	
		DDE-p,p'	3.2	U	ng/L	P339743	
		DDT-p,p'	3.2	U	ng/L	P339743	
		Dieldrin	4.2	U	ng/L	P339743	
		Endosulfan I	4.2	U	ng/L	P339743	
		Endosulfan II	4.2	U	ng/L	P339743	MS
1964167	EPA 8270D	Endosulfan Sulfate	2.1	U	ng/L	P339743	
		Endrin	2.1	U	ng/L	P339743	
		Endrin Aldehyde	2.1	U	ng/L	P339743	
		Heptachlor	1.6	U	ng/L	P339743	
		Heptachlor Epoxide	2.1	U	ng/L	P339743	
		Methoxychlor	4.2	U	ng/L	P339743	
		Mirex	2.1	U	ng/L	P339743	
		Permethrin	11	U	ng/L	P339743	
		Trifluralin	1.1	U	ng/L	P339743	
		Alpha-Chlordane	1.1	U	ng/L	P339743	
		Gamma-Chlordane	1.1	U	ng/L	P339743	
		Endrin Ketone	2.1	U	ng/L	P339743	
		Dicofol	32	UJ	ng/L	P339743	RPD
		Chlordane**	2.6	U	ng/L	P339743	
		Toxaphene**	13	U	ng/L	P339743	
	EPA 8276						

Field ID: G1NE0860

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964168	EPA 8270D	Alachlor	0.25	U	ng/L	P339294	
		Ametryn	0.32	UJ	ng/L	P339294	LCS, MS
		Atrazine	0.25	U	ng/L	P339294	
		Atrazine Desethyl	1.5	U	ng/L	P339294	MS, RPD
		Azinphos Methyl	2.2	U	ng/L	P339294	
		Bromacil	0.50	U	ng/L	P339294	
		Butylate	0.40	U	ng/L	P339294	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P339294	MS
		Chlorpyrifos Methyl	0.099	U	ng/L	P339294	MS
		Demeton	2.0	U	ng/L	P339294	
		Diazinon	0.12	U	ng/L	P339294	
		Disulfoton	0.50	U	ng/L	P339294	
		EPTC	1.2	UJ	ng/L	P339294	LCS, RPD
		Ethion	0.15	U	ng/L	P339294	
		Ethoprop	0.099	U	ng/L	P339294	
		Fenamiphos	0.25	U	ng/L	P339294	
		Fipronil	0.25	U	ng/L	P339294	
		Fipronil Sulfide	0.15	U	ng/L	P339294	
		Fipronil Sulfone	0.15	U	ng/L	P339294	
		Hexazinone	0.50	U	ng/L	P339294	
		Malathion	0.35	U	ng/L	P339294	MS
		Metribuzin	0.20	U	ng/L	P339294	
		Mevinphos	0.50	U	ng/L	P339294	
		Molinate	0.30	U	ng/L	P339294	
		Norflurazon	0.50	U	ng/L	P339294	
		Pendimethalin	0.99	U	ng/L	P339294	
		Phorate	0.25	U	ng/L	P339294	
		Prometon	0.89	U	ng/L	P339294	
		Prometryn	0.20	U	ng/L	P339294	
		Simazine	0.50	U	ng/L	P339294	
		Terbufos	0.099	U	ng/L	P339294	
		Terbuthylazine	0.42	U	ng/L	P339294	
		Fonofos	0.20	U	ng/L	P339294	
		Metaxyl	0.25	U	ng/L	P339294	
		Metolachlor	0.25	U	ng/L	P339294	
		Acetochlor	0.25	U	ng/L	P339294	
		Cyanazine	0.50	U	ng/L	P339294	
		Parathion Ethyl	0.25	U	ng/L	P339294	MS
		Parathion Methyl	0.25	UJ	ng/L	P339294	LCS, MS

Ref. Method and Comment:

EPA 8321B: MS accuracy for 2,4-D 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: Moss Lee Lake Center

Collection Date/Time: 02/01/2018 11:00

Field ID: G3NE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964145	EPA 180.1 Rev. 2.0	Turbidity	0.55		NTU	P339264	
	EPA 300.0 Rev. 2.1	Chloride	9.9		mg Cl/L	P339699	
		Sulfate	0.92		mg SO4/L	P339704	
	SM 2120 B	Color (true)	180		PCU	P339258	
	SM 2320 B-97	Total Alkalinity	1.5	I	mg CaCO3/L	P339979	
	SM 2540 C-97	TDS	68		mg/L	P339747	
	SM 2540 D-97	TSS	2	I	mg/L	P339686	
	SM 4500 F-C-97	Fluoride	0.071	I	mg F/L	P340472	
1964149	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P339679	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P339277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P339338	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P339577	
	SM 5310 B-00	Organic Carbon	24		mg C/L	P340071	
1964153	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P339314	

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 Jeffords Center

Collection Date/Time: 02/01/2018 11:45

Field ID: 20020055

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964146	EPA 180.1 Rev. 2.0	Turbidity	4.5	A	NTU	P339264	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P339699	
		Sulfate	4.8		mg SO4/L	P339704	
	SM 2120 B	Color (true)	260		PCU	P339258	
	SM 2320 B-97	Total Alkalinity	0.68	I	mg CaCO3/L	P339979	
	SM 2540 C-97	TDS	71		mg/L	P339747	
	SM 2540 D-97	TSS	3	I	mg/L	P339686	
	SM 4500 F-C-97	Fluoride	0.038	I	mg F/L	P340473	
1964150	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P339680	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P339277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.060		mg N/L	P339338	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P339577	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P340071	
1964154	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P339314	

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: Alligator Creek Above the Starke WWTP

Collection Date/Time: 02/01/2018 10:00

Field ID: 21030076

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964147	EPA 180.1 Rev. 2.0	Turbidity	8.5		NTU	P339264	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P339699	
		Sulfate	21		mg SO4/L	P339704	
	SM 2120 B	Color (true)	200		PCU	P339258	

Field ID: 21030076

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964147	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P339979	
	SM 2540 C-97	TDS	136		mg/L	P339747	
	SM 2540 D-97	TSS	9	I	mg/L	P339686	
	SM 4500 F-C-97	Fluoride	0.036	I	mg F/L	P340473	
1964151	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P339680	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.62		mg N/L	P339277	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038		mg N/L	P339338	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P339577	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P340071	
1964155	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.016		mg P/L	P339314	

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: P339263

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P339264

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P339412

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: P339412

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339699

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339704

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339679

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339680

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339277

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339338

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339577

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339314

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

Reference Method: EPA 8270D
Batch ID: P339294

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P339294

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

Reference Method: EPA 8270D

Batch ID: P339743

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P339743

Component	Result	Code	Units
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 8276
Batch ID: P339743

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	12	U	ng/L

Reference Method: EPA 8321B
Batch ID: P339218

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	0.0080	U	ug/L
Fluridone	8.0E-04	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P339296

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P339377

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P339258

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P339979

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

Reference Method: SM 2540 C-97
Batch ID: P339747

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P339686

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P340472

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P340473

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P340071

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: P339412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	111		P	85 - 115
Magnesium	108		P	85 - 115
Potassium	108		P	85 - 115
Sodium	110		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	102		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	99.7		P	85 - 115
Copper	98.7		P	85 - 115
Lead	100		P	85 - 115
Nickel	100		P	85 - 115
Silver	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339699

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339704

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339679

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339680

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339277

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	91.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339338

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339577

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.7		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339314

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

Reference Method: EPA 8270D
Batch ID: P339294

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	113	90.2	P/P	74 - 119
Alachlor	116	95.3	P/P	75 - 118
Ametryn	221	164	F/F	59 - 137
Atrazine	119	111	P/P	73 - 120
Atrazine Desethyl	102	93.3	P/P	19 - 129
Azinphos Methyl	152	141	P/P	65 - 181
Bromacil	89.2	76.7	P/P	43 - 123
Butylate	52.5	50.1	P/P	28 - 85.0
Chlorpyrifos Ethyl	111	110	P/P	55 - 112
Chlorpyrifos Methyl	122	107	P/P	35 - 124
Cyanazine	149	147	P/P	26 - 262
Demeton	103	105	P/P	43 - 122
Diazinon	108	79.7	P/P	72 - 120
Disulfoton	77.6	78.5	P/P	45 - 137
EPTC	33.3	17.8	P/F	28 - 95.0
Ethion	120	113	P/P	63 - 127
Ethoprop	106	94.4	P/P	63 - 109
Fenamiphos	107	106	P/P	66 - 136
Fipronil	103	92.9	P/P	63 - 126
Fipronil Sulfide	94.0	94.3	P/P	59 - 123
Fipronil Sulfone	109	108	P/P	56 - 122
Fonofos	95.5	95.6	P/P	64 - 114
Hexazinone	117	113	P/P	49 - 144
Malathion	112	120	P/P	68 - 131
Metalaxyl	110	87.8	P/P	57 - 126
Metolachlor	110	99.2	P/P	75 - 118
Metribuzin	167	131	P/P	46 - 169
Mevinphos	86.9	99.4	P/P	34 - 126
Molinate	53.5	46.2	P/P	37 - 101
Norflurazon	99.4	89.2	P/P	63 - 127
Parathion Ethyl	104	98.4	P/P	78 - 109
Parathion Methyl	132	107	F/P	74 - 123
Pendimethalin	107	94.3	P/P	51 - 130
Phorate	89.9	82.9	P/P	53 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P339294

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometon	95.8	102	P/P	66 - 124
Prometryn	91.4	73.1	P/P	66 - 124
Simazine	111	97.4	P/P	62 - 134
Terbufos	110	109	P/P	59 - 115
Terbutylazine	111	99.8	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P339743

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	77.9	84.7	P/P	24 - 89.0
Alpha-BHC	83.4	97.5	P/P	58 - 117
Alpha-Chlordane	92.2	106	P/P	56 - 115
Beta-BHC	94.4	124	P/P	55 - 137
Carbophenothion	101	121	P/P	37 - 145
Chlorothalonil	80.8	48.7	P/P	26 - 163
Cypermethrin	91.0	108	P/P	42 - 156
DDD-p,p'	99.2	125	P/P	59 - 129
DDE-p,p'	96.5	108	P/P	52 - 117
DDT-p,p'	86.3	106	P/P	48 - 128
Delta-BHC	104	129	P/P	59 - 158
Dicofol	76.7	39.7	P/P	19 - 124
Dieldrin	96.8	125	P/P	57 - 126
Endosulfan I	85.4	110	P/P	59 - 133
Endosulfan II	110	140	P/P	58 - 148
Endosulfan Sulfate	98.9	113	P/P	56 - 135
Endrin	98.9	120	P/P	50 - 140
Endrin Aldehyde	75.8	84.9	P/P	47 - 141
Endrin Ketone	96.4	121	P/P	63 - 123
Gamma-BHC	86.7	116	P/P	59 - 132
Gamma-Chlordane	92.2	107	P/P	55 - 112
Heptachlor	80.1	93.0	P/P	45 - 102
Heptachlor Epoxide	90.8	104	P/P	61 - 116
Methoxychlor	90.8	112	P/P	60 - 133
Mirex	81.8	92.8	P/P	40 - 98.0
Permethrin	90.5	108	P/P	45 - 131
Trifluralin	82.2	96.8	P/P	38 - 179

Reference Method: EPA 8276
Batch ID: P339743

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	88.6	89.6	P/P	47 - 125
Toxaphene	92.6	88.5	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P339218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.2		P	40 - 150
3-Hydroxycarbofuran	96.9		P	40 - 150
Acetaminophen	109		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P339218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldicarb	72.0		P	30 - 150
Aldicarb Sulfone	103		P	40 - 150
Aldicarb Sulfoxide	100		P	40 - 150
Bentazon	84.2		P	30 - 150
Carbamazepine	94.0		P	40 - 150
Carbaryl	93.1		P	40 - 150
Carbofuran	81.9		P	40 - 150
Diuron	86.8		P	40 - 150
Fenuron	115		P	40 - 150
Fluridone	86.2		P	40 - 150
Imidacloprid	95.2		P	40 - 160
Linuron	89.5		P	40 - 150
MCPP	81.1		P	40 - 150
Methiocarb	83.4		P	40 - 150
Methomyl	107		P	40 - 150
Oxamyl	103		P	40 - 150
Primidone	107		P	40 - 150
Propoxur	81.9		P	40 - 150
Pyraclostrobin	81.1		P	40 - 150
Triclopyr	73.8		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P339296

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	105		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P339377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	105		P	40 - 150
Glyphosate	100		P	40 - 150

Reference Method: SM 2320 B-97

Batch ID: P339979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.3		P	95 - 108

Reference Method: SM 4500 F-C-97

Batch ID: P340472

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.8		P	92 - 103

Reference Method: SM 4500 F-C-97

Batch ID: P340473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.2		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P340071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P339412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964072	Calcium	105		P	80 - 120
1964072	Iron	110		P	80 - 120
1964072	Magnesium	107		P	80 - 120
1964072	Potassium	103		P	80 - 120
1964072	Sodium	103		P	80 - 120
1964072	Zinc	105		P	80 - 120
1964537	Calcium	104		P	80 - 120
1964537	Iron	111	110	P/P	80 - 120
1964537	Magnesium	106		P	80 - 120
1964537	Potassium	105	105	P/P	80 - 120
1964537	Sodium	106	106	P/P	80 - 120
1964537	Zinc	103	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P339412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964072	Arsenic	102		P	80 - 120
1964072	Cadmium	102		P	80 - 120
1964072	Chromium	95.7		P	80 - 120
1964072	Copper	95.8		P	80 - 120
1964072	Lead	99.7		P	80 - 120
1964072	Nickel	96.7		P	80 - 120
1964072	Silver	98.0		P	80 - 120
1964537	Arsenic	102	102	P/P	80 - 120
1964537	Cadmium	103	103	P/P	80 - 120
1964537	Chromium	98.4	97.8	P/P	80 - 120
1964537	Copper	95.6	95.9	P/P	80 - 120
1964537	Lead	101	101	P/P	80 - 120
1964537	Nickel	97.3	97.7	P/P	80 - 120
1964537	Silver	100	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P339699

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963974	Chloride	96.1		P	90 - 110
1964145	Chloride	96.8		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963974	Sulfate	95.9		P	90 - 110
1964145	Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339679

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964075	Ammonia-N	102	109	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964566	Ammonia-N	97.9	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964104	Kjeldahl Nitrogen	100	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339338

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964143	NO2NO3-N	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P339577

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964097	Total-P	95.0	96.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P339314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964144	O-Phosphate-P	94.1	94.1	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P339294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962857	Acetochlor	118	106	P/P	67 - 125
1962857	Alachlor	113	109	P/P	69 - 123
1962857	Ametryn	181	166	F/F	52 - 151
1962857	Atrazine Desethyl	81.7	141	P/F	10 - 129
1962857	Azinphos Methyl	150	162	P/P	48 - 200
1962857	Bromacil	107	109	P/P	46 - 130
1962857	Butylate	46.6	52.8	P/P	10 - 85.0
1962857	Chlorpyrifos Ethyl	120	103	F/P	54 - 115
1962857	Chlorpyrifos Methyl	137	102	F/P	44 - 117

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P339294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962857	Cyanazine	145	145	P/P	10 - 262
1962857	Demeton	84.7	105	P/P	24 - 145
1962857	Diazinon	93.5	92.4	P/P	66 - 129
1962857	Disulfoton	88.6	73.8	P/P	45 - 139
1962857	EPTC	47.6	46.7	P/P	10 - 86.0
1962857	Ethion	117	102	P/P	59 - 133
1962857	Ethoprop	112	113	P/P	54 - 116
1962857	Fenamiphos	109	101	P/P	55 - 140
1962857	Fipronil	113	110	P/P	37 - 142
1962857	Fipronil Sulfide	107	89.8	P/P	37 - 130
1962857	Fipronil Sulfone	93.3	52.7	P/P	18 - 143
1962857	Fonofos	103	88.9	P/P	55 - 118
1962857	Hexazinone	123	134	P/P	62 - 140
1962857	Malathion	145	128	F/P	64 - 132
1962857	Metalaxyl	113	102	P/P	55 - 129
1962857	Metolachlor	113	118	P/P	56 - 137
1962857	Metribuzin	185	170	P/P	16 - 218
1962857	Mevinphos	88.7	84.4	P/P	34 - 129
1962857	Molinate	55.1	62.5	P/P	16 - 99.0
1962857	Norflurazon	101	109	P/P	43 - 135
1962857	Parathion Ethyl	107	114	P/F	71 - 112
1962857	Parathion Methyl	134	119	F/P	65 - 127
1962857	Pendimethalin	109	111	P/P	35 - 159
1962857	Phorate	96.2	83.1	P/P	41 - 129
1962857	Prometon	94.8	103	P/P	56 - 140
1962857	Prometryn	112	101	P/P	65 - 130
1962857	Simazine	116	117	P/P	54 - 148
1962857	Terbufos	102	86.7	P/P	53 - 126
1962857	Terbutylazine	99.8	108	P/P	73 - 114

Reference Method: EPA 8270D
Batch ID: P339743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963880	Aldrin	76.6	83.4	P/P	26 - 96.0
1963880	Alpha-BHC	102	99.4	P/P	51 - 123
1963880	Alpha-Chlordane	99.8	95.6	P/P	45 - 120
1963880	Beta-BHC	123	103	P/P	43 - 146
1963880	Carbophenothion	124	106	P/P	26 - 179
1963880	Chlorothalonil	230	131	F/P	10 - 215
1963880	Cypermethrin	112	97.1	P/P	35 - 169
1963880	DDD-p,p'	110	106	P/P	49 - 131
1963880	DDE-p,p'	100	100	P/P	39 - 127
1963880	DDT-p,p'	98.1	99.3	P/P	49 - 120
1963880	Delta-BHC	139	125	P/P	49 - 187
1963880	Dicofol	84.0	101	P/P	10 - 129
1963880	Dieldrin	100	98.3	P/P	46 - 132
1963880	Endosulfan I	124	117	P/P	57 - 130
1963880	Endosulfan II	158	155	F/F	52 - 148
1963880	Endosulfan Sulfate	110	103	P/P	55 - 129
1963880	Endrin	102	94.4	P/P	45 - 133
1963880	Endrin Aldehyde	104	130	P/P	26 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P339743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963880	Endrin Ketone	119	107	P/P	60 - 125
1963880	Gamma-BHC	99.6	95.9	P/P	50 - 145
1963880	Gamma-Chlordane	99.2	93.8	P/P	44 - 118
1963880	Heptachlor	88.2	81.8	P/P	35 - 106
1963880	Heptachlor Epoxide	101	95.7	P/P	52 - 123
1963880	Methoxychlor	113	106	P/P	54 - 132
1963880	Mirex	83.3	80.9	P/P	36 - 107
1963880	Permethrin	104	101	P/P	47 - 135
1963880	Trifluralin	93.9	89.8	P/P	32 - 228

Reference Method: EPA 8276

Batch ID: P339743

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963585	Chlordane	56.7	56.9	P/P	41 - 134
1963585	Toxaphene	72.6	69.6	P/P	39 - 158

Reference Method: EPA 8321B

Batch ID: P339218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963931	3-Hydroxycarbofuran	114	112	P/P	40 - 150
1963931	Acetaminophen	134	126	P/P	30 - 150
1963931	Aldicarb	71.2	66.3	P/P	30 - 150
1963931	Aldicarb Sulfone	126	130	P/P	40 - 150
1963931	Aldicarb Sulfoxide	105	100	P/P	40 - 150
1963931	Bentazon	68.5	57.0	P/P	30 - 150
1963931	Carbamazepine	93.4	90.7	P/P	40 - 150
1963931	Carbaryl	86.0	79.6	P/P	40 - 150
1963931	Carbofuran	75.1	70.7	P/P	40 - 150
1963931	Diuron	84.6	77.4	P/P	40 - 150
1963931	Fenuron	98.1	88.2	P/P	40 - 150
1963931	Fluridone	71.6	66.0	P/P	40 - 150
1963931	Imidacloprid	149	153	P/P	40 - 160
1963931	Linuron	85.7	87.7	P/P	40 - 150
1963931	MCPP	64.2	59.4	P/P	40 - 150
1963931	Methiocarb	85.5	79.2	P/P	40 - 150
1963931	Methomyl	99.5	94.9	P/P	40 - 150
1963931	Oxamyl	103	101	P/P	40 - 150
1963931	Primidone	127	113	P/P	40 - 150
1963931	Propoxur	76.7	72.9	P/P	40 - 150
1963931	Pyraclostrobin	73.9	72.1	P/P	40 - 150
1963931	Triclopyr	64.7	52.8	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P339296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963387	Sucralose	116	112	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P339377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964165	AMPA	104	108	P/P	40 - 150
1964165	Glyphosate	108	106	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P340472

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964092	Fluoride	98.7	102	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P340473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1964802	Fluoride	94.9	96.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P340071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963978	Organic Carbon	107		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P339263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963975	Turbidity	0.855	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P339264

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964146	Turbidity	0.669	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P339412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964537	Calcium	0.0363	Spike	P	0 - 20
1964537	Iron	1.18	Spike	P	0 - 20
1964537	Magnesium	1.20	Spike	P	0 - 20
1964537	Potassium	0.00479	Spike	P	0 - 20
1964537	Sodium	0.305	Spike	P	0 - 20
1964537	Zinc	0.933	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P339412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964537	Arsenic	0.0418	Spike	P	0 - 20
1964537	Cadmium	0.292	Spike	P	0 - 20
1964537	Chromium	0.626	Spike	P	0 - 20
1964537	Copper	0.298	Spike	P	0 - 20
1964537	Lead	0.533	Spike	P	0 - 20
1964537	Nickel	0.406	Spike	P	0 - 20
1964537	Silver	0.734	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339699

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963974	Chloride	0.402	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P339704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963974	Sulfate	0.466	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339679

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964075	Ammonia-N	4.47	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964566	Ammonia-N	1.94	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P339277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964104	Kjeldahl Nitrogen	0.564	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P339338

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964143	NO2NO3-N	0.494	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P339577

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964097	Total-P	1.18	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P339314

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964144	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P339294

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962857	Acetochlor	10.4	Spike	P	0 - 30
1962857	Alachlor	3.36	Spike	P	0 - 30
1962857	Ametryn	8.86	Spike	P	0 - 30
1962857	Atrazine	2.57	Spike	P	0 - 30
1962857	Atrazine Desethyl	37.5	Spike	F	0 - 30
1962857	Azinphos Methyl	7.62	Spike	P	0 - 30
1962857	Bromacil	2.41	Spike	P	0 - 30
1962857	Butylate	12.5	Spike	P	0 - 30
1962857	Chlorpyrifos Ethyl	15.2	Spike	P	0 - 30
1962857	Chlorpyrifos Methyl	29.2	Spike	P	0 - 30
1962857	Cyanazine	0.181	Spike	P	0 - 30
1962857	Demeton	21.6	Spike	P	0 - 30
1962857	Diazinon	1.27	Spike	P	0 - 30
1962857	Disulfoton	18.2	Spike	P	0 - 30
1962857	EPTC	1.92	Spike	P	0 - 30
1962857	Ethion	13.2	Spike	P	0 - 30
1962857	Ethoprop	1.11	Spike	P	0 - 30
1962857	Fenamiphos	7.62	Spike	P	0 - 30
1962857	Fipronil	2.73	Spike	P	0 - 30
1962857	Fipronil Sulfide	8.27	Spike	P	0 - 30
1962857	Fipronil Sulfone	10.2	Spike	P	0 - 30
1962857	Fonofos	15.1	Spike	P	0 - 30
1962857	Hexazinone	8.40	Spike	P	0 - 30
1962857	Malathion	12.7	Spike	P	0 - 30
1962857	Metalaxyl	10.6	Spike	P	0 - 30
1962857	Metolachlor	3.81	Spike	P	0 - 30
1962857	Metribuzin	8.22	Spike	P	0 - 30
1962857	Mevinphos	4.95	Spike	P	0 - 30
1962857	Molinate	12.5	Spike	P	0 - 30
1962857	Norflurazon	7.66	Spike	P	0 - 30
1962857	Parathion Ethyl	6.24	Spike	P	0 - 30
1962857	Parathion Methyl	11.8	Spike	P	0 - 30
1962857	Pendimethalin	1.77	Spike	P	0 - 30
1962857	Phorate	14.7	Spike	P	0 - 30
1962857	Prometon	8.10	Spike	P	0 - 30
1962857	Prometryn	10.4	Spike	P	0 - 30
1962857	Simazine	0.324	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P339294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962857	Terbufos	16.2	Spike	P	0 - 30
1962857	Terbuthylazine	7.98	Spike	P	0 - 30
LFB	Acetochlor	22.3	LCS	P	0 - 30
LFB	Alachlor	19.7	LCS	P	0 - 30
LFB	Ametryn	29.7	LCS	P	0 - 30
LFB	Atrazine	6.89	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.23	LCS	P	0 - 30
LFB	Azinphos Methyl	7.92	LCS	P	0 - 30
LFB	Bromacil	15.1	LCS	P	0 - 30
LFB	Butylate	4.69	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.11	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	13.2	LCS	P	0 - 30
LFB	Cyanazine	1.36	LCS	P	0 - 30
LFB	Demeton	1.66	LCS	P	0 - 30
LFB	Diazinon	29.8	LCS	P	0 - 30
LFB	Disulfoton	1.12	LCS	P	0 - 30
LFB	EPTC	60.5	LCS	F	0 - 30
LFB	Ethion	5.83	LCS	P	0 - 30
LFB	Ethoprop	11.4	LCS	P	0 - 30
LFB	Fenamiphos	0.157	LCS	P	0 - 30
LFB	Fipronil	10.7	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.377	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.182	LCS	P	0 - 30
LFB	Fonofos	0.102	LCS	P	0 - 30
LFB	Hexazinone	3.48	LCS	P	0 - 30
LFB	Malathion	6.45	LCS	P	0 - 30
LFB	Metalaxyl	22.8	LCS	P	0 - 30
LFB	Metolachlor	10.4	LCS	P	0 - 30
LFB	Metribuzin	24.2	LCS	P	0 - 30
LFB	Mevinphos	13.5	LCS	P	0 - 30
LFB	Molinate	14.6	LCS	P	0 - 30
LFB	Norflurazon	10.7	LCS	P	0 - 30
LFB	Parathion Ethyl	5.68	LCS	P	0 - 30
LFB	Parathion Methyl	21.3	LCS	P	0 - 30
LFB	Pendimethalin	12.7	LCS	P	0 - 30
LFB	Phorate	8.05	LCS	P	0 - 30
LFB	Prometon	6.59	LCS	P	0 - 30
LFB	Prometryn	22.2	LCS	P	0 - 30
LFB	Simazine	12.9	LCS	P	0 - 30
LFB	Terbufos	0.665	LCS	P	0 - 30
LFB	Terbuthylazine	10.5	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P339743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963880	Aldrin	8.48	Spike	P	0 - 30
1963880	Alpha-BHC	2.77	Spike	P	0 - 30
1963880	Alpha-Chlordane	4.31	Spike	P	0 - 30
1963880	Beta-BHC	17.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P339743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963880	Carbophenothion	15.2	Spike	P	0 - 30
1963880	Chlorothalonil	54.9	Spike	F	0 - 30
1963880	Cypermethrin	13.8	Spike	P	0 - 30
1963880	DDD-p,p'	3.09	Spike	P	0 - 30
1963880	DDE-p,p'	0.143	Spike	P	0 - 30
1963880	DDT-p,p'	1.20	Spike	P	0 - 30
1963880	Delta-BHC	10.4	Spike	P	0 - 30
1963880	Dicofol	18.8	Spike	P	0 - 30
1963880	Dieldrin	2.14	Spike	P	0 - 30
1963880	Endosulfan I	5.95	Spike	P	0 - 30
1963880	Endosulfan II	1.82	Spike	P	0 - 30
1963880	Endosulfan Sulfate	7.19	Spike	P	0 - 30
1963880	Endrin	7.62	Spike	P	0 - 30
1963880	Endrin Aldehyde	22.3	Spike	P	0 - 30
1963880	Endrin Ketone	10.2	Spike	P	0 - 30
1963880	Gamma-BHC	3.75	Spike	P	0 - 30
1963880	Gamma-Chlordane	5.61	Spike	P	0 - 30
1963880	Heptachlor	7.56	Spike	P	0 - 30
1963880	Heptachlor Epoxide	5.05	Spike	P	0 - 30
1963880	Methoxychlor	6.94	Spike	P	0 - 30
1963880	Mirex	2.83	Spike	P	0 - 30
1963880	Permethrin	3.57	Spike	P	0 - 30
1963880	Trifluralin	4.45	Spike	P	0 - 30
LFB	Aldrin	8.36	LCS	P	0 - 30
LFB	Alpha-BHC	15.6	LCS	P	0 - 30
LFB	Alpha-Chlordane	13.8	LCS	P	0 - 30
LFB	Beta-BHC	26.9	LCS	P	0 - 30
LFB	Carbophenothion	17.4	LCS	P	0 - 30
LFB	Chlorothalonil	49.7	LCS	F	0 - 30
LFB	Cypermethrin	17.4	LCS	P	0 - 30
LFB	DDD-p,p'	23.0	LCS	P	0 - 30
LFB	DDE-p,p'	11.6	LCS	P	0 - 30
LFB	DDT-p,p'	20.3	LCS	P	0 - 30
LFB	Delta-BHC	21.5	LCS	P	0 - 30
LFB	Dicofol	63.6	LCS	F	0 - 30
LFB	Dieldrin	25.5	LCS	P	0 - 30
LFB	Endosulfan I	25.5	LCS	P	0 - 30
LFB	Endosulfan II	23.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	13.2	LCS	P	0 - 30
LFB	Endrin	19.6	LCS	P	0 - 30
LFB	Endrin Aldehyde	11.4	LCS	P	0 - 30
LFB	Endrin Ketone	22.9	LCS	P	0 - 30
LFB	Gamma-BHC	29.0	LCS	P	0 - 30
LFB	Gamma-Chlordane	15.0	LCS	P	0 - 30
LFB	Heptachlor	14.9	LCS	P	0 - 30
LFB	Heptachlor Epoxide	14.0	LCS	P	0 - 30
LFB	Methoxychlor	21.3	LCS	P	0 - 30
LFB	Mirex	12.6	LCS	P	0 - 30
LFB	Permethrin	17.3	LCS	P	0 - 30
LFB	Trifluralin	16.3	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P339743

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963585	Chlordane	0.237	Spike	P	0 - 30
1963585	Toxaphene	4.22	Spike	P	0 - 30
LFB	Chlordane	1.10	LCS	P	0 - 30
LFB	Toxaphene	4.56	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P339218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963931	2,4-D	21.5	Spike	P	0 - 30
1963931	3-Hydroxycarbofuran	1.75	Spike	P	0 - 30
1963931	Acetaminophen	5.63	Spike	P	0 - 30
1963931	Aldicarb	7.13	Spike	P	0 - 30
1963931	Aldicarb Sulfone	2.81	Spike	P	0 - 30
1963931	Aldicarb Sulfoxide	4.87	Spike	P	0 - 30
1963931	Bentazon	8.15	Spike	P	0 - 30
1963931	Carbamazepine	2.87	Spike	P	0 - 30
1963931	Carbaryl	7.81	Spike	P	0 - 30
1963931	Carbofuran	5.98	Spike	P	0 - 30
1963931	Diuron	8.34	Spike	P	0 - 30
1963931	Fenuron	10.6	Spike	P	0 - 30
1963931	Fluridone	2.79	Spike	P	0 - 30
1963931	Imidacloprid	2.65	Spike	P	0 - 30
1963931	Linuron	2.27	Spike	P	0 - 30
1963931	MCPP	7.72	Spike	P	0 - 30
1963931	Methiocarb	7.67	Spike	P	0 - 30
1963931	Methomyl	4.72	Spike	P	0 - 30
1963931	Oxamyl	1.83	Spike	P	0 - 30
1963931	Primidone	11.2	Spike	P	0 - 30
1963931	Propoxur	5.05	Spike	P	0 - 30
1963931	Pyraclostrobin	2.54	Spike	P	0 - 30
1963931	Triclopyr	20.2	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P339296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963387	Sucralose	3.87	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P339377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964165	AMPA	4.58	Spike	P	0 - 30
1964165	Glyphosate	1.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P339258

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964090	Color (true)	3.35	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P339979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964208	Total Alkalinity	0.687	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P339747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964093	TDS	6.53	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P340472

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964092	Fluoride	2.39	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P340473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964802	Fluoride	0.940	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P340071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1963978	Organic Carbon	0.538	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: 1964165
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	77.1	P	30 - 160
EPA 8321B	2,4-D-d3	77.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	124	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1964165
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	124	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	89.0	P	30 - 160
EPA 8321B	Diuron-d6	81.1	P	30 - 160
EPA 8321B	Diuron-d6	81.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	110	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	110	P	40 - 160
EPA 8321B	Primidone-d5	84.4	P	30 - 160
EPA 8321B	Primidone-d5	84.4	P	30 - 160
EPA 8321B	Sucralose-d6	149	P	40 - 160

Lab Sample ID: 1964166
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	72.3	P	30 - 160

Lab Sample ID: 1964167
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	89.4	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	68.2	P	34 - 101
EPA 8276	Decachlorobiphenyl	79.7	P	31 - 108
EPA 8276	PCNB	109	P	62 - 142

Lab Sample ID: 1964168
Field Sample ID: G1NE0860

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	122	P	71 - 126
EPA 8270D	Terbufos-d10	102	P	50 - 130

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A81828
Included Lab Sample IDs: 1964142, 1964145, 1964146, 1964147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	109	111	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A81829
Included Lab Sample IDs: 1964142, 1964145, 1964146, 1964147

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A81844

Included Lab Sample IDs: 1964144, 1964153, 1964154, 1964155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	98.1	P/P	90 - 110
O-Phosphate-P	98.5	98.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81855

Included Lab Sample IDs: 1964143, 1964149, 1964150, 1964151

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81888

Included Lab Sample IDs: 1964143, 1964149, 1964150, 1964151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	98.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81909

Included Lab Sample IDs: 1964169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	95.1	93.0	P/P	90 - 110
Cadmium	96.7	94.8	P/P	90 - 110
Chromium	94.5	91.8	P/P	90 - 110
Copper	94.8	92.8	P/P	90 - 110
Lead	97.1	93.2	P/P	90 - 110
Nickel	95.2	92.9	P/P	90 - 110
Silver	94.9	91.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A81910

Included Lab Sample IDs: 1964165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	112	114	P/P	70 - 130
Glyphosate	113	107	P/P	70 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A81911

Included Lab Sample IDs: 1964169

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	101	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	102	102	P/P	90 - 110
Potassium	99.0	99.1	P/P	90 - 110
Sodium	100	99.0	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A81928

Included Lab Sample IDs: 1964165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	109	107	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81955

Included Lab Sample IDs: 1964143, 1964149, 1964150

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81960

Included Lab Sample IDs: 1964151

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81964

Included Lab Sample IDs: 1964143, 1964149, 1964150, 1964151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A81969

Included Lab Sample IDs: 1964142, 1964145, 1964146, 1964147

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

Reference Method: EPA 8270D

Run ID: A82006

Included Lab Sample IDs: 1964168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.3		P	80 - 120
Alachlor	105		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	109		P	80 - 120
Atrazine Desethyl	112		P	80 - 120
Azinphos Methyl	105		P	80 - 120
Bromacil	97.6		P	80 - 120
Butylate	107		P	80 - 120
Chlorpyrifos Ethyl	101		P	80 - 120
Chlorpyrifos Methyl	94.7		P	80 - 120
Cyanazine	108		P	80 - 120
Demeton	110		P	80 - 120
Diazinon	91.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A82006

Included Lab Sample IDs: 1964168

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Disulfoton	83.6		P	80 - 120
EPTC	111		P	80 - 120
Ethion	103		P	80 - 120
Ethoprop	111		P	80 - 120
Fenamiphos	109		P	80 - 120
Fipronil	116		P	80 - 120
Fipronil Sulfide	114		P	80 - 120
Fipronil Sulfone	120		P	80 - 120
Fonofos	88.8		P	80 - 120
Hexazinone	110		P	80 - 120
Malathion	105		P	80 - 120
Metaxyl	105		P	80 - 120
Metolachlor	112		P	80 - 120
Metribuzin	99.2		P	80 - 120
Mevinphos	105		P	80 - 120
Molinate	108		P	80 - 120
Norflurazon	103		P	80 - 120
Parathion Ethyl	112		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	112		P	80 - 120
Phorate	108		P	80 - 120
Prometon	105		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	106		P	80 - 120
Terbufos	94.6		P	80 - 120
Terbutylazine	101		P	80 - 120

Reference Method: EPA 8270D

Run ID: A82038

Included Lab Sample IDs: 1964167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	99.7		P	80 - 120
Beta-BHC	97.4		P	80 - 120
Carbophenothion	95.8		P	80 - 120
Chlorothalonil	117		P	80 - 120
Cypermethrin	86.7		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	99.1		P	80 - 120
Delta-BHC	99.9		P	80 - 120
Dicofol	104		P	80 - 120
Dieldrin	97.8		P	80 - 120
Endosulfan I	97.5		P	80 - 120
Endosulfan II	111		P	80 - 120
Endosulfan Sulfate	104		P	80 - 120
Endrin	99.5		P	80 - 120
Endrin Aldehyde	108		P	80 - 120
Endrin Ketone	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A82038

Included Lab Sample IDs: 1964167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	99.8		P	80 - 120
Heptachlor	96.6		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Methoxychlor	101		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	95.5		P	80 - 120
Trifluralin	99.3		P	80 - 120

Reference Method: SM 2320 B-97

Run ID: A82073

Included Lab Sample IDs: 1964142, 1964145, 1964146, 1964147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.1	97.8	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A82103

Included Lab Sample IDs: 1964167

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	87.5		P	80 - 120
Toxaphene	83.3		P	80 - 120

Reference Method: SM 5310 B-00

Run ID: A82106

Included Lab Sample IDs: 1964143, 1964149, 1964150, 1964151

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.2	96.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A82192

Included Lab Sample IDs: 1964165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	81.1	95.4	P/P	50 - 150
3-Hydroxycarbofuran	118	107	P/P	60 - 150
Acetaminophen	106	105	P/P	60 - 150
Aldicarb	87.3	91.5	P/P	60 - 150
Aldicarb Sulfone	109	107	P/P	50 - 150
Aldicarb Sulfoxide	103	107	P/P	50 - 150
Bentazon	115	108	P/P	50 - 150
Carbamazepine	110	117	P/P	60 - 150
Carbaryl	127	134	P/P	60 - 150
Carbofuran	114	122	P/P	50 - 150
Diuron	117	111	P/P	60 - 150
Fenuron	114	113	P/P	60 - 150
Fluridone	105	101	P/P	60 - 160
Imidacloprid	99.9	104	P/P	60 - 150
Linuron	129	121	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A82192
Included Lab Sample IDs: 1964165

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCP	102	97.4	P/P	50 - 150
Methiocarb	123	126	P/P	50 - 150
Methomyl	106	116	P/P	50 - 150
Oxamyl	104	114	P/P	50 - 150
Primidone	108	114	P/P	60 - 150
Propoxur	118	128	P/P	50 - 150
Pyraclostrobin	93.7	96.8	P/P	60 - 150
Triclopyr	92.8	90.8	P/P	50 - 150

Reference Method: SM 4500 F-C-97
Run ID: A82245
Included Lab Sample IDs: 1964142, 1964145, 1964146, 1964147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.6	P/P	90 - 110
Fluoride	98.6	98.5	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.855	
	Turbidity							0.669	
EPA 200.7 Rev. 4.4	Calcium	108		105	104				0.0363
	Iron	111		110	111	110			1.18
	Magnesium	108		107	106				1.20
	Potassium	108		103	105	105			0.0047
	Sodium	110		103	106	106			0.305
	Zinc	104		105	103	102			0.933
EPA 200.8 Rev. 5.4	Arsenic	102		102	102	102			0.0418
	Cadmium	104		102	103	103			0.292
	Chromium	99.7		95.7	98.4	97.8			0.626
	Copper	98.7		95.8	95.6	95.9			0.298
	Lead	100		99.7	101	101			0.533
	Nickel	100		96.7	97.3	97.7			0.406
	Silver	100		98.0	100	101			0.734
EPA 300.0 Rev. 2.1	Chloride	96.4		96.1	96.8			0.402	
	Sulfate	95.0		95.9	97.5			0.466	
EPA 350.1 Rev. 2.0	Ammonia-N	99.6		102	109				4.47
	Ammonia-N	101		97.9	100				1.94
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	91.9		100	99.1				0.564
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	105		101	102				0.494
EPA 365.1 Rev. 2.0	Total-P	98.7		95.0	96.1				1.18
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	95.4		94.1	94.1				0.0
EPA 8270D	Acetochlor	113	90.2	118	106		22.3		10.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						SMP	MS
EPA 8270D	Alachlor	116	95.3	113	109	19.7	3.36
	Aldrin	77.9	84.7	76.6	83.4	8.36	8.48
	Alpha-BHC	83.4	97.5	102	99.4	15.6	2.77
	Alpha-Chlordane	92.2	106	99.8	95.6	13.8	4.31
	Ametryn	221	164	181	166	29.7	8.86
	Atrazine	119	111			6.89	2.57
	Atrazine Desethyl	102	93.3	81.7	141	9.23	37.5
	Azinphos Methyl	152	141	150	162	7.92	7.62
	Beta-BHC	94.4	124	123	103	26.9	17.7
	Bromacil	89.2	76.7	107	109	15.1	2.41
	Butylate	52.5	50.1	46.6	52.8	4.69	12.5
	Carbophenothion	101	121	124	106	17.4	15.2
	Chlorothalonil	80.8	48.7	230	131	49.7	54.9
	Chlorpyrifos Ethyl	111	110	120	103	1.11	15.2
	Chlorpyrifos Methyl	122	107	137	102	13.2	29.2
	Cyanazine	149	147	145	145	1.36	0.181
	Cypermethrin	91.0	108	112	97.1	17.4	13.8
	DDD-p,p'	99.2	125	110	106	23.0	3.09
	DDE-p,p'	96.5	108	100	100	11.6	0.143
	DDT-p,p'	86.3	106	98.1	99.3	20.3	1.20
	Delta-BHC	104	129	139	125	21.5	10.4
	Demeton	103	105	84.7	105	1.66	21.6
	Diazinon	108	79.7	93.5	92.4	29.8	1.27
	Dicofol	76.7	39.7	84.0	101	63.6	18.8
	Dieldrin	96.8	125	100	98.3	25.5	2.14
	Disulfoton	77.6	78.5	88.6	73.8	1.12	18.2
	Endosulfan I	85.4	110	124	117	25.5	5.95
	Endosulfan II	110	140	158	155	23.4	1.82
	Endosulfan Sulfate	98.9	113	110	103	13.2	7.19
	Endrin	98.9	120	102	94.4	19.6	7.62
	Endrin Aldehyde	75.8	84.9	104	130	11.4	22.3
	Endrin Ketone	96.4	121	119	107	22.9	10.2
	EPTC	33.3	17.8	47.6	46.7	60.5	1.92
	Ethion	120	113	117	102	5.83	13.2
	Ethoprop	106	94.4	112	113	11.4	1.11
	Fenamiphos	107	106	109	101	0.157	7.62
	Fipronil	103	92.9	113	110	10.7	2.73
	Fipronil Sulfide	94.0	94.3	107	89.8	0.377	8.27
	Fipronil Sulfone	109	108	93.3	52.7	0.182	10.2
	Fonofos	95.5	95.6	103	88.9	0.102	15.1
	Gamma-BHC	86.7	116	99.6	95.9	29.0	3.75
	Gamma-Chlordane	92.2	107	99.2	93.8	15.0	5.61
	Heptachlor	80.1	93.0	88.2	81.8	14.9	7.56
	Heptachlor Epoxide	90.8	104	101	95.7	14.0	5.05
	Hexazinone	117	113	123	134	3.48	8.40
	Malathion	112	120	145	128	6.45	12.7
	Metalaxyl	110	87.8	113	102	22.8	10.6
	Methoxychlor	90.8	112	113	106	21.3	6.94
	Metolachlor	110	99.2	113	118	10.4	3.81
	Metribuzin	167	131	185	170	24.2	8.22
	Mevinphos	86.9	99.4	88.7	84.4	13.5	4.95
	Mirex	81.8	92.8	83.3	80.9	12.6	2.83
	Molinate	53.5	46.2	55.1	62.5	14.6	12.5
	Norflurazon	99.4	89.2	101	109	10.7	7.66

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Parathion Ethyl	104	98.4	107	114	5.68	6.24
	Parathion Methyl	132	107	134	119	21.3	11.8
	Pendimethalin	107	94.3	109	111	12.7	1.77
	Permethrin	90.5	108	104	101	17.3	3.57
	Phorate	89.9	82.9	96.2	83.1	8.05	14.7
	Prometon	95.8	102	94.8	103	6.59	8.10
	Prometryn	91.4	73.1	112	101	22.2	10.4
	Simazine	111	97.4	116	117	12.9	0.324
	Terbufos	110	109	102	86.7	0.665	16.2
	Terbutylazine	111	99.8	99.8	108	10.5	7.98
	Trifluralin	82.2	96.8	93.9	89.8	16.3	4.45
	Chlordane	88.6	89.6	56.7	56.9	1.10	0.237
	Toxaphene	92.6	88.5	72.6	69.6	4.56	4.22
EPA 8276							
EPA 8321B	2,4-D	71.2					21.5
	3-Hydroxycarbofuran	96.9		114	112		1.75
	Acetaminophen	109		134	126		5.63
	Aldicarb	72.0		71.2	66.3		7.13
	Aldicarb Sulfone	103		126	130		2.81
	Aldicarb Sulfoxide	100		105	100		4.87
	AMPA	105		104	108		4.58
	Bentazon	84.2		68.5	57.0		8.15
	Carbamazepine	94.0		93.4	90.7		2.87
	Carbaryl	93.1		86.0	79.6		7.81
	Carbofuran	81.9		75.1	70.7		5.98
	Diuron	86.8		84.6	77.4		8.34
	Fenuron	115		98.1	88.2		10.6
	Fluridone	86.2		71.6	66.0		2.79
	Glyphosate	100		108	106		1.03
	Imidacloprid	95.2		149	153		2.65
	Linuron	89.5		85.7	87.7		2.27
	MCPP	81.1		64.2	59.4		7.72
	Methiocarb	83.4		85.5	79.2		7.67
	Methomyl	107		99.5	94.9		4.72
	Oxamyl	103		103	101		1.83
	Primidone	107		127	113		11.2
	Propoxur	81.9		76.7	72.9		5.05
	Pyraclostrobin	81.1		73.9	72.1		2.54
	Sucralose	105		116	112		3.87
	Triclopyr	73.8		64.7	52.8		20.2
	Color (true)					3.35	
	Total Alkalinity	97.3				0.687	
	TDS					6.53	
	Fluoride	95.8		98.7	102		2.39
	Fluoride	96.2		94.9	96.1		0.940
	Organic Carbon	95.8		107			0.538
SM 2120 B							
SM 2320 B-97							
SM 2540 C-97							
SM 4500 F-C-97							
SM 5310 B-00							

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1964142, 1964145, 1964146, 1964147
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1964169

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1964169
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1964142, 1964145, 1964146, 1964147
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1964142, 1964145, 1964146, 1964147
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1964143, 1964149, 1964150, 1964151
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1964143, 1964149, 1964150, 1964151
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1964143, 1964149, 1964150, 1964151
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1964143, 1964149, 1964150, 1964151
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1964144, 1964153, 1964154, 1964155
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1964167
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1964168
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1964167
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1964166
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1964165
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1964165
SM 2120 B / E31780	True Color measured at 450 nm	1964142, 1964145, 1964146, 1964147
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1964142, 1964145, 1964146, 1964147
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1964142, 1964145, 1964146, 1964147
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1964142, 1964145, 1964146, 1964147
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1964142, 1964145, 1964146, 1964147
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1964143, 1964149, 1964150, 1964151

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	02/02/2018			02/02/2018 14:20	Tanya Welborn	1964142, 1964145, 1964146, 1964147
EPA 200.7 Rev. 4.4	02/02/2018	02/06/2018	Elliott D. Healy	02/07/2018	Betina Topolski	1964169
EPA 200.8 Rev. 5.4	02/02/2018	02/06/2018	Elliott D. Healy	02/08/2018	Robert K Palmer	1964169
EPA 300.0 Rev. 2.1	02/02/2018			02/09/2018	Julia Storbeck	1964142, 1964145, 1964146, 1964147
EPA 350.1 Rev. 2.0	02/02/2018			02/09/2018	Julia Storbeck	1964143, 1964149, 1964150, 1964151
EPA 351.2 Rev. 2.0	02/02/2018	02/05/2018	Adrian Shelby	02/07/2018	Joseph Suarez	1964143, 1964149, 1964150, 1964151
EPA 353.2 Rev. 2.0	02/02/2018			02/05/2018	Lauren Bottorf	1964143, 1964149, 1964150, 1964151
EPA 365.1 Rev. 2.0	02/02/2018	02/08/2018	Sima Feizi	02/09/2018	Lipi Saha	1964143, 1964149, 1964150, 1964151
EPA 365.1 Rev. 2.0 dissolved	02/02/2018			02/02/2018 15:35	Megan Treadwell	1964144
	02/02/2018			02/02/2018 16:03	Megan Treadwell	1964153
	02/02/2018			02/02/2018 16:04	Megan Treadwell	1964154, 1964155
EPA 8270D	02/02/2018	02/05/2018	John Kaba	02/08/2018	Vandana T. Nagar	1964168
	02/02/2018	02/07/2018	Rasheda Ghaffari	02/09/2018	Marek Topolski	1964167
EPA 8276	02/02/2018	02/07/2018	Rasheda Ghaffari	02/15/2018	John P. Burgos	1964167
EPA 8321B	02/02/2018	02/06/2018	Juyoung Kim	02/07/2018	Juyoung Kim	1964165
	02/02/2018	02/07/2018	Hoor Shaik	02/09/2018	Julie Michelle Frank	1964165
	02/02/2018	02/07/2018	Juyoung Kim	02/07/2018	Juyoung Kim	1964165
SM 2120 B	02/02/2018			02/02/2018 17:11	Tanya Welborn	1964142
	02/02/2018			02/02/2018 17:12	Tanya Welborn	1964145
	02/02/2018			02/02/2018 17:13	Tanya Welborn	1964146, 1964147
SM 2320 B-97	02/02/2018			02/14/2018	Dale L. Simmons	1964142, 1964145, 1964146, 1964147
SM 2540 C-97	02/02/2018			02/07/2018	Yijie Li	1964142, 1964145, 1964146, 1964147
SM 2540 D-97	02/02/2018			02/07/2018	Yijie Li	1964142, 1964145, 1964146, 1964147
SM 4500 F-C-97	02/02/2018			02/22/2018	Dale L. Simmons	1964142, 1964145, 1964146, 1964147
SM 5310 B-00	02/02/2018			02/15/2018	Megan Treadwell	1964143, 1964149, 1964150, 1964151