

Chemical Analysis Report

NE-DIST-2017-12-21-01

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

Event Description: **Gville South**
Request ID: **RQ-2017-12-18-08**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way W
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 12-JAN-2018 16:49

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored 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: W. HAWTHORNE BR. @ FISH CAMP RD.

Collection Date/Time: 12/20/2017 12:10

Field ID: G1NE0210 12202017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955535	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P337372	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P337529	
		Sulfate	1.9		mg SO4/L	P337533	
	SM 2120 B	Color (true)	520		PCU	P337337	
	SM 2320 B-97	Total Alkalinity	9.6		mg CaCO3/L	P337489	
	SM 2540 C-97	TDS	131		mg/L	P337524	
	SM 2540 D-97	TSS	2	U	mg/L	P337458	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P337492	
1955536	EPA 350.1 Rev. 2.0	Ammonia-N	0.10		mg N/L	P337691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P337404	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P337408	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P337417	
	SM 5310 B-00	Organic Carbon	42		mg C/L	P337547	
1955537	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.37		mg P/L	P337369	

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 @ SE SR 225

Collection Date/Time: 12/20/2017 10:55

Field ID: G1NE0860 12202017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955538	EPA 180.1 Rev. 2.0	Turbidity	1.4	A	NTU	P337372	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P337529	
		Sulfate	0.25	I	mg SO4/L	P337533	
	SM 2120 B	Color (true)	480		PCU	P337337	
	SM 2320 B-97	Total Alkalinity	4.3		mg CaCO3/L	P337489	
	SM 2540 C-97	TDS	122		mg/L	P337524	
	SM 2540 D-97	TSS	2	U	mg/L	P337458	
	SM 4500 F-C-97	Fluoride	0.062	I	mg F/L	P337492	
1955539	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P337691	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P337536	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P337408	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P337420	
	SM 5310 B-00	Organic Carbon	46		mg C/L	P337558	
1955540	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.094		mg P/L	P337369	
1955546	EPA 200.7 Rev. 4.4	Calcium	7.65		mg/L	P337447	
		Iron	890		ug/L	P337711	
		Magnesium	2.37		mg/L	P337447	
		Potassium	0.73	I	mg/L	P337447	
		Sodium	6.2		mg/L	P337447	
		Zinc	5.0	U	ug/L	P337447	
	EPA 200.8 Rev. 5.4	Arsenic	0.56		ug/L	P337447	
		Cadmium	0.020	U	ug/L	P337447	
		Chromium	0.55	I	ug/L	P337447	

Field ID: G1NE0860 12202017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955546	EPA 200.8 Rev. 5.4	Copper	0.55	I	ug/L	P337447	
		Lead	0.44		ug/L	P337447	
		Nickel	0.68	I	ug/L	P337447	
		Silver	0.010	U	ug/L	P337447	

Ref. Method and Comment:

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

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable because of high analyte concentration in the QC sample. Batch matrix spike recoveries for magnesium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for copper are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: LOCHLOOSA SLOUGH @ SE SR 225

Collection Date/Time: 12/20/2017 10:55

Field ID: G1NE0860 12202017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955543	EPA 8321B	Glyphosate**	0.10	U	ug/L	P337210	
		AMPA**	0.10	U	ug/L	P337210	
		Pyraclostrobin**	0.0020	U	ug/L	P337204	
		Sucralose**	0.010	UJ	ug/L	P337442	SUR
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P337256	
		Diuron	8.0E-04	U	ug/L	P337256	
		Fenuron	0.0080	U	ug/L	P337256	
		Imidacloprid	0.0034		ug/L	P337256	MS
		Bentazon	8.0E-04	U	ug/L	P337256	
		Linuron	0.0040	U	ug/L	P337256	
		Acetaminophen**	0.0080	U	ug/L	P337256	
		MCP	0.0020	U	ug/L	P337256	
		Carbamazepine**	4.0E-04	U	ug/L	P337256	
		Triclopyr**	0.0040	U	ug/L	P337256	
		Primidone**	0.0040	U	ug/L	P337256	
		Fluridone**	4.0E-04	U	ug/L	P337256	
	EPA 8270D	Aldrin	4.3	UJ	ng/L	P337436	RPD
		Alpha-BHC	2.1	UJ	ng/L	P337436	RPD
		Beta-BHC	4.3	UJ	ng/L	P337436	RPD
		Delta-BHC	4.3	UJ	ng/L	P337436	RPD
		Gamma-BHC	4.3	UJ	ng/L	P337436	RPD
		Carbophenothion	4.3	U	ng/L	P337436	
		Chlorothalonil	2.1	UJ	ng/L	P337436	RPD
		Cypermethrin	21	U	ng/L	P337436	
		DDD-p,p'	3.2	UJ	ng/L	P337436	RPD
		DDE-p,p'	3.2	UJ	ng/L	P337436	RPD
		DDT-p,p'	3.2	U	ng/L	P337436	
		Dieldrin	4.3	UJ	ng/L	P337436	RPD
		Endosulfan I	4.3	UJ	ng/L	P337436	RPD
		Endosulfan II	4.3	U	ng/L	P337436	
		Endosulfan Sulfate	2.1	UJ	ng/L	P337436	RPD

Field ID: G1NE0860 12202017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955544	EPA 8270D	Endrin	2.1	UJ	ng/L	P337436	RPD
		Endrin Aldehyde	2.1	UJ	ng/L	P337436	RPD
		Heptachlor	1.6	UJ	ng/L	P337436	RPD
		Heptachlor Epoxide	2.1	UJ	ng/L	P337436	RPD
		Methoxychlor	4.3	U	ng/L	P337436	
		Mirex	2.1	UJ	ng/L	P337436	RPD
		Permethrin	11	UJ	ng/L	P337436	RPD
		Trifluralin	1.1	UJ	ng/L	P337436	RPD
		Alpha-Chlordane	1.1	UJ	ng/L	P337436	RPD
		Gamma-Chlordane	1.1	UJ	ng/L	P337436	RPD
		Endrin Ketone	2.1	UJ	ng/L	P337436	RPD
		Dicofol	32	U	ng/L	P337436	
		Chlordane**	2.7	U	ng/L	P337436	
		Toxaphene**	13	U	ng/L	P337436	
	EPA 8276						
1955545	EPA 8270D	Alachlor	0.24	U	ng/L	P337230	
		Ametryn	0.31	UJ	ng/L	P337230	LCS, RPD
		Atrazine	0.24	U	ng/L	P337230	
		Atrazine Desethyl	1.4	U	ng/L	P337230	MS, RPD
		Azinphos Methyl	2.1	U	ng/L	P337230	
		Bromacil	0.47	U	ng/L	P337230	
		Butylate	0.38	U	ng/L	P337230	
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P337230	LCS
		Chlorpyrifos Methyl	0.094	U	ng/L	P337230	
		Demeton	1.9	U	ng/L	P337230	
		Diazinon	0.12	U	ng/L	P337230	
		Disulfoton	0.47	UJ	ng/L	P337230	RPD
		EPTC	1.2	U	ng/L	P337230	
		Ethion	0.14	U	ng/L	P337230	
		Ethoprop	0.094	UJ	ng/L	P337230	LCS
		Fenamiphos	0.24	UJ	ng/L	P337230	RPD
		Fipronil	0.24	U	ng/L	P337230	
		Fipronil Sulfide	0.14	UJ	ng/L	P337230	RPD
		Fipronil Sulfone	0.14	U	ng/L	P337230	
		Hexazinone	0.47	U	ng/L	P337230	
		Malathion	0.33	U	ng/L	P337230	
		Metribuzin	0.19	UJ	ng/L	P337230	LCS, MS, RPD
		Mevinphos	0.47	U	ng/L	P337230	
		Molinate	0.28	UJ	ng/L	P337230	RPD
		Norflurazon	0.47	UJ	ng/L	P337230	LCS
		Pendimethalin	0.94	U	ng/L	P337230	
		Phorate	0.24	UJ	ng/L	P337230	RPD
		Prometon	0.85	U	ng/L	P337230	
		Prometryn	0.19	U	ng/L	P337230	
		Simazine	0.47	U	ng/L	P337230	

Field ID: G1NE0860 12202017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1955545	EPA 8270D	Terbufos	0.094	U	ng/L	P337230	LCS, RPD
		Terbuthylazine	0.40	U	ng/L	P337230	
		Fonofos	0.19	UJ	ng/L	P337230	
		Metalaxyl	0.24	U	ng/L	P337230	
		Metolachlor	0.24	U	ng/L	P337230	
		Acetochlor	0.24	U	ng/L	P337230	LCS, MS, RPD, LCS
		Cyanazine	0.47	UJ	ng/L	P337230	
		Parathion Ethyl	0.24	UJ	ng/L	P337230	
		Parathion Methyl	0.24	U	ng/L	P337230	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy and precision for bentazon 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P337372

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P337447

Component	Result	Code	Units
Calcium	0.075	U	mg/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 200.7 Rev. 4.4

Batch ID: P337711

Component	Result	Code	Units
Iron	30	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P337447

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: P337529

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337533

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337536

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337408

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337417

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337420

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337369

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P337230

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
Metaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P337436

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P337436

Component	Result	Code	Units
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.3	I	ng/L
Delta-BHC	4.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Gamma-BHC	4.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8276
Batch ID: P337436

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

Reference Method: EPA 8321B
Batch ID: P337204

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P337210

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

Reference Method: EPA 8321B
Batch ID: P337442

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P337337

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P337489

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

Reference Method: SM 2540 C-97
Batch ID: P337524

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P337458

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P337492

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P337547

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

Reference Method: SM 5310 B-00
Batch ID: P337558

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

Reference Method: USGS O-2060-01
Batch ID: P337256

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337447

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	109		P	85 - 115
Magnesium	113		P	85 - 115
Potassium	106		P	85 - 115
Sodium	103		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	98.2		P	85 - 115
Copper	98.6		P	85 - 115
Lead	99.6		P	85 - 115
Nickel	101		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337529

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337533

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337536

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

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P337536

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	93.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P337408

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P337417

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P337420

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P337369

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

Reference Method: EPA 8270D

Batch ID: P337230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	110	90.8	P/P	78 - 118
Alachlor	109	93.8	P/P	77 - 119
Ametryn	79.3	142	P/F	61 - 136
Atrazine	109	111	P/P	73 - 120
Atrazine Desethyl	106	79.2	P/P	16 - 122
Azinphos Methyl	153	127	P/P	69 - 186
Bromacil	112	115	P/P	40 - 125
Butylate	56.7	67.7	P/P	32 - 87.0
Chlorpyrifos Ethyl	125	109	F/P	53 - 110
Chlorpyrifos Methyl	107	100	P/P	31 - 119
Cyanazine	287	127	F/P	36 - 224
Demeton	106	88.6	P/P	39 - 122
Diazinon	104	102	P/P	75 - 119
Disulfoton	121	76.0	P/P	42 - 139
EPTC	54.7	69.1	P/P	33 - 96.0
Ethion	105	114	P/P	63 - 127
Ethoprop	122	97.4	F/P	65 - 107
Fenamiphos	130	79.3	P/P	64 - 137
Fipronil	114	106	P/P	60 - 126
Fipronil Sulfide	121	76.0	P/P	58 - 124
Fipronil Sulfone	114	85.6	P/P	57 - 126
Fonofos	133	89.8	F/P	65 - 111

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P337230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hexazinone	109	119	P/P	46 - 151
Malathion	120	116	P/P	68 - 132
Metaxyl	114	96.6	P/P	51 - 132
Metolachlor	110	99.1	P/P	78 - 119
Metribuzin	234	122	F/P	58 - 148
Mevinphos	86.2	104	P/P	34 - 128
Molinate	99.6	61.6	P/P	44 - 101
Norflurazon	113	130	P/F	63 - 129
Parathion Ethyl	112	105	F/P	80 - 109
Parathion Methyl	122	105	P/P	74 - 125
Pendimethalin	120	124	P/P	48 - 134
Phorate	103	67.6	P/P	52 - 119
Prometon	98.9	95.2	P/P	69 - 124
Prometryn	107	100	P/P	66 - 124
Simazine	127	131	P/P	61 - 134
Terbufos	113	86.0	P/P	58 - 115
Terbutylazine	111	91.3	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P337436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	28.3	39.8	P/P	24 - 89.0
Alpha-BHC	63.7	93.1	P/P	58 - 117
Alpha-Chlordane	63.7	90.8	P/P	56 - 115
Beta-BHC	62.7	90.1	P/P	55 - 137
Carbophenothion	113	119	P/P	37 - 145
Chlorothalonil	67.3	125	P/P	26 - 163
Cypermethrin	73.3	98.9	P/P	42 - 156
DDD-p,p'	66.8	93.7	P/P	59 - 129
DDE-p,p'	68.9	95.8	P/P	52 - 117
DDT-p,p'	89.4	104	P/P	48 - 128
Delta-BHC	77.8	127	P/P	59 - 158
Dicofol	71.6	84.0	P/P	19 - 124
Dieldrin	65.8	91.9	P/P	57 - 126
Endosulfan I	73.9	102	P/P	59 - 133
Endosulfan II	101	122	P/P	58 - 148
Endosulfan Sulfate	66.3	98.4	P/P	56 - 135
Endrin	70.3	99.5	P/P	50 - 140
Endrin Aldehyde	70.4	98.0	P/P	47 - 141
Endrin Ketone	69.8	101	P/P	63 - 123
Gamma-BHC	68.7	107	P/P	59 - 132
Gamma-Chlordane	63.1	87.4	P/P	55 - 112
Heptachlor	52.9	77.1	P/P	45 - 102
Heptachlor Epoxide	64.5	92.5	P/P	61 - 116
Methoxychlor	75.1	99.9	P/P	60 - 133
Mirex	64.3	90.0	P/P	40 - 98.0
Permethrin	65.0	95.4	P/P	45 - 131
Trifluralin	82.7	133	P/P	38 - 179

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276

Batch ID: P337436

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	105	99.4	P/P	47 - 125
Toxaphene	77.0	84.1	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P337204

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	142		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P337210

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	126		P	40 - 150
Glyphosate	120		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P337442

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	81.7		P	40 - 150

Reference Method: SM 2320 B-97

Batch ID: P337489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 108

Reference Method: SM 4500 F-C-97

Batch ID: P337492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.2		P	92 - 103

Reference Method: SM 5310 B-00

Batch ID: P337547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Reference Method: SM 5310 B-00

Batch ID: P337558

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.8		P	85 - 115

Reference Method: USGS O-2060-01

Batch ID: P337256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.3		P	40 - 150
Acetaminophen	100		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P337256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	89.3		P	30 - 150
Carbamazepine	101		P	40 - 150
Diuron	90.8		P	40 - 150
Fenuron	113		P	40 - 150
Fluridone	109		P	40 - 150
Imidacloprid	105		P	40 - 160
Linuron	99.6		P	40 - 150
MCPP	89.3		P	40 - 150
Primidone	103		P	40 - 150
Triclopyr	88.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955483	Potassium	112	106	P/P	80 - 120
1955483	Sodium	112	105	P/P	80 - 120
1955483	Zinc	105	98.6	P/P	80 - 120
1955606	Magnesium	113		P	80 - 120
1955606	Potassium	106		P	80 - 120
1955606	Zinc	101		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955500	Iron	105		P	80 - 120
1956441	Iron	108	108	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955483	Arsenic	100	102	P/P	80 - 120
1955483	Cadmium	102	104	P/P	80 - 120
1955483	Chromium	93.9	95.3	P/P	80 - 120
1955483	Copper	91.7	92.6	P/P	80 - 120
1955483	Lead	97.6	99.4	P/P	80 - 120
1955483	Nickel	94.0	95.2	P/P	80 - 120
1955483	Silver	99.9	101	P/P	80 - 120
1955606	Arsenic	105		P	80 - 120
1955606	Cadmium	105		P	80 - 120
1955606	Chromium	95.6		P	80 - 120
1955606	Lead	101		P	80 - 120
1955606	Nickel	95.6		P	80 - 120
1955606	Silver	99.9		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955611	Chloride	103		P	90 - 110
1955793	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337533

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955611	Sulfate	100		P	90 - 110
1955793	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955490	Ammonia-N	95.7	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955490	Kjeldahl Nitrogen	89.3	86.2	F/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337536

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1956227	Kjeldahl Nitrogen	92.7	95.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955532	NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337417

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955532	Total-P	96.2	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955615	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337369

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955533	O-Phosphate-P	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P337230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955049	Acetochlor	94.3	90.4	P/P	74 - 123
1955049	Alachlor	95.4	92.1	P/P	73 - 124
1955049	Ametryn	88.0	65.0	P/P	56 - 149
1955049	Atrazine	105	108	P/P	73 - 124
1955049	Atrazine Desethyl	66.0	107	P/F	12 - 103
1955049	Azinphos Methyl	105	126	P/P	60 - 202
1955049	Bromacil	93.1	86.4	P/P	42 - 133
1955049	Butylate	59.1	50.4	P/P	10 - 85.0
1955049	Chlorpyrifos Ethyl	99.8	97.8	P/P	53 - 113
1955049	Chlorpyrifos Methyl	92.3	105	P/P	40 - 115
1955049	Cyanazine	113	267	P/F	22 - 210
1955049	Demeton	81.2	90.6	P/P	17 - 149
1955049	Diazinon	79.5	85.6	P/P	72 - 124
1955049	Disulfoton	84.4	99.9	P/P	43 - 139
1955049	EPTC	59.7	49.0	P/P	10 - 86.0
1955049	Ethion	104	87.0	P/P	65 - 131
1955049	Ethoprop	86.7	102	P/P	59 - 110
1955049	Fenamiphos	109	108	P/P	57 - 138
1955049	Fipronil	103	89.8	P/P	40 - 130
1955049	Fipronil Sulfide	107	96.8	P/P	36 - 128
1955049	Fipronil Sulfone	107	92.3	P/P	16 - 145
1955049	Fonofos	80.4	96.7	P/P	60 - 112
1955049	Hexazinone	116	94.6	P/P	69 - 142
1955049	Malathion	98.6	90.2	P/P	68 - 132
1955049	Metaxyl	94.9	91.2	P/P	66 - 118
1955049	Metolachlor	103	91.5	P/P	71 - 124
1955049	Metribuzin	111	175	P/F	61 - 140
1955049	Mevinphos	53.1	62.9	P/P	38 - 130
1955049	Molinate	61.1	61.8	P/P	23 - 99.0
1955049	Norflurazon	107	84.8	P/P	39 - 139
1955049	Parathion Ethyl	91.7	92.2	P/P	75 - 111
1955049	Parathion Methyl	93.1	100	P/P	64 - 130
1955049	Pendimethalin	98.9	102	P/P	26 - 173
1955049	Phorate	75.6	87.7	P/P	43 - 127
1955049	Prometon	97.1	86.6	P/P	50 - 144
1955049	Prometryn	102	87.9	P/P	69 - 126
1955049	Simazine	102	108	P/P	51 - 152
1955049	Terbufos	83.0	97.8	P/P	54 - 125
1955049	Terbutylazine	99.6	96.7	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P337436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1956030	Aldrin	39.9	45.7	P/P	26 - 96.0
1956030	Alpha-BHC	97.7	92.2	P/P	51 - 123
1956030	Alpha-Chlordane	82.9	81.7	P/P	45 - 120
1956030	Beta-BHC	106	94.3	P/P	43 - 146
1956030	Carbophenothion	141	149	P/P	26 - 179
1956030	Chlorothalonil	113	108	P/P	10 - 215
1956030	Cypermethrin	101	81.2	P/P	35 - 169
1956030	DDD-p,p'	80.2	78.7	P/P	49 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P337436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1956030	DDE-p,p'	84.9	83.2	P/P	39 - 127
1956030	DDT-p,p'	110	93.8	P/P	49 - 120
1956030	Delta-BHC	128	123	P/P	49 - 187
1956030	Dicofol	63.1	66.2	P/P	10 - 129
1956030	Dieldrin	81.0	83.2	P/P	46 - 132
1956030	Endosulfan I	89.7	87.9	P/P	57 - 130
1956030	Endosulfan II	94.5	87.9	P/P	52 - 148
1956030	Endosulfan Sulfate	94.2	85.7	P/P	55 - 129
1956030	Endrin	87.3	82.8	P/P	45 - 133
1956030	Endrin Aldehyde	86.6	82.6	P/P	26 - 140
1956030	Endrin Ketone	96.7	92.5	P/P	60 - 125
1956030	Gamma-BHC	105	99.0	P/P	50 - 145
1956030	Gamma-Chlordane	79.6	79.2	P/P	44 - 118
1956030	Heptachlor	75.5	68.3	P/P	35 - 106
1956030	Heptachlor Epoxide	87.2	83.6	P/P	52 - 123
1956030	Methoxychlor	102	94.2	P/P	54 - 132
1956030	Mirex	81.0	74.1	P/P	36 - 107
1956030	Permethrin	94.8	87.1	P/P	47 - 135
1956030	Trifluralin	135	140	P/P	32 - 228

Reference Method: EPA 8276
Batch ID: P337436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955841	Chlordane	95.0	82.2	P/P	41 - 134
1955841	Toxaphene	51.1	66.9	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P337204

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955156	Pyraclostrobin	148	140	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P337210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955156	AMPA	126	122	P/P	40 - 150
1955156	Glyphosate	128	128	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P337442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955505	Sucralose	104	109	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P337492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955487	Fluoride	94.9	96.1	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P337547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955183	Organic Carbon	95.3	96.9	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P337256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1955250	2,4-D	113	116	P/P	40 - 150
1955250	Acetaminophen	115	109	P/P	30 - 150
1955250	Carbamazepine	112	104	P/P	40 - 150
1955250	Diuron	94.9	89.2	P/P	40 - 150
1955250	Fenuron	124	93.5	P/P	40 - 150
1955250	Fluridone	96.2	88.2	P/P	40 - 150
1955250	Imidacloprid	172	150	F/P	40 - 160
1955250	Linuron	101	89.3	P/P	40 - 150
1955250	MCP	86.6	86.8	P/P	40 - 150
1955250	Primidone	114	106	P/P	40 - 150
1955250	Triclopyr	91.5	88.4	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P337372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955538	Turbidity	5.71	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955483	Calcium	2.95	Spike	P	0 - 20
1955483	Magnesium	4.35	Spike	P	0 - 20
1955483	Potassium	4.90	Spike	P	0 - 20
1955483	Sodium	3.92	Spike	P	0 - 20
1955483	Zinc	5.91	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P337711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956441	Iron	0.214	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P337447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955483	Arsenic	1.54	Spike	P	0 - 20
1955483	Cadmium	1.93	Spike	P	0 - 20
1955483	Chromium	1.40	Spike	P	0 - 20
1955483	Copper	1.04	Spike	P	0 - 20
1955483	Lead	1.74	Spike	P	0 - 20
1955483	Nickel	1.28	Spike	P	0 - 20
1955483	Silver	0.810	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955611	Chloride	1.02	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P337533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955611	Sulfate	1.21	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P337691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955490	Ammonia-N	0.434	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955490	Kjeldahl Nitrogen	2.79	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P337536

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956227	Kjeldahl Nitrogen	2.60	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P337408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955532	NO2NO3-N	0.406	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337417

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955532	Total-P	3.81	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P337420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955615	Total-P	1.15	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P337369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955533	O-Phosphate-P	0.688	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P337230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955049	Acetochlor	4.24	Spike	P	0 - 30
1955049	Alachlor	3.60	Spike	P	0 - 30
1955049	Ametryn	30.0	Spike	F	0 - 30
1955049	Atrazine	2.03	Spike	P	0 - 30
1955049	Atrazine Desethyl	47.0	Spike	F	0 - 30
1955049	Azinphos Methyl	18.4	Spike	P	0 - 30
1955049	Bromacil	7.53	Spike	P	0 - 30
1955049	Butylate	15.9	Spike	P	0 - 30
1955049	Chlorpyrifos Ethyl	2.00	Spike	P	0 - 30
1955049	Chlorpyrifos Methyl	12.5	Spike	P	0 - 30
1955049	Cyanazine	80.8	Spike	F	0 - 30
1955049	Demeton	10.9	Spike	P	0 - 30
1955049	Diazinon	7.33	Spike	P	0 - 30
1955049	Disulfoton	16.8	Spike	P	0 - 30
1955049	EPTC	19.8	Spike	P	0 - 30
1955049	Ethion	17.4	Spike	P	0 - 30
1955049	Ethoprop	16.2	Spike	P	0 - 30
1955049	Fenamiphos	0.945	Spike	P	0 - 30
1955049	Fipronil	14.0	Spike	P	0 - 30
1955049	Fipronil Sulfide	9.96	Spike	P	0 - 30
1955049	Fipronil Sulfone	14.4	Spike	P	0 - 30
1955049	Fonofos	18.4	Spike	P	0 - 30
1955049	Hexazinone	17.7	Spike	P	0 - 30
1955049	Malathion	8.11	Spike	P	0 - 30
1955049	Metalaxyl	3.93	Spike	P	0 - 30
1955049	Metolachlor	11.0	Spike	P	0 - 30
1955049	Metribuzin	43.9	Spike	F	0 - 30
1955049	Mevinphos	16.9	Spike	P	0 - 30
1955049	Molinate	1.12	Spike	P	0 - 30
1955049	Norflurazon	21.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P337230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955049	Parathion Ethyl	0.529	Spike	P	0 - 30
1955049	Parathion Methyl	7.60	Spike	P	0 - 30
1955049	Pendimethalin	3.04	Spike	P	0 - 30
1955049	Phorate	14.8	Spike	P	0 - 30
1955049	Prometon	11.4	Spike	P	0 - 30
1955049	Prometryn	14.4	Spike	P	0 - 30
1955049	Simazine	6.10	Spike	P	0 - 30
1955049	Terbufos	16.4	Spike	P	0 - 30
1955049	Terbuthylazine	2.92	Spike	P	0 - 30
LFB	Acetochlor	19.4	LCS	P	0 - 30
LFB	Alachlor	14.8	LCS	P	0 - 30
LFB	Ametryn	56.5	LCS	F	0 - 30
LFB	Atrazine	1.58	LCS	P	0 - 30
LFB	Atrazine Desethyl	29.0	LCS	P	0 - 30
LFB	Azinphos Methyl	18.2	LCS	P	0 - 30
LFB	Bromacil	2.87	LCS	P	0 - 30
LFB	Butylate	17.7	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.7	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	6.63	LCS	P	0 - 30
LFB	Cyanazine	77.5	LCS	F	0 - 30
LFB	Demeton	18.2	LCS	P	0 - 30
LFB	Diazinon	2.07	LCS	P	0 - 30
LFB	Disulfoton	45.5	LCS	F	0 - 30
LFB	EPTC	23.2	LCS	P	0 - 30
LFB	Ethion	7.72	LCS	P	0 - 30
LFB	Ethoprop	22.8	LCS	P	0 - 30
LFB	Fenamiphos	48.2	LCS	F	0 - 30
LFB	Fipronil	7.23	LCS	P	0 - 30
LFB	Fipronil Sulfide	45.4	LCS	F	0 - 30
LFB	Fipronil Sulfone	28.9	LCS	P	0 - 30
LFB	Fonofos	38.9	LCS	F	0 - 30
LFB	Hexazinone	8.95	LCS	P	0 - 30
LFB	Malathion	3.93	LCS	P	0 - 30
LFB	Metaxyl	16.6	LCS	P	0 - 30
LFB	Metolachlor	10.3	LCS	P	0 - 30
LFB	Metribuzin	63.1	LCS	F	0 - 30
LFB	Mevinphos	19.0	LCS	P	0 - 30
LFB	Molinate	47.2	LCS	F	0 - 30
LFB	Norflurazon	14.1	LCS	P	0 - 30
LFB	Parathion Ethyl	6.99	LCS	P	0 - 30
LFB	Parathion Methyl	15.2	LCS	P	0 - 30
LFB	Pendimethalin	2.54	LCS	P	0 - 30
LFB	Phorate	41.1	LCS	F	0 - 30
LFB	Prometon	3.82	LCS	P	0 - 30
LFB	Prometryn	5.96	LCS	P	0 - 30
LFB	Simazine	3.00	LCS	P	0 - 30
LFB	Terbufos	27.5	LCS	P	0 - 30
LFB	Terbuthylazine	19.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P337436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1956030	Aldrin	13.7	Spike	P	0 - 30
1956030	Alpha-BHC	5.78	Spike	P	0 - 30
1956030	Alpha-Chlordane	1.43	Spike	P	0 - 30
1956030	Beta-BHC	11.9	Spike	P	0 - 30
1956030	Carbophenothion	5.71	Spike	P	0 - 30
1956030	Chlorothalonil	4.58	Spike	P	0 - 30
1956030	Cypermethrin	21.3	Spike	P	0 - 30
1956030	DDD-p,p'	1.81	Spike	P	0 - 30
1956030	DDE-p,p'	2.13	Spike	P	0 - 30
1956030	DDT-p,p'	16.1	Spike	P	0 - 30
1956030	Delta-BHC	4.57	Spike	P	0 - 30
1956030	Dicofol	4.90	Spike	P	0 - 30
1956030	Dieldrin	2.60	Spike	P	0 - 30
1956030	Endosulfan I	1.98	Spike	P	0 - 30
1956030	Endosulfan II	7.28	Spike	P	0 - 30
1956030	Endosulfan Sulfate	9.44	Spike	P	0 - 30
1956030	Endrin	5.23	Spike	P	0 - 30
1956030	Endrin Aldehyde	4.65	Spike	P	0 - 30
1956030	Endrin Ketone	4.35	Spike	P	0 - 30
1956030	Gamma-BHC	5.79	Spike	P	0 - 30
1956030	Gamma-Chlordane	0.566	Spike	P	0 - 30
1956030	Heptachlor	9.96	Spike	P	0 - 30
1956030	Heptachlor Epoxide	4.30	Spike	P	0 - 30
1956030	Methoxychlor	7.59	Spike	P	0 - 30
1956030	Mirex	8.99	Spike	P	0 - 30
1956030	Permethrin	8.50	Spike	P	0 - 30
1956030	Trifluralin	3.73	Spike	P	0 - 30
LFB	Aldrin	33.8	LCS	F	0 - 30
LFB	Alpha-BHC	37.6	LCS	F	0 - 30
LFB	Alpha-Chlordane	35.1	LCS	F	0 - 30
LFB	Beta-BHC	35.8	LCS	F	0 - 30
LFB	Carbophenothion	4.99	LCS	P	0 - 30
LFB	Chlorothalonil	60.2	LCS	F	0 - 30
LFB	Cypermethrin	29.7	LCS	P	0 - 30
LFB	DDD-p,p'	33.6	LCS	F	0 - 30
LFB	DDE-p,p'	32.6	LCS	F	0 - 30
LFB	DDT-p,p'	14.7	LCS	P	0 - 30
LFB	Delta-BHC	48.3	LCS	F	0 - 30
LFB	Dicofol	15.9	LCS	P	0 - 30
LFB	Dieldrin	33.1	LCS	F	0 - 30
LFB	Endosulfan I	32.0	LCS	F	0 - 30
LFB	Endosulfan II	19.1	LCS	P	0 - 30
LFB	Endosulfan Sulfate	39.0	LCS	F	0 - 30
LFB	Endrin	34.4	LCS	F	0 - 30
LFB	Endrin Aldehyde	32.8	LCS	F	0 - 30
LFB	Endrin Ketone	36.2	LCS	F	0 - 30
LFB	Gamma-BHC	43.4	LCS	F	0 - 30
LFB	Gamma-Chlordane	32.3	LCS	F	0 - 30
LFB	Heptachlor	37.2	LCS	F	0 - 30
LFB	Heptachlor Epoxide	35.8	LCS	F	0 - 30
LFB	Methoxychlor	28.3	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P337436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	33.3	LCS	F	0 - 30
LFB	Permethrin	37.8	LCS	F	0 - 30
LFB	Trifluralin	46.7	LCS	F	0 - 30

Reference Method: EPA 8276
Batch ID: P337436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955841	Chlordane	14.5	Spike	P	0 - 30
1955841	Toxaphene	26.9	Spike	P	0 - 30
LFB	Chlordane	5.88	LCS	P	0 - 30
LFB	Toxaphene	8.86	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P337204

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955156	Pyraclostrobin	6.04	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P337210

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955156	AMPA	3.95	Spike	P	0 - 30
1955156	Glyphosate	0.156	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P337442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955505	Sucralose	5.30	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P337337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955585	Color (true)	2.79	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P337489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955487	Total Alkalinity	0.353	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
 Batch ID: P337524

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955600	TDS	0.259	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P337492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955487	Fluoride	0.953	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P337547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955183	Organic Carbon	1.56	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P337558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955539	Organic Carbon	0.513	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P337256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1955250	2,4-D	1.97	Spike	P	0 - 30
1955250	Acetaminophen	5.36	Spike	P	0 - 30
1955250	Carbamazepine	6.52	Spike	P	0 - 30
1955250	Diuron	5.88	Spike	P	0 - 30
1955250	Fenuron	27.9	Spike	P	0 - 30
1955250	Fluridone	6.18	Spike	P	0 - 30
1955250	Imidacloprid	12.5	Spike	P	0 - 30
1955250	Linuron	12.4	Spike	P	0 - 30
1955250	MCP	0.138	Spike	P	0 - 30
1955250	Primidone	7.44	Spike	P	0 - 30
1955250	Triclopyr	3.39	Spike	P	0 - 30

* 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: 1955543
 Field Sample ID: G1NE0860 12202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
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Quality Assurance Report Surrogates

Lab Sample ID: 1955543
Field Sample ID: G1NE0860 12202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.5	P	30 - 160
EPA 8321B	Diuron-d6	117	P	30 - 160
EPA 8321B	Diuron-d6	78.2	P	30 - 160
EPA 8321B	Diuron-d6	117	P	30 - 160
EPA 8321B	Diuron-d6	78.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.7	P	40 - 160
EPA 8321B	Primidone-d5	59.8	P	30 - 160
EPA 8321B	Primidone-d5	59.8	P	30 - 160
EPA 8321B	Sucralose-d6	0.125	F	40 - 160
EPA 8321B	Sucralose-d6	0.125	F	40 - 160
USGS O-2060-01	2,4-D-d3	91.8	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	132	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	88.5	P	30 - 160
USGS O-2060-01	Diuron-d6	117	P	30 - 160
USGS O-2060-01	Diuron-d6	78.2	P	30 - 160
USGS O-2060-01	Primidone-d5	59.8	P	30 - 160
USGS O-2060-01	Sucralose-d6	0.125	F	40 - 160

Lab Sample ID: 1955544
Field Sample ID: G1NE0860 12202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	76.5	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	62.1	P	34 - 101
EPA 8276	Decachlorobiphenyl	54.8	P	31 - 108
EPA 8276	PCNB	111	P	40 - 130

Lab Sample ID: 1955545
Field Sample ID: G1NE0860 12202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	67.7	P	53 - 135
EPA 8270D	Simazine-d10	83.5	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
Run ID: A81063
Included Lab Sample IDs: 1955535, 1955538

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A81079

Included Lab Sample IDs: 1955537, 1955540

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	102	P/P	90 - 110
O-Phosphate-P	99.5	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A81080

Included Lab Sample IDs: 1955535, 1955538

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

Reference Method: EPA 8321B

Run ID: A81086

Included Lab Sample IDs: 1955543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.3	94.7	P/P	60 - 150
Glyphosate	83.8	95.2	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81092

Included Lab Sample IDs: 1955536, 1955539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110
NO2NO3-N	101	101	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A81093

Included Lab Sample IDs: 1955543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.8	100	P/P	50 - 150
Acetaminophen	100	95.0	P/P	60 - 150
Bentazon	97.6	100	P/P	50 - 150
Carbamazepine	103	98.9	P/P	60 - 150
Diuron	99.7	95.8	P/P	60 - 150
Fenuron	102	99.7	P/P	60 - 150
Fluridone	105	101	P/P	60 - 160
Imidacloprid	96.8	93.0	P/P	60 - 150
Linuron	101	110	P/P	60 - 150
MCPP	91.0	94.9	P/P	50 - 150
Primidone	103	102	P/P	60 - 150
Triclopyr	85.8	87.6	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A81106

Included Lab Sample IDs: 1955543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	83.8	85.8	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A81114
Included Lab Sample IDs: 1955536, 1955539

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

Reference Method: SM 5310 B-00
Run ID: A81124
Included Lab Sample IDs: 1955536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.7	98.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A81127
Included Lab Sample IDs: 1955536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	106	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A81134
Included Lab Sample IDs: 1955535, 1955538

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.5	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A81134
Included Lab Sample IDs: 1955535, 1955538

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

Reference Method: EPA 8321B
Run ID: A81137
Included Lab Sample IDs: 1955543

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	92.0	89.2	P/P	60 - 150

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A81150
Included Lab Sample IDs: 1955535, 1955538

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	106	P/P	90 - 110
Sulfate	102	106	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A81160
Included Lab Sample IDs: 1955539

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

Reference Method: SM 5310 B-00
Run ID: A81160
Included Lab Sample IDs: 1955539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	96.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A81172
Included Lab Sample IDs: 1955546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	97.8	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Chromium	97.4	96.5	P/P	90 - 110
Copper	100	93.4	P/P	90 - 110
Lead	98.0	97.3	P/P	90 - 110
Nickel	100	94.0	P/P	90 - 110
Silver	98.2	97.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A81173
Included Lab Sample IDs: 1955546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	105	106	P/P	90 - 110
Magnesium	104	106	P/P	90 - 110
Potassium	103	104	P/P	90 - 110
Sodium	98.8	99.7	P/P	90 - 110
Zinc	104	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A81180
Included Lab Sample IDs: 1955539

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.1	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A81222
Included Lab Sample IDs: 1955536, 1955539

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A81266
Included Lab Sample IDs: 1955546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	104	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A81331

Included Lab Sample IDs: 1955544

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	109		P	80 - 120
Toxaphene	106		P	80 - 120

Reference Method: EPA 8270D

Run ID: A81366

Included Lab Sample IDs: 1955545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.9		P	80 - 120
Alachlor	97.1		P	80 - 120
Ametryn	90.5		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	108		P	80 - 120
Azinphos Methyl	94.8		P	80 - 120
Bromacil	97.9		P	80 - 120
Butylate	98.0		P	80 - 120
Chlorpyrifos Ethyl	96.6		P	80 - 120
Chlorpyrifos Methyl	98.0		P	80 - 120
Cyanazine	108		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	92.6		P	80 - 120
Disulfoton	97.9		P	80 - 120
EPTC	97.7		P	80 - 120
Ethion	99.7		P	80 - 120
Ethoprop	100		P	80 - 120
Fenamiphos	94.7		P	80 - 120
Fipronil	94.5		P	80 - 120
Fipronil Sulfide	96.6		P	80 - 120
Fipronil Sulfone	97.7		P	80 - 120
Fonofos	97.6		P	80 - 120
Hexazinone	94.7		P	80 - 120
Malathion	97.6		P	80 - 120
Metalaxyl	97.2		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	95.5		P	80 - 120
Mevinphos	92.2		P	80 - 120
Molinate	102		P	80 - 120
Norflurazon	98.2		P	80 - 120
Parathion Ethyl	90.9		P	80 - 120
Parathion Methyl	94.0		P	80 - 120
Pendimethalin	96.7		P	80 - 120
Phorate	96.1		P	80 - 120
Prometon	97.3		P	80 - 120
Prometryn	95.8		P	80 - 120
Simazine	92.8		P	80 - 120
Terbufos	96.4		P	80 - 120
Terbuthylazine	96.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A81367
Included Lab Sample IDs: 1955544

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	104		P	80 - 120
Alpha-Chlordane	96.0		P	80 - 120
Beta-BHC	108		P	80 - 120
Carbophenothion	105		P	80 - 120
Chlorothalonil	97.5		P	80 - 120
Cypermethrin	93.9		P	80 - 120
DDD-p,p'	95.5		P	80 - 120
DDE-p,p'	97.1		P	80 - 120
DDT-p,p'	104		P	80 - 120
Delta-BHC	103		P	80 - 120
Dicofol	90.8		P	80 - 120
Dieldrin	88.7		P	80 - 120
Endosulfan I	97.3		P	80 - 120
Endosulfan II	105		P	80 - 120
Endosulfan Sulfate	97.3		P	80 - 120
Endrin	99.6		P	80 - 120
Endrin Aldehyde	94.5		P	80 - 120
Endrin Ketone	99.2		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	94.5		P	80 - 120
Heptachlor	92.0		P	80 - 120
Heptachlor Epoxide	94.1		P	80 - 120
Methoxychlor	107		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	91.3		P	80 - 120
Trifluralin	114		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						5.71	
EPA 200.7 Rev. 4.4	Calcium	109						2.95
	Iron	104	105	108	108			0.214
	Magnesium	113	113					4.35
	Potassium	106	112	106	106			4.90
	Sodium	103	112	105				3.92
	Zinc	102	105	98.6	101			5.91
EPA 200.8 Rev. 5.4	Arsenic	103	100	102	105			1.54
	Cadmium	102	102	104	105			1.93
	Chromium	98.2	93.9	95.3	95.6			1.40
	Copper	98.6	91.7	92.6				1.04
	Lead	99.6	97.6	99.4	101			1.74
	Nickel	101	94.0	95.2	95.6			1.28

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 200.8 Rev. 5.4	Silver	101		99.9	101	99.9		0.810
EPA 300.0 Rev. 2.1	Chloride	103		103	105		1.02	
	Sulfate	104		100	103		1.21	
EPA 350.1 Rev. 2.0	Ammonia-N	97.8		95.7	96.2			0.434
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		89.3	86.2			2.79
	Kjeldahl Nitrogen	93.3		92.7	95.7			2.60
EPA 353.2 Rev. 2.0	NO2NO3-N	103		103	104			0.406
EPA 365.1 Rev. 2.0	Total-P	101		96.2	100			3.81
	Total-P	104		103	104			1.15
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3		101	102			0.688
EPA 8270D	Acetochlor	110	90.8	94.3	90.4	19.4		4.24
	Alachlor	109	93.8	95.4	92.1	14.8		3.60
	Aldrin	28.3	39.8	39.9	45.7	33.8		13.7
	Alpha-BHC	63.7	93.1	97.7	92.2	37.6		5.78
	Alpha-Chlordane	63.7	90.8	82.9	81.7	35.1		1.43
	Ametryn	79.3	142	88.0	65.0	56.5		30.0
	Atrazine	109	111	105	108	1.58		2.03
	Atrazine Desethyl	106	79.2	66.0	107	29.0		47.0
	Azinphos Methyl	153	127	105	126	18.2		18.4
	Beta-BHC	62.7	90.1	106	94.3	35.8		11.9
	Bromacil	112	115	93.1	86.4	2.87		7.53
	Butylate	56.7	67.7	59.1	50.4	17.7		15.9
	Carbophenothion	113	119	141	149	4.99		5.71
	Chlorothalonil	67.3	125	113	108	60.2		4.58
	Chlorpyrifos Ethyl	125	109	99.8	97.8	13.7		2.00
	Chlorpyrifos Methyl	107	100	92.3	105	6.63		12.5
	Cyanazine	287	127	113	267	77.5		80.8
	Cypermethrin	73.3	98.9	101	81.2	29.7		21.3
	DDD-p,p'	66.8	93.7	80.2	78.7	33.6		1.81
	DDE-p,p'	68.9	95.8	84.9	83.2	32.6		2.13
	DDT-p,p'	89.4	104	110	93.8	14.7		16.1
	Delta-BHC	77.8	127	128	123	48.3		4.57
	Demeton	106	88.6	81.2	90.6	18.2		10.9
	Diazinon	104	102	79.5	85.6	2.07		7.33
	Dicofol	71.6	84.0	63.1	66.2	15.9		4.90
	Dieldrin	65.8	91.9	81.0	83.2	33.1		2.60
	Disulfoton	121	76.0	84.4	99.9	45.5		16.8
	Endosulfan I	73.9	102	89.7	87.9	32.0		1.98
	Endosulfan II	101	122	94.5	87.9	19.1		7.28
	Endosulfan Sulfate	66.3	98.4	94.2	85.7	39.0		9.44
	Endrin	70.3	99.5	87.3	82.8	34.4		5.23
	Endrin Aldehyde	70.4	98.0	86.6	82.6	32.8		4.65
	Endrin Ketone	69.8	101	96.7	92.5	36.2		4.35
	EPTC	54.7	69.1	59.7	49.0	23.2		19.8
	Ethion	105	114	104	87.0	7.72		17.4
	Ethoprop	122	97.4	86.7	102	22.8		16.2
	Fenamiphos	130	79.3	109	108	48.2		0.945
	Fipronil	114	106	103	89.8	7.23		14.0
	Fipronil Sulfide	121	76.0	107	96.8	45.4		9.96
	Fipronil Sulfone	114	85.6	107	92.3	28.9		14.4
	Fonofos	133	89.8	80.4	96.7	38.9		18.4
	Gamma-BHC	68.7	107	105	99.0	43.4		5.79
	Gamma-Chlordane	63.1	87.4	79.6	79.2	32.3		0.566
	Heptachlor	52.9	77.1	75.5	68.3	37.2		9.96

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 8270D	Heptachlor Epoxide	64.5	92.5	87.2	83.6	35.8		4.30
	Hexazinone	109	119	116	94.6	8.95		17.7
	Malathion	120	116	98.6	90.2	3.93		8.11
	Metalaxyl	114	96.6	94.9	91.2	16.6		3.93
	Methoxychlor	75.1	99.9	102	94.2	28.3		7.59
	Metolachlor	110	99.1	103	91.5	10.3		11.0
	Metribuzin	234	122	111	175	63.1		43.9
	Mevinphos	86.2	104	53.1	62.9	19.0		16.9
	Mirex	64.3	90.0	81.0	74.1	33.3		8.99
	Molinate	99.6	61.6	61.1	61.8	47.2		1.12
	Norflurazon	113	130	107	84.8	14.1		21.2
	Parathion Ethyl	112	105	91.7	92.2	6.99		0.529
	Parathion Methyl	122	105	93.1	100	15.2		7.60
	Pendimethalin	120	124	98.9	102	2.54		3.04
	Permethrin	65.0	95.4	94.8	87.1	37.8		8.50
	Phorate	103	67.6	75.6	87.7	41.1		14.8
	Prometon	98.9	95.2	97.1	86.6	3.82		11.4
	Prometryn	107	100	102	87.9	5.96		14.4
	Simazine	127	131	102	108	3.00		6.10
	Terbufos	113	86.0	83.0	97.8	27.5		16.4
	Terbutylazine	111	91.3	99.6	96.7	19.2		2.92
	Trifluralin	82.7	133	135	140	46.7		3.73
EPA 8276	Chlordane	105	99.4	95.0	82.2	5.88		14.5
	Toxaphene	77.0	84.1	51.1	66.9	8.86		26.9
EPA 8321B	AMPA	126		126	122			3.95
	Glyphosate	120		128	128			0.156
	Pyraclostrobin	142		148	140			6.04
	Sucralose	81.7		104	109			5.30
SM 2120 B	Color (true)						2.79	
SM 2320 B-97	Total Alkalinity	102					0.353	
SM 2540 C-97	TDS						0.259	
SM 4500 F-C-97	Fluoride	94.2		94.9	96.1			0.953
SM 5310 B-00	Organic Carbon	96.2		95.3	96.9			1.56
	Organic Carbon	92.8						0.513
USGS O-2060-01	2,4-D	97.3		113	116			1.97
	Acetaminophen	100		115	109			5.36
	Bentazon	89.3						
	Carbamazepine	101		112	104			6.52
	Diuron	90.8		94.9	89.2			5.88
	Fenuron	113		124	93.5			27.9
	Fluridone	109		96.2	88.2			6.18
	Imidacloprid	105		172	150			12.5
	Linuron	99.6		101	89.3			12.4
	MCPP	89.3		86.6	86.8			0.138
	Primidone	103		114	106			7.44
	Triclopyr	88.2		91.5	88.4			3.39

Reference Method Descriptions

Method / DoH Cert #
EPA 180.1 Rev. 2.0 /
E31780

Description
Turbidity in aqueous matrices

Associated Samples
1955535, 1955538

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1955546
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1955546
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1955535, 1955538
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1955535, 1955538
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1955536, 1955539
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1955536, 1955539
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1955536, 1955539
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1955536, 1955539
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1955537, 1955540
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1955544
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1955545
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1955544
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1955543
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1955543
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1955543
SM 2120 B / E31780	True Color measured at 450 nm	1955535, 1955538
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1955535, 1955538
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1955535, 1955538
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1955535, 1955538
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1955535, 1955538
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1955536, 1955539
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1955543
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1955543

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	12/21/2017			12/21/2017 16:10	DeAsia Armster	1955535, 1955538
EPA 200.7 Rev. 4.4	12/21/2017	01/02/2018	Elliott D. Healy	01/03/2018	Betina Topolski	1955546
	12/21/2017	12/26/2017	Elliott D. Healy	12/28/2017	Betina Topolski	1955546
EPA 200.8 Rev. 5.4	12/21/2017	12/26/2017	Elliott D. Healy	12/28/2017	Nadine Brooks	1955546
EPA 300.0 Rev. 2.1	12/21/2017			12/26/2017	Julia Storbeck	1955535, 1955538
EPA 350.1 Rev. 2.0	12/21/2017			12/29/2017	Sofia Elnemr	1955536, 1955539
EPA 351.2 Rev. 2.0	12/21/2017	12/22/2017	Adrian Shelby	12/26/2017	Joseph Suarez	1955536
	12/21/2017	12/28/2017	Adrian Shelby	12/29/2017	Joseph Suarez	1955539
EPA 353.2 Rev. 2.0	12/21/2017			12/22/2017	Lipi Saha	1955536, 1955539
EPA 365.1 Rev. 2.0	12/21/2017	12/22/2017	Sima Feizi	12/26/2017	Lipi Saha	1955536, 1955539
EPA 365.1 Rev. 2.0 dissolved	12/21/2017			12/21/2017 14:10	Megan Treadwell	1955540
	12/21/2017			12/21/2017 14:16	Megan Treadwell	1955537
EPA 8270D	12/21/2017	12/21/2017	Fe-Val Siddell	12/26/2017	Vandana T. Nagar	1955545
	12/21/2017	12/26/2017	Fe-Val Siddell	01/04/2018	Goutam Palui	1955544
EPA 8276	12/21/2017	12/26/2017	Fe-Val Siddell	01/08/2018	John P. Burgos	1955544
EPA 8321B	12/21/2017	12/21/2017	Juyoung Kim	12/21/2017	Juyoung Kim	1955543
	12/21/2017	12/21/2017	Juyoung Kim	12/23/2017	Juyoung Kim	1955543
	12/21/2017	12/26/2017	Juyoung Kim	12/27/2017	Juyoung Kim	1955543
SM 2120 B	12/21/2017			12/21/2017 12:46	Julia Storbeck	1955535
	12/21/2017			12/21/2017 12:47	Julia Storbeck	1955538
SM 2320 B-97	12/21/2017			12/27/2017	Dale L. Simmons	1955535, 1955538
SM 2540 C-97	12/21/2017			12/22/2017	DeAsia Armster	1955535, 1955538
SM 2540 D-97	12/21/2017			12/22/2017	DeAsia Armster	1955535, 1955538
SM 4500 F-C-97	12/21/2017			12/27/2017	Dale L. Simmons	1955535, 1955538
SM 5310 B-00	12/21/2017			12/23/2017	Megan Treadwell	1955536
	12/21/2017			12/27/2017	Megan Treadwell	1955539
USGS O-2060-01	12/21/2017	12/21/2017	Hoor Shaik	12/22/2017	Julie Michelle Frank	1955543
	12/21/2017	12/21/2017	Hoor Shaik	12/23/2017	Julie Michelle Frank	1955543