

Chemical Analysis Report

NE-DIST-2017-03-31-01

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

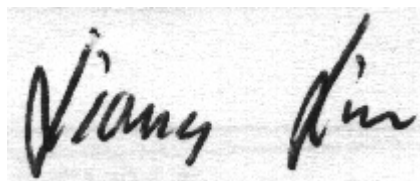
Event Description: **Suwannee SCI's**
Request ID: **RQ-2017-03-27-03**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 21-APR-2017 13:59

A handwritten signature in black ink, appearing to read "Liang Lin", is written on a light-colored, textured 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: NEW RIVER @ SR 100

Collection Date/Time: 03/30/2017 09:40

Field ID: G1NE0534 03302017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885152	EPA 8321B	Sucralose**	0.033	I	ug/L	P322530	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P322653	MS
		Diuron	0.0040	U	ug/L	P322653	
		Fenuron	0.0080	U	ug/L	P322653	
		Imidacloprid	0.0040	U	ug/L	P322653	
		Bentazon	0.0040	U	ug/L	P322653	MS
		Linuron	0.0040	U	ug/L	P322653	
		Acetaminophen**	0.010	U	ug/L	P322653	
		MCP	0.0040	U	ug/L	P322653	
		Carbamazepine**	0.011		ug/L	P322653	
		Triclopyr**	0.010	U	ug/L	P322653	
		Primidone**	0.0080	U	ug/L	P322653	RPD
		Fluridone**	4.0E-04	U	ug/L	P322653	

Sample Location: COW CREEK @ SR 138

Collection Date/Time: 03/30/2017 09:55

Field ID: G1NE0565 03302017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885131	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P322688	
	EPA 300.0 Rev. 2.1	Chloride	5.4		mg Cl/L	P323118	
		Sulfate	0.23	I	mg SO4/L	P323121	
	SM 2120 B	Color (true)	40	A	PCU	P322590	
	SM 2320 B-97	Total Alkalinity	238		mg CaCO3/L	P323004	
	SM 2540 C-97	TDS	256	A	mg/L	P322987	
	SM 2540 D-97	TSS	4	IA	mg/L	P323024	
	SM 4500 F-C-97	Fluoride	0.068	I	mg F/L	P323007	
1885132	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P322607	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P322637	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P322722	
	EPA 365.1 Rev. 2.0	Total-P	0.072		mg P/L	P322707	
	SM 5310 B-00	Organic Carbon	8.1		mg C/L	P322613	
1885133	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.055		mg P/L	P322611	

Ref. Method and Comment:

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

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

Sample Location: COW CREEK @ SR 138

Collection Date/Time: 03/30/2017 09:55

Field ID: G1NE0565 03302017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885153	EPA 8321B	Sucralose**	0.010	U	ug/L	P322530	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P322653	MS
		Diuron	0.0040	U	ug/L	P322653	
		Fenuron	0.0080	U	ug/L	P322653	

Field ID: G1NE0565 03302017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885153	USGS O-2060-01	Imidacloprid	0.0040	U	ug/L	P322653	
		Bentazon	0.0040	U	ug/L	P322653	MS
		Linuron	0.0040	U	ug/L	P322653	
		Acetaminophen**	0.010	U	ug/L	P322653	
		MCP	0.0040	U	ug/L	P322653	
		Carbamazepine**	4.0E-04	U	ug/L	P322653	
		Triclopyr**	0.010	U	ug/L	P322653	
		Primidone**	0.0080	U	ug/L	P322653	RPD
		Fluridone**	4.0E-04	U	ug/L	P322653	

Ref. Method and Comment:
USGS O-2060-01: Results confirmed in re-extraction.

Sample Location: PARENERS BRANCH @ CR 1491

Collection Date/Time: 03/30/2017 10:40

Field ID: G1NE0600 03302017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885154	EPA 8321B	Sucralose**	0.010	U	ug/L	P322530	
	USGS O-2060-01	2,4-D	0.0040	UJ	ug/L	P322653	MS
		Diuron	0.031		ug/L	P322653	
		Fenuron	0.047		ug/L	P322653	
		Imidacloprid	0.0040	U	ug/L	P322653	
		Bentazon	0.0040	UJ	ug/L	P322653	MS
		Linuron	0.0040	U	ug/L	P322653	
		Acetaminophen**	0.010	U	ug/L	P322653	
		MCP	0.0040	U	ug/L	P322653	
		Carbamazepine**	4.0E-04	U	ug/L	P322653	
		Triclopyr**	0.010	U	ug/L	P322653	
		Primidone**	0.0080	UJ	ug/L	P322653	RPD
		Fluridone**	7.6E-04	I	ug/L	P322653	

Ref. Method and Comment:
USGS O-2060-01: Refer to the narrative for an explanation of QC Codes.

Sample Location: HAQUE CREEK @ US 441

Collection Date/Time: 03/30/2017 12:55

Field ID: HAQUE CREEK @ US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885155	EPA 8321B	Sucralose**	0.070		ug/L	P322530	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P322653	MS
		Diuron	0.0040	U	ug/L	P322653	
		Fenuron	0.0080	U	ug/L	P322653	
		Imidacloprid	0.0040	U	ug/L	P322653	
		Bentazon	0.0040	U	ug/L	P322653	MS
		Linuron	0.0040	U	ug/L	P322653	
		Acetaminophen**	0.010	U	ug/L	P322653	
		MCP	0.0040	U	ug/L	P322653	
		Carbamazepine**	4.0E-04	U	ug/L	P322653	
		Triclopyr**	0.010	U	ug/L	P322653	

Field ID: HAQUE CREEK @ US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885155	USGS O-2060-01	Primidone**	0.0080	U	ug/L	P322653	RPD
		Fluridone**	4.0E-04	U	ug/L	P322653	

Sample Location: HAQUE CREEK @ US 441

Collection Date/Time: 03/30/2017 12:55

Field ID: HAQUE CREEK @ US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885134	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P322688	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P323118	
		Sulfate	53		mg SO4/L	P323121	
	SM 2120 B	Color (true)	26		PCU	P322590	
	SM 2320 B-97	Total Alkalinity	190	A	mg CaCO3/L	P323004	
	SM 2540 C-97	TDS	292		mg/L	P322987	
	SM 2540 D-97	TSS	4	I	mg/L	P323024	
	SM 4500 F-C-97	Fluoride	0.29		mg F/L	P323007	
1885135	EPA 350.1 Rev. 2.0	Ammonia-N	0.027		mg N/L	P322607	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P322637	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P322722	
	EPA 365.1 Rev. 2.0	Total-P	0.63		mg P/L	P322707	
	SM 5310 B-00	Organic Carbon	4.9		mg C/L	P322613	
1885136	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.52		mg P/L	P322611	
1885156	EPA 8321B	Glyphosate**	10	U	ug/L	P322576	
		Pyraclostrobin**	0.0020	U	ug/L	P322599	
1885166	EPA 200.7 Rev. 4.4	Calcium	47.4		mg/L	P322761	
		Iron	120	I	ug/L	P322761	
		Magnesium	19.4		mg/L	P322761	
		Potassium	3.5		mg/L	P322761	
		Sodium	38.4		mg/L	P322761	
		Zinc	5.0	U	ug/L	P322761	
	EPA 200.8 Rev. 5.4	Arsenic	1.01		ug/L	P322761	
		Cadmium	0.502		ug/L	P322761	
		Chromium	0.40	U	ug/L	P322761	
		Copper	0.50	I	ug/L	P322761	
		Lead	0.10	I	ug/L	P322761	
		Nickel	2.86		ug/L	P322761	
		Silver	0.010	U	ug/L	P322761	
1885170	EPA 8270D	Aldrin	4.1	U	ng/L	P322674	
		Alpha-BHC	2.1	U	ng/L	P322674	
		Beta-BHC	4.1	U	ng/L	P322674	
		Delta-BHC	4.1	U	ng/L	P322674	
		Gamma-BHC	4.1	U	ng/L	P322674	
		Carbophenothion	4.1	U	ng/L	P322674	
		Chlorothalonil	2.1	U	ng/L	P322674	
		Cypermethrin	21	U	ng/L	P322674	
		DDD-p,p'	2.1	U	ng/L	P322674	

Field ID: HAQUE CREEK @ US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885170	EPA 8270D	DDE-p,p'	3.1	U	ng/L	P322674	
		DDT-p,p'	3.1	U	ng/L	P322674	
		Dieldrin	4.1	U	ng/L	P322674	
		Endosulfan I	4.1	U	ng/L	P322674	
		Endosulfan II	4.1	U	ng/L	P322674	
		Endosulfan Sulfate	2.1	U	ng/L	P322674	
		Endrin	2.1	U	ng/L	P322674	
		Endrin Aldehyde	2.1	U	ng/L	P322674	
		Heptachlor	1.5	U	ng/L	P322674	
		Heptachlor Epoxide	2.1	U	ng/L	P322674	
		Methoxychlor	4.1	U	ng/L	P322674	
		Mirex	2.1	U	ng/L	P322674	MS
		Permethrin	10	U	ng/L	P322674	
		Trifluralin	1.0	U	ng/L	P322674	
		Alpha-Chlordane	1.0	U	ng/L	P322674	
		Gamma-Chlordane	1.0	U	ng/L	P322674	
		Endrin Ketone	2.1	U	ng/L	P322674	
		Dicofol	31	U	ng/L	P322674	
1885171		Ametryn	0.32	U	ng/L	P322762	
		Atrazine	1.5		ng/L	P322762	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P322762	
		Chlorpyrifos Methyl	0.10	U	ng/L	P322762	
		Disulfoton	0.32	U	ng/L	P322762	
		Ethion	0.15	U	ng/L	P322762	RPD
		Ethoprop	0.10	U	ng/L	P322762	
		Hexazinone	3.2		ng/L	P322762	
		Malathion	0.35	U	ng/L	P322762	
		Metribuzin	0.20	U	ng/L	P322762	
		Mevinphos	0.50	U	ng/L	P322762	
		Norflurazon	0.50	U	ng/L	P322762	
		Phorate	0.25	U	ng/L	P322762	
		Prometryn	0.20	U	ng/L	P322762	
		Simazine	0.50	U	ng/L	P322762	
		Atrazine Desethyl	1.5	U	ng/L	P322762	
		Prometon	0.90	U	ng/L	P322762	
		Fipronil	0.25	U	ng/L	P322762	
		Molinate	0.30	U	ng/L	P322762	
		Pendimethalin	1.5	U	ng/L	P322762	
		Terbufos	0.10	U	ng/L	P322762	
		EPTC	1.2	U	ng/L	P322762	
		Terbuthylazine	0.42	U	ng/L	P322762	
		Bromacil	6.2		ng/L	P322762	
		Fipronil Sulfide	0.15	U	ng/L	P322762	
		Fipronil Sulfone	0.15	U	ng/L	P322762	
		Alachlor	0.25	U	ng/L	P322762	

Field ID: HAQUE CREEK @ US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1885171	EPA 8270D	Azinphos Methyl	2.2	U	ng/L	P322762	
		Butylate	0.40	U	ng/L	P322762	
		Demeton	1.0	U	ng/L	P322762	
		Diazinon	0.12	U	ng/L	P322762	
		Fenamiphos	0.25	U	ng/L	P322762	
		Fonofos	0.20	U	ng/L	P322762	
		Metalaxyl	0.20	U	ng/L	P322762	
		Metolachlor	0.25	U	ng/L	P322762	
		Acetochlor	0.25	U	ng/L	P322762	
		Cyanazine	0.50	U	ng/L	P322762	
		Parathion Ethyl	0.25	U	ng/L	P322762	
		Parathion Methyl	0.25	U	ng/L	P322762	

Ref. Method and Comment:

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

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

EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P322688

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P322761

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: P322761

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: P323118

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323121

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322607

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322637

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322722

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322707

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322611

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

Reference Method: EPA 8270D
Batch ID: P322674

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'	2.0	U	ng/L
DDE-p,p'	3.0	U	ng/L
DDT-p,p'	3.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P322674

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

Reference Method: EPA 8270D

Batch ID: P322762

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	1.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	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	0.20	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P322762

Component	Result	Code	Units
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	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 8321B
Batch ID: P322530

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P322576

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P322599

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P322590

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P323004

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

Reference Method: SM 2540 C-97
Batch ID: P322987

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P323024

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
 Batch ID: P323007

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
 Batch ID: P322613

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

Reference Method: USGS O-2060-01
 Batch ID: P322653

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.010	U	ug/L
Bentazon	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P322761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	108		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P322761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.8		P	85 - 115
Cadmium	97.5		P	85 - 115
Chromium	99.6		P	85 - 115
Copper	95.4		P	85 - 115
Lead	99.3		P	85 - 115
Nickel	97.1		P	85 - 115
Silver	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323118

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322607

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: P322637

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322722

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	96.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322707

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322611

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

Reference Method: EPA 8270D
Batch ID: P322674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.9	62.0	P/P	30 - 83.0
Alpha-BHC	86.3	85.9	P/P	62 - 119
Alpha-Chlordane	92.8	94.9	P/P	56 - 119
Beta-BHC	88.8	83.0	P/P	54 - 141
Carbophenothion	96.6	90.2	P/P	33 - 147
Chlorothalonil	118	102	P/P	25 - 175
Cypermethrin	89.8	89.2	P/P	50 - 155
DDD-p,p'	92.7	91.7	P/P	56 - 135
DDE-p,p'	98.8	99.2	P/P	48 - 120
DDT-p,p'	85.2	87.9	P/P	51 - 121

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P322674

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Delta-BHC	105	97.3	P/P	65 - 163
Dicofol	82.4	89.3	P/P	15 - 112
Dieldrin	93.9	93.9	P/P	59 - 134
Endosulfan I	97.1	97.7	P/P	65 - 142
Endosulfan II	93.2	91.0	P/P	65 - 154
Endosulfan Sulfate	85.8	81.3	P/P	65 - 136
Endrin	103	104	P/P	53 - 156
Endrin Aldehyde	93.5	92.2	P/P	47 - 156
Endrin Ketone	78.8	76.9	P/P	70 - 124
Gamma-BHC	91.1	87.1	P/P	64 - 142
Gamma-Chlordane	92.3	92.5	P/P	55 - 114
Heptachlor	84.5	84.4	P/P	42 - 105
Heptachlor Epoxide	92.7	93.0	P/P	67 - 120
Methoxychlor	90.9	81.1	P/P	63 - 134
Mirex	81.4	80.9	P/P	40 - 90.0
Permethrin	83.1	83.2	P/P	36 - 144
Trifluralin	116	108	P/P	40 - 170

Reference Method: EPA 8270D
Batch ID: P322762

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	92.7	90.5	P/P	78 - 118
Alachlor	93.2	90.9	P/P	77 - 119
Ametryn	113	106	P/P	61 - 136
Atrazine	104	96.6	P/P	73 - 120
Atrazine Desethyl	84.2	75.4	P/P	16 - 122
Azinphos Methyl	144	149	P/P	69 - 186
Bromacil	99.7	76.5	P/P	40 - 125
Butylate	72.2	54.6	P/P	32 - 87.0
Chlorpyrifos Ethyl	103	94.1	P/P	53 - 110
Chlorpyrifos Methyl	97.2	93.1	P/P	31 - 119
Cyanazine	121	116	P/P	36 - 224
Demeton	104	98.2	P/P	39 - 122
Diazinon	90.6	89.9	P/P	75 - 119
Disulfoton	117	115	P/P	42 - 139
EPTC	70.6	56.2	P/P	33 - 96.0
Ethion	119	96.5	P/P	63 - 127
Ethoprop	93.0	91.6	P/P	65 - 107
Fenamiphos	122	113	P/P	64 - 137
Fipronil	103	97.4	P/P	60 - 126
Fipronil Sulfide	102	95.4	P/P	58 - 124
Fipronil Sulfone	96.2	88.0	P/P	57 - 126
Fonofos	91.0	89.2	P/P	65 - 111
Hexazinone	96.9	89.0	P/P	46 - 151
Malathion	117	109	P/P	68 - 132
Metalaxyl	93.9	89.5	P/P	51 - 132
Metolachlor	102	96.6	P/P	78 - 119
Metribuzin	125	128	P/P	64 - 138
Mevinphos	114	110	P/P	34 - 128
Molinate	75.6	68.0	P/P	44 - 101
Norflurazon	115	110	P/P	63 - 129

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P322762

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Parathion Ethyl	99.9	91.1	P/P	80 - 109
Parathion Methyl	85.1	87.5	P/P	74 - 125
Pendimethalin	103	94.4	P/P	48 - 134
Phorate	102	97.0	P/P	52 - 119
Prometon	121	111	P/P	69 - 124
Prometryn	113	108	P/P	66 - 124
Simazine	99.8	95.0	P/P	61 - 134
Terbufos	85.7	83.8	P/P	58 - 115
Terbuthylazine	93.8	90.5	P/P	77 - 113

Reference Method: EPA 8321B

Batch ID: P322530

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	99.6		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P322576

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	131		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P322599

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	112		P	40 - 140

Reference Method: SM 2320 B-97

Batch ID: P323004

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	105		P	95 - 108

Reference Method: SM 4500 F-C-97

Batch ID: P323007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	92 - 103

Reference Method: SM 5310 B-00

Batch ID: P322613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Reference Method: USGS O-2060-01

Batch ID: P322653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	111		P	40 - 140
Acetaminophen	82.0		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P322653

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	131		P	40 - 140
Carbamazepine	109		P	40 - 140
Diuron	104		P	40 - 140
Fenuron	113		P	40 - 140
Fluridone	94.8		P	40 - 140
Imidacloprid	106		P	40 - 160
Linuron	78.0		P	40 - 140
MCPP	117		P	40 - 140
Primidone	114		P	40 - 140
Triclopyr	112		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P322761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884641	Calcium	99.3		P	80 - 120
1884641	Iron	107		P	80 - 120
1884641	Magnesium	102		P	80 - 120
1884641	Potassium	108		P	80 - 120
1884641	Sodium	101		P	80 - 120
1884641	Zinc	99.9		P	80 - 120
1885166	Calcium	106		P	80 - 120
1885166	Iron	106	107	P/P	80 - 120
1885166	Magnesium	105		P	80 - 120
1885166	Potassium	99.7	99.6	P/P	80 - 120
1885166	Sodium	103		P	80 - 120
1885166	Zinc	99.8	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P322761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884641	Arsenic	103		P	80 - 120
1884641	Cadmium	104		P	80 - 120
1884641	Chromium	102		P	80 - 120
1884641	Copper	96.7		P	80 - 120
1884641	Lead	103		P	80 - 120
1884641	Nickel	98.4		P	80 - 120
1884641	Silver	104		P	80 - 120
1885166	Arsenic	102	103	P/P	80 - 120
1885166	Cadmium	101	103	P/P	80 - 120
1885166	Chromium	99.7	100	P/P	80 - 120
1885166	Copper	92.8	92.7	P/P	80 - 120
1885166	Lead	104	100	P/P	80 - 120
1885166	Nickel	94.7	95.9	P/P	80 - 120
1885166	Silver	101	101	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323118

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885051	Chloride	98.7		P	90 - 110
1885069	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885051	Sulfate	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322607

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884977	Ammonia-N	106	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885161	Kjeldahl Nitrogen	99.2	99.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885058	NO2NO3-N	97.0	94.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885071	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885112	O-Phosphate-P	94.5	96.0	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P322674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885130	Aldrin	71.7	72.5	P/P	30 - 83.0
1885130	Alpha-BHC	88.2	84.9	P/P	62 - 119
1885130	Alpha-Chlordane	98.7	97.0	P/P	56 - 119
1885130	Beta-BHC	91.9	105	P/P	54 - 141
1885130	Carbophenothion	122	116	P/P	33 - 147
1885130	Chlorothalonil	60.9	80.9	P/P	25 - 175
1885130	Cypermethrin	101	89.9	P/P	50 - 155
1885130	DDD-p,p'	93.9	86.8	P/P	56 - 135
1885130	DDE-p,p'	103	99.8	P/P	48 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P322674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885130	DDT-p,p'	92.9	84.0	P/P	51 - 121
1885130	Delta-BHC	133	109	P/P	65 - 163
1885130	Dicofol	89.1	97.1	P/P	15 - 112
1885130	Dieldrin	98.8	97.5	P/P	59 - 134
1885130	Endosulfan I	111	122	P/P	65 - 142
1885130	Endosulfan II	108	105	P/P	65 - 154
1885130	Endosulfan Sulfate	95.6	87.7	P/P	65 - 136
1885130	Endrin	103	101	P/P	53 - 156
1885130	Endrin Aldehyde	56.3	58.9	P/P	47 - 156
1885130	Endrin Ketone	89.1	84.8	P/P	70 - 124
1885130	Gamma-BHC	112	116	P/P	64 - 142
1885130	Gamma-Chlordane	98.7	95.5	P/P	55 - 114
1885130	Heptachlor	81.8	80.5	P/P	42 - 105
1885130	Heptachlor Epoxide	98.6	96.2	P/P	67 - 120
1885130	Methoxychlor	96.4	85.2	P/P	63 - 134
1885130	Mirex	91.2	83.7	F/P	40 - 90.0
1885130	Permethrin	99.1	91.8	P/P	36 - 144
1885130	Trifluralin	140	136	P/P	40 - 170

Reference Method: EPA 8270D
Batch ID: P322762

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884988	Acetochlor	94.5	94.2	P/P	74 - 123
1884988	Alachlor	98.7	98.5	P/P	73 - 124
1884988	Ametryn	128	130	P/P	56 - 149
1884988	Atrazine Desethyl	67.8	56.4	P/P	12 - 103
1884988	Azinphos Methyl	185	171	P/P	60 - 202
1884988	Bromacil	83.0	83.3	P/P	42 - 133
1884988	Butylate	68.8	57.0	P/P	10 - 85.0
1884988	Chlorpyrifos Ethyl	107	98.9	P/P	53 - 113
1884988	Chlorpyrifos Methyl	95.5	88.2	P/P	40 - 115
1884988	Cyanazine	120	118	P/P	22 - 210
1884988	Demeton	115	107	P/P	17 - 149
1884988	Diazinon	97.8	97.8	P/P	72 - 124
1884988	Disulfoton	137	130	P/P	43 - 139
1884988	EPTC	70.3	60.4	P/P	10 - 86.0
1884988	Ethion	108	75.3	P/P	65 - 131
1884988	Ethoprop	105	99.6	P/P	59 - 110
1884988	Fenamiphos	89.9	89.3	P/P	57 - 138
1884988	Fipronil	103	101	P/P	40 - 130
1884988	Fipronil Sulfide	96.1	86.2	P/P	36 - 128
1884988	Fipronil Sulfone	86.3	79.1	P/P	16 - 145
1884988	Fonofos	103	94.2	P/P	60 - 112
1884988	Hexazinone	93.8	95.6	P/P	69 - 142
1884988	Malathion	113	106	P/P	68 - 132
1884988	Metalaxyl	94.7	96.7	P/P	66 - 118
1884988	Metolachlor	97.0	96.7	P/P	71 - 124
1884988	Metribuzin	130	129	P/P	61 - 140
1884988	Mevinphos	123	110	P/P	38 - 130
1884988	Molinate	79.6	73.1	P/P	23 - 99.0
1884988	Norflurazon	108	107	P/P	39 - 139

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P322762

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884988	Parathion Ethyl	95.3	93.9	P/P	75 - 111
1884988	Parathion Methyl	95.2	95.5	P/P	64 - 130
1884988	Pendimethalin	104	104	P/P	26 - 173
1884988	Phorate	123	118	P/P	43 - 127
1884988	Prometon	114	114	P/P	50 - 144
1884988	Prometryn	114	117	P/P	69 - 126
1884988	Simazine	114	120	P/P	51 - 152
1884988	Terbufos	103	100	P/P	54 - 125
1884988	Terbutylazine	94.9	95.5	P/P	76 - 113

Reference Method: EPA 8321B
Batch ID: P322530

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884563	Sucralose	76.5	76.6	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P322576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885156	Glyphosate	53.2	53.8	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P322599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884219	Pyraclostrobin	84.4	90.4	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P323007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885134	Fluoride	98.9	98.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P322613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1884977	Organic Carbon	102		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P322653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885154	2,4-D	142	139	F/P	40 - 140
1885154	Acetaminophen	65.6	67.2	P/P	40 - 140
1885154	Bentazon	227	243	F/F	40 - 140
1885154	Carbamazepine	81.2	90.0	P/P	40 - 140
1885154	Diuron	82.5	76.9	P/P	40 - 140
1885154	Fenuron	78.8	87.6	P/P	40 - 140
1885154	Fluridone	67.2	70.4	P/P	40 - 140
1885154	Imidacloprid	123	123	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P322653

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1885154	Linuron	86.8	82.4	P/P	40 - 140
1885154	MCP	109	112	P/P	40 - 140
1885154	Primidone	70.0	98.8	P/P	40 - 140
1885154	Triclopyr	119	102	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P322688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885051	Turbidity	4.05	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P322761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885166	Calcium	0.917	Spike	P	0 - 20
1885166	Iron	0.956	Spike	P	0 - 20
1885166	Magnesium	1.36	Spike	P	0 - 20
1885166	Potassium	0.0469	Spike	P	0 - 20
1885166	Sodium	1.73	Spike	P	0 - 20
1885166	Zinc	0.932	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P322761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885166	Arsenic	1.14	Spike	P	0 - 20
1885166	Cadmium	1.06	Spike	P	0 - 20
1885166	Chromium	0.729	Spike	P	0 - 20
1885166	Copper	0.118	Spike	P	0 - 20
1885166	Lead	3.59	Spike	P	0 - 20
1885166	Nickel	1.17	Spike	P	0 - 20
1885166	Silver	0.514	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885069	Chloride	0.223	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P323121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885069	Sulfate	0.119	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P322607

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884977	Ammonia-N	5.51	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P322637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885161	Kjeldahl Nitrogen	0.496	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P322722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885058	NO2NO3-N	1.62	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P322707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885071	Total-P	0.459	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P322611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885112	O-Phosphate-P	1.36	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P322674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885130	Aldrin	1.13	Spike	P	0 - 30
1885130	Alpha-BHC	3.78	Spike	P	0 - 30
1885130	Alpha-Chlordane	1.77	Spike	P	0 - 30
1885130	Beta-BHC	13.4	Spike	P	0 - 30
1885130	Carbophenothion	5.22	Spike	P	0 - 30
1885130	Chlorothalonil	28.1	Spike	P	0 - 30
1885130	Cypermethrin	11.7	Spike	P	0 - 30
1885130	DDD-p,p'	7.87	Spike	P	0 - 30
1885130	DDE-p,p'	3.48	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P322674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885130	DDT-p,p'	10.0	Spike	P	0 - 30
1885130	Delta-BHC	20.0	Spike	P	0 - 30
1885130	Dicofol	8.60	Spike	P	0 - 30
1885130	Dieldrin	1.39	Spike	P	0 - 30
1885130	Endosulfan I	9.30	Spike	P	0 - 30
1885130	Endosulfan II	2.83	Spike	P	0 - 30
1885130	Endosulfan Sulfate	8.63	Spike	P	0 - 30
1885130	Endrin	1.10	Spike	P	0 - 30
1885130	Endrin Aldehyde	4.64	Spike	P	0 - 30
1885130	Endrin Ketone	5.01	Spike	P	0 - 30
1885130	Gamma-BHC	4.17	Spike	P	0 - 30
1885130	Gamma-Chlordane	3.32	Spike	P	0 - 30
1885130	Heptachlor	1.54	Spike	P	0 - 30
1885130	Heptachlor Epoxide	2.40	Spike	P	0 - 30
1885130	Methoxychlor	12.3	Spike	P	0 - 30
1885130	Mirex	8.58	Spike	P	0 - 30
1885130	Permethrin	7.73	Spike	P	0 - 30
1885130	Trifluralin	2.79	Spike	P	0 - 30
LFB	Aldrin	27.8	LCS	P	0 - 30
LFB	Alpha-BHC	0.511	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.22	LCS	P	0 - 30
LFB	Beta-BHC	6.69	LCS	P	0 - 30
LFB	Carbophenothion	6.90	LCS	P	0 - 30
LFB	Chlorothalonil	14.0	LCS	P	0 - 30
LFB	Cypermethrin	0.665	LCS	P	0 - 30
LFB	DDD-p,p'	1.03	LCS	P	0 - 30
LFB	DDE-p,p'	0.412	LCS	P	0 - 30
LFB	DDT-p,p'	3.17	LCS	P	0 - 30
LFB	Delta-BHC	7.67	LCS	P	0 - 30
LFB	Dicofol	8.00	LCS	P	0 - 30
LFB	Dieldrin	0.0500	LCS	P	0 - 30
LFB	Endosulfan I	0.593	LCS	P	0 - 30
LFB	Endosulfan II	2.48	LCS	P	0 - 30
LFB	Endosulfan Sulfate	5.38	LCS	P	0 - 30
LFB	Endrin	0.759	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.40	LCS	P	0 - 30
LFB	Endrin Ketone	2.42	LCS	P	0 - 30
LFB	Gamma-BHC	4.50	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.242	LCS	P	0 - 30
LFB	Heptachlor	0.136	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.329	LCS	P	0 - 30
LFB	Methoxychlor	11.4	LCS	P	0 - 30
LFB	Mirex	0.631	LCS	P	0 - 30
LFB	Permethrin	0.146	LCS	P	0 - 30
LFB	Trifluralin	7.54	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P322762

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

Reference Method: EPA 8270D
Batch ID: P322762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884988	Acetochlor	0.273	Spike	P	0 - 30
1884988	Alachlor	0.179	Spike	P	0 - 30
1884988	Ametryn	1.80	Spike	P	0 - 30
1884988	Atrazine	2.08	Spike	P	0 - 30
1884988	Atrazine Desethyl	15.6	Spike	P	0 - 30
1884988	Azinphos Methyl	7.53	Spike	P	0 - 30
1884988	Bromacil	0.386	Spike	P	0 - 30
1884988	Butylate	18.7	Spike	P	0 - 30
1884988	Chlorpyrifos Ethyl	7.98	Spike	P	0 - 30
1884988	Chlorpyrifos Methyl	7.99	Spike	P	0 - 30
1884988	Cyanazine	1.45	Spike	P	0 - 30
1884988	Demeton	7.33	Spike	P	0 - 30
1884988	Diazinon	0.0384	Spike	P	0 - 30
1884988	Disulfoton	5.21	Spike	P	0 - 30
1884988	EPTC	15.2	Spike	P	0 - 30
1884988	Ethion	35.4	Spike	F	0 - 30
1884988	Ethoprop	5.33	Spike	P	0 - 30
1884988	Fenamiphos	0.748	Spike	P	0 - 30
1884988	Fipronil	1.41	Spike	P	0 - 30
1884988	Fipronil Sulfide	9.18	Spike	P	0 - 30
1884988	Fipronil Sulfone	6.79	Spike	P	0 - 30
1884988	Fonofos	8.96	Spike	P	0 - 30
1884988	Hexazinone	1.94	Spike	P	0 - 30
1884988	Malathion	6.35	Spike	P	0 - 30
1884988	Metalaxyl	2.12	Spike	P	0 - 30
1884988	Metolachlor	0.273	Spike	P	0 - 30
1884988	Metribuzin	0.332	Spike	P	0 - 30
1884988	Mevinphos	11.0	Spike	P	0 - 30
1884988	Molinate	8.57	Spike	P	0 - 30
1884988	Norflurazon	0.820	Spike	P	0 - 30
1884988	Parathion Ethyl	1.44	Spike	P	0 - 30
1884988	Parathion Methyl	0.353	Spike	P	0 - 30
1884988	Pendimethalin	0.510	Spike	P	0 - 30
1884988	Phorate	4.17	Spike	P	0 - 30
1884988	Prometon	0.0282	Spike	P	0 - 30
1884988	Prometryn	2.48	Spike	P	0 - 30
1884988	Simazine	5.39	Spike	P	0 - 30
1884988	Terbufos	2.97	Spike	P	0 - 30
1884988	Terbutylazine	0.676	Spike	P	0 - 30
LFB	Acetochlor	2.40	LCS	P	0 - 30
LFB	Alachlor	2.53	LCS	P	0 - 30
LFB	Ametryn	6.41	LCS	P	0 - 30
LFB	Atrazine	7.65	LCS	P	0 - 30
LFB	Atrazine Desethyl	11.1	LCS	P	0 - 30
LFB	Azinphos Methyl	3.28	LCS	P	0 - 30
LFB	Bromacil	26.3	LCS	P	0 - 30
LFB	Butylate	27.8	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	8.68	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.32	LCS	P	0 - 30
LFB	Cyanazine	4.50	LCS	P	0 - 30
LFB	Demeton	5.57	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P322762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	0.738	LCS	P	0 - 30
LFB	Disulfoton	1.86	LCS	P	0 - 30
LFB	EPTC	22.7	LCS	P	0 - 30
LFB	Ethion	21.0	LCS	P	0 - 30
LFB	Ethoprop	1.57	LCS	P	0 - 30
LFB	Fenamiphos	7.54	LCS	P	0 - 30
LFB	Fipronil	5.31	LCS	P	0 - 30
LFB	Fipronil Sulfide	6.85	LCS	P	0 - 30
LFB	Fipronil Sulfone	8.91	LCS	P	0 - 30
LFB	Fonofos	1.97	LCS	P	0 - 30
LFB	Hexazinone	8.51	LCS	P	0 - 30
LFB	Malathion	7.85	LCS	P	0 - 30
LFB	Metalaxyl	4.87	LCS	P	0 - 30
LFB	Metolachlor	5.48	LCS	P	0 - 30
LFB	Metribuzin	2.36	LCS	P	0 - 30
LFB	Mevinphos	3.30	LCS	P	0 - 30
LFB	Molinate	10.6	LCS	P	0 - 30
LFB	Norflurazon	4.44	LCS	P	0 - 30
LFB	Parathion Ethyl	9.17	LCS	P	0 - 30
LFB	Parathion Methyl	2.81	LCS	P	0 - 30
LFB	Pendimethalin	8.66	LCS	P	0 - 30
LFB	Phorate	5.46	LCS	P	0 - 30
LFB	Prometon	8.04	LCS	P	0 - 30
LFB	Prometryn	4.13	LCS	P	0 - 30
LFB	Simazine	4.92	LCS	P	0 - 30
LFB	Terbufos	2.19	LCS	P	0 - 30
LFB	Terbutylazine	3.66	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P322530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884563	Sucralose	0.131	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P322576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885156	Glyphosate	1.12	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P322599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884219	Pyraclostrobin	6.86	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
 Batch ID: P322590

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885131	Color (true)	2.22	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P323004

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885134	Total Alkalinity	0.0234	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
 Batch ID: P322987

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885131	TDS	3.12	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P323007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885134	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P322613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1884977	Organic Carbon	0.290	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P322653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1885154	2,4-D	2.00	Spike	P	0 - 30
1885154	Acetaminophen	2.41	Spike	P	0 - 30
1885154	Bentazon	6.81	Spike	P	0 - 30
1885154	Carbamazepine	10.3	Spike	P	0 - 30
1885154	Diuron	5.07	Spike	P	0 - 30
1885154	Fenuron	6.77	Spike	P	0 - 30
1885154	Fluridone	4.60	Spike	P	0 - 30
1885154	Imidacloprid	0.0	Spike	P	0 - 30
1885154	Linuron	5.20	Spike	P	0 - 30
1885154	MCP	3.25	Spike	P	0 - 30
1885154	Primidone	34.1	Spike	F	0 - 30
1885154	Triclopyr	15.2	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: 1885152
Field Sample ID: G1NE0534 03302017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	98.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	114	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	68.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	80.2	P	40 - 160
USGS O-2060-01	Diuron-d6	54.4	P	40 - 150
USGS O-2060-01	Primidone-d5	61.8	P	40 - 150

Lab Sample ID: 1885153
Field Sample ID: G1NE0565 03302017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	103	P	40 - 150
USGS O-2060-01	2,4-D-d3	109	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	69.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	81.2	P	40 - 160
USGS O-2060-01	Diuron-d6	52.6	P	40 - 150
USGS O-2060-01	Primidone-d5	72.6	P	40 - 150

Lab Sample ID: 1885154
Field Sample ID: G1NE0600 03302017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	90.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	93.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	56.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	105	P	40 - 160
USGS O-2060-01	Diuron-d6	76.2	P	40 - 150
USGS O-2060-01	Primidone-d5	72.8	P	40 - 150

Lab Sample ID: 1885155
Field Sample ID: HAQUE CREEK @ US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	88.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	100	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	75.0	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	104	P	40 - 160
USGS O-2060-01	Diuron-d6	71.6	P	40 - 150
USGS O-2060-01	Primidone-d5	98.8	P	40 - 150

Lab Sample ID: 1885156
Field Sample ID: HAQUE CREEK @ US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	131	P	40 - 150
EPA 8321B	Glyphosate 13C 15N	52.2	P	50 - 150

Lab Sample ID: 1885170
Field Sample ID: HAQUE CREEK @ US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	69.6	P	51 - 123

Quality Assurance Report Surrogates

Lab Sample ID: 1885170

Field Sample ID: HAQUE CREEK @ US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Tetrachloro-m-xylene	52.5	P	31 - 111

Lab Sample ID: 1885171

Field Sample ID: HAQUE CREEK @ US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	108	P	62 - 132
EPA 8270D	Simazine-d10	88.5	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A75503

Included Lab Sample IDs: 1885131, 1885134

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A75505

Included Lab Sample IDs: 1885132, 1885135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A75506

Included Lab Sample IDs: 1885133, 1885136

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.8	P/P	90 - 110
O-Phosphate-P	99.6	98.9	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A75508

Included Lab Sample IDs: 1885132, 1885135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.3	96.3	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A75544

Included Lab Sample IDs: 1885131, 1885134

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A75553

Included Lab Sample IDs: 1885132, 1885135

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	92.5	93.0	P/P	90 - 110
NO2NO3-N	94.5	93.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A75568

Included Lab Sample IDs: 1885132, 1885135

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

Reference Method: EPA 8321B

Run ID: A75575

Included Lab Sample IDs: 1885156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	75.2	123	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A75581

Included Lab Sample IDs: 1885156

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	124	129	P/P	70 - 130

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75582

Included Lab Sample IDs: 1885132, 1885135

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A75591

Included Lab Sample IDs: 1885166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.6	97.8	P/P	90 - 110
Cadmium	99.5	98.9	P/P	90 - 110
Chromium	99.8	98.6	P/P	90 - 110
Copper	96.7	95.9	P/P	90 - 110
Lead	97.6	96.6	P/P	90 - 110
Nickel	97.6	97.5	P/P	90 - 110
Silver	98.8	98.8	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A75643

Included Lab Sample IDs: 1885166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Iron	104	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A75643

Included Lab Sample IDs: 1885166

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	103	101	P/P	90 - 110
Potassium	99.6	101	P/P	90 - 110
Sodium	101	99.9	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A75665

Included Lab Sample IDs: 1885131, 1885134

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	107	P/P	90 - 110
Total Alkalinity	107	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A75665

Included Lab Sample IDs: 1885131, 1885134

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

Reference Method: EPA 8321B

Run ID: A75673

Included Lab Sample IDs: 1885152, 1885153, 1885154, 1885155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	104	139	P/P	60 - 150
Sucralose	140	104	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A75682

Included Lab Sample IDs: 1885152, 1885153, 1885154, 1885155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	123	86.4	P/P	60 - 150
Acetaminophen	86.4	99.2	P/P	60 - 150
Carbamazepine	118	126	P/P	60 - 150
Carbamazepine	126	131	P/P	60 - 150
Diuron	106	122	P/P	60 - 150
Diuron	110	106	P/P	60 - 150
Fenuron	112	118	P/P	60 - 150
Fenuron	118	121	P/P	60 - 150
Fluridone	101	104	P/P	60 - 150
Fluridone	107	101	P/P	60 - 150
Imidacloprid	92.0	112	P/P	60 - 150
Imidacloprid	96.8	92.0	P/P	60 - 150
Linuron	112	124	P/P	60 - 150
Linuron	150	112	P/P	60 - 150
Primidone	116	89.6	P/P	60 - 150
Primidone	80.0	116	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A75707

Included Lab Sample IDs: 1885170

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	98.8		P	80 - 120
Beta-BHC	93.9		P	80 - 120
Carbophenothion	82.4		P	80 - 120
Chlorothalonil	119		P	80 - 120
Cypermethrin	91.0		P	80 - 120
DDD-p,p'	96.9		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	104		P	80 - 120
Delta-BHC	101		P	80 - 120
Dicofol	108		P	80 - 120
Dieldrin	98.2		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	91.7		P	80 - 120
Endosulfan Sulfate	84.2		P	80 - 120
Endrin	103		P	80 - 120
Endrin Aldehyde	91.0		P	80 - 120
Endrin Ketone	89.8		P	80 - 120
Gamma-BHC	96.0		P	80 - 120
Gamma-Chlordane	99.8		P	80 - 120
Heptachlor	102		P	80 - 120
Heptachlor Epoxide	98.1		P	80 - 120
Methoxychlor	107		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	90.8		P	80 - 120
Trifluralin	103		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75723

Included Lab Sample IDs: 1885131, 1885134

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	103	P/P	90 - 110
Sulfate	101	98.0	P/P	90 - 110
Sulfate	104	103	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A75741

Included Lab Sample IDs: 1885152, 1885153, 1885154, 1885155

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	119	125	P/P	50 - 150
2,4-D	125	120	P/P	50 - 150
Bentazon	88.8	112	P/P	50 - 150
Bentazon	94.4	88.8	P/P	50 - 150
MCP	127	122	P/P	50 - 150
MCP	93.8	127	P/P	50 - 150
Triclopyr	109	106	P/P	50 - 150
Triclopyr	111	109	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A75825
Included Lab Sample IDs: 1885171

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	114		P	80 - 120
Atrazine	99.0		P	80 - 120
Atrazine Desethyl	108		P	80 - 120
Azinphos Methyl	113		P	80 - 120
Bromacil	110		P	80 - 120
Butylate	107		P	80 - 120
Chlorpyrifos Ethyl	93.7		P	80 - 120
Chlorpyrifos Methyl	94.0		P	80 - 120
Cyanazine	113		P	80 - 120
Demeton	102		P	80 - 120
Diazinon	103		P	80 - 120
Disulfoton	106		P	80 - 120
EPTC	109		P	80 - 120
Ethion	92.4		P	80 - 120
Ethoprop	101		P	80 - 120
Fenamiphos	95.6		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Sulfide	95.4		P	80 - 120
Fipronil Sulfone	98.0		P	80 - 120
Fonofos	98.5		P	80 - 120
Hexazinone	99.3		P	80 - 120
Malathion	93.6		P	80 - 120
Metaxyl	103		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	111		P	80 - 120
Mevinphos	80.5		P	80 - 120
Molinate	112		P	80 - 120
Norflurazon	100		P	80 - 120
Parathion Ethyl	90.2		P	80 - 120
Parathion Methyl	88.6		P	80 - 120
Pendimethalin	104		P	80 - 120
Phorate	102		P	80 - 120
Prometon	112		P	80 - 120
Prometryn	117		P	80 - 120
Simazine	109		P	80 - 120
Terbufos	94.0		P	80 - 120
Terbutylazine	101		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				4.05	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 200.7 Rev. 4.4	Calcium	103		99.3	106			0.917
	Iron	108		107	106	107		0.956
	Magnesium	103		102	105			1.36
	Potassium	102		108	99.7	99.6		0.0469
	Sodium	102		101	103			1.73
	Zinc	101		99.9	99.8	101		0.932
EPA 200.8 Rev. 5.4	Arsenic	98.8		103	102	103		1.14
	Cadmium	97.5		104	101	103		1.06
	Chromium	99.6		102	99.7	100		0.729
	Copper	95.4		96.7	92.8	92.7		0.118
	Lead	99.3		103	104	100		3.59
	Nickel	97.1		98.4	94.7	95.9		1.17
	Silver	102		104	101	101		0.514
EPA 300.0 Rev. 2.1	Chloride	101		99.0	98.7		0.223	
	Sulfate	97.3		95.6			0.119	
EPA 350.1 Rev. 2.0	Ammonia-N	101		106	100			5.51
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		99.2	99.9			0.496
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	96.5		97.0	94.5			1.62
EPA 365.1 Rev. 2.0	Total-P	103		107	107			0.459
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7		94.5	96.0			1.36
EPA 8270D	Acetochlor	92.7	90.5	94.5	94.2	2.40		0.273
	Alachlor	93.2	90.9	98.7	98.5	2.53		0.179
	Aldrin	46.9	62.0	71.7	72.5	27.8		1.13
	Alpha-BHC	86.3	85.9	88.2	84.9	0.511		3.78
	Alpha-Chlordane	92.8	94.9	98.7	97.0	2.22		1.77
	Ametryn	113	106	128	130	6.41		1.80
	Atrazine	104	96.6			7.65		2.08
	Atrazine Desethyl	84.2	75.4	67.8	56.4	11.1		15.6
	Azinphos Methyl	144	149	185	171	3.28		7.53
	Beta-BHC	88.8	83.0	91.9	105	6.69		13.4
	Bromacil	99.7	76.5	83.0	83.3	26.3		0.386
	Butylate	72.2	54.6	68.8	57.0	27.8		18.7
	Carbophenothion	96.6	90.2	122	116	6.90		5.22
	Chlorothalonil	118	102	60.9	80.9	14.0		28.1
	Chlorpyrifos Ethyl	103	94.1	107	98.9	8.68		7.98
	Chlorpyrifos Methyl	97.2	93.1	95.5	88.2	4.32		7.99
	Cyanazine	121	116	120	118	4.50		1.45
	Cypermethrin	89.8	89.2	101	89.9	0.665		11.7
	DDD-p,p'	92.7	91.7	93.9	86.8	1.03		7.87
	DDE-p,p'	98.8	99.2	103	99.8	0.412		3.48
	DDT-p,p'	85.2	87.9	92.9	84.0	3.17		10.0
	Delta-BHC	105	97.3	133	109	7.67		20.0
	Demeton	104	98.2	115	107	5.57		7.33
	Diazinon	90.6	89.9	97.8	97.8	0.738		0.0384
	Dicofol	82.4	89.3	89.1	97.1	8.00		8.60
	Dieldrin	93.9	93.9	98.8	97.5	0.0500		1.39
	Disulfoton	117	115	137	130	1.86		5.21
	Endosulfan I	97.1	97.7	111	122	0.593		9.30
	Endosulfan II	93.2	91.0	108	105	2.48		2.83
	Endosulfan Sulfate	85.8	81.3	95.6	87.7	5.38		8.63
	Endrin	103	104	103	101	0.759		1.10
	Endrin Aldehyde	93.5	92.2	56.3	58.9	1.40		4.64
	Endrin Ketone	78.8	76.9	89.1	84.8	2.42		5.01
	EPTC	70.6	56.2	70.3	60.4	22.7		15.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270D	Ethion	119	96.5	108	75.3	21.0		35.4
	Ethoprop	93.0	91.6	105	99.6	1.57		5.33
	Fenamiphos	122	113	89.9	89.3	7.54		0.748
	Fipronil	103	97.4	103	101	5.31		1.41
	Fipronil Sulfide	102	95.4	96.1	86.2	6.85		9.18
	Fipronil Sulfone	96.2	88.0	86.3	79.1	8.91		6.79
	Fonofos	91.0	89.2	103	94.2	1.97		8.96
	Gamma-BHC	91.1	87.1	112	116	4.50		4.17
	Gamma-Chlordane	92.3	92.5	98.7	95.5	0.242		3.32
	Heptachlor	84.5	84.4	81.8	80.5	0.136		1.54
	Heptachlor Epoxide	92.7	93.0	98.6	96.2	0.329		2.40
	Hexazinone	96.9	89.0	93.8	95.6	8.51		1.94
	Malathion	117	109	113	106	7.85		6.35
	Metalaxyl	93.9	89.5	94.7	96.7	4.87		2.12
	Methoxychlor	90.9	81.1	96.4	85.2	11.4		12.3
	Metolachlor	102	96.6	97.0	96.7	5.48		0.273
	Metribuzin	125	128	130	129	2.36		0.332
	Mevinphos	114	110	123	110	3.30		11.0
	Mirex	81.4	80.9	91.2	83.7	0.631		8.58
	Molinate	75.6	68.0	79.6	73.1	10.6		8.57
	Norflurazon	115	110	108	107	4.44		0.820
	Parathion Ethyl	99.9	91.1	95.3	93.9	9.17		1.44
	Parathion Methyl	85.1	87.5	95.2	95.5	2.81		0.353
	Pendimethalin	103	94.4	104	104	8.66		0.510
	Permethrin	83.1	83.2	99.1	91.8	0.146		7.73
	Phorate	102	97.0	123	118	5.46		4.17
	Prometon	121	111	114	114	8.04		0.0282
	Prometryn	113	108	114	117	4.13		2.48
	Simazine	99.8	95.0	114	120	4.92		5.39
	Terbufos	85.7	83.8	103	100	2.19		2.97
	Terbutylazine	93.8	90.5	94.9	95.5	3.66		0.676
	Trifluralin	116	108	140	136	7.54		2.79
EPA 8321B	Glyphosate	131		53.2	53.8			1.12
	Pyraclostrobin	112		84.4	90.4			6.86
	Sucralose	99.6		76.5	76.6			0.131
SM 2120 B	Color (true)						2.22	
SM 2320 B-97	Total Alkalinity	105					0.0234	
SM 2540 C-97	TDS						3.12	
SM 4500 F-C-97	Fluoride	97.4		98.9	98.9			0.0
SM 5310 B-00	Organic Carbon	97.8		102				0.290
USGS O-2060-01	2,4-D	111		142	139			2.00
	Acetaminophen	82.0		65.6	67.2			2.41
	Bentazon	131		227	243			6.81
	Carbamazepine	109		81.2	90.0			10.3
	Diuron	104		82.5	76.9			5.07
	Fenuron	113		78.8	87.6			6.77
	Fluridone	94.8		67.2	70.4			4.60
	Imidacloprid	106		123	123			0.0
	Linuron	78.0		86.8	82.4			5.20
	MCPP	117		109	112			3.25
	Primidone	114		70.0	98.8			34.1
	Triclopyr	112		119	102			15.2

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1885131, 1885134
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1885166
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1885166
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1885131, 1885134
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1885131, 1885134
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1885132, 1885135
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1885132, 1885135
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1885132, 1885135
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1885132, 1885135
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1885133, 1885136
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1885170
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1885171
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1885156
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1885156
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1885152, 1885153, 1885154, 1885155
SM 2120 B / E31780	True Color measured at 450 nm	1885131, 1885134
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1885131, 1885134
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1885131, 1885134
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1885131, 1885134
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1885131, 1885134
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1885132, 1885135
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1885152, 1885153, 1885154, 1885155
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1885152, 1885153, 1885154, 1885155

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	03/31/2017			03/31/2017 15:55	Blanca Fach	1885131, 1885134
EPA 200.7 Rev. 4.4	03/31/2017	04/04/2017	Elliott D. Healy	04/06/2017	Martin Acosta	1885166
EPA 200.8 Rev. 5.4	03/31/2017	04/04/2017	Elliott D. Healy	04/05/2017	Betina Topolski	1885166
EPA 300.0 Rev. 2.1	03/31/2017			04/11/2017	Ping Hua	1885131, 1885134
EPA 350.1 Rev. 2.0	03/31/2017			03/31/2017	Julie Michelle Frank	1885132, 1885135
EPA 351.2 Rev. 2.0	03/31/2017	04/03/2017	Adrian Shelby	04/04/2017	Joseph Suarez	1885132, 1885135
EPA 353.2 Rev. 2.0	03/31/2017			04/04/2017	Beverly Y. Sanders	1885132, 1885135
EPA 365.1 Rev. 2.0	03/31/2017	04/04/2017	Adrian Shelby	04/05/2017	Lipi Saha	1885132, 1885135
EPA 365.1 Rev. 2.0 dissolved	03/31/2017			03/31/2017 15:36	Anthony C. Onicha	1885136
	03/31/2017			03/31/2017 15:57	Anthony C. Onicha	1885133
EPA 8270D	03/31/2017	04/04/2017	Fe-Val Siddell	04/07/2017	Vandana T. Nagar	1885170
	03/31/2017	04/04/2017	Rasheda Ghaffari	04/05/2017	Irina Carbone	1885171
EPA 8321B	03/31/2017	04/03/2017	Fe-Val Siddell	04/05/2017	Juyoung Kim	1885156
	03/31/2017	04/05/2017	Mohammad Ghaffari	04/05/2017	Mohammad Ghaffari	1885156
	03/31/2017	04/07/2017	Mohammad Ghaffari	04/07/2017	Mohammad Ghaffari	1885152, 1885153, 1885154, 1885155
SM 2120 B	03/31/2017			03/31/2017 14:34	Julia Storbeck	1885131
	03/31/2017			03/31/2017 14:37	Julia Storbeck	1885134
SM 2320 B-97	03/31/2017			04/07/2017	Dale L. Simmons	1885131, 1885134
SM 2540 C-97	03/31/2017			04/05/2017	Yijie Li	1885131, 1885134
SM 2540 D-97	03/31/2017			04/05/2017	Yijie Li	1885131, 1885134
SM 4500 F-C-97	03/31/2017			04/07/2017	Dale L. Simmons	1885131, 1885134
SM 5310 B-00	03/31/2017			03/31/2017	Christopher Armour	1885132, 1885135
USGS O-2060-01	03/31/2017	04/06/2017	Fe-Val Siddell	04/08/2017	Juyoung Kim	1885154
	03/31/2017	04/06/2017	Fe-Val Siddell	04/09/2017	Juyoung Kim	1885152, 1885153, 1885155
	03/31/2017	04/06/2017	Fe-Val Siddell	04/12/2017	Juyoung Kim	1885152, 1885153, 1885154, 1885155