

Chemical Analysis Report

SE-DIST-2017-10-11-01

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

Event Description: **SMP-G3 E-canals**
Request ID: **RQ-2017-10-09-28**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

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

Certified by: Colin Wright, Program Administrator

Date Certified: 02-NOV-2017 12:51

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

Case Narrative

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

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

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

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

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: E-3 Canal @ Glades Rd

Collection Date/Time: 10/10/2017 10:05

Field ID: 32013006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935679	EPA 180.1 Rev. 2.0	Turbidity	1.7	A	NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	48		mg Cl/L	P333257	
		Sulfate	19		mg SO4/L	P333261	
	SM 2120 B	Color (true)	89		PCU	P333199	
	SM 2320 B-97	Total Alkalinity	98		mg CaCO3/L	P333703	
	SM 2540 C-97	TDS	231		mg/L	P333562	
	SM 2540 D-97	TSS	2	I	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P333707	
1935683	EPA 350.1 Rev. 2.0	Ammonia-N	0.14		mg N/L	P333447	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.94		mg N/L	P333583	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P333488	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P333899	
1935687	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.025		mg P/L	P333215	
1935718	EPA 200.7 Rev. 4.4	Calcium	45.4		mg/L	P333272	
		Iron	110	I	ug/L	P333272	
		Magnesium	3.60		mg/L	P333272	
		Potassium	3.7		mg/L	P333272	
		Sodium	28.5		mg/L	P333272	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P333272	
		Arsenic	2.42		ug/L	P333272	
		Cadmium	0.020	U	ug/L	P333272	
		Chromium	1.1	I	ug/L	P333272	
		Copper	2.09		ug/L	P333272	
		Lead	0.11	I	ug/L	P333272	
		Nickel	0.25	I	ug/L	P333272	
		Silver	0.010	U	ug/L	P333272	

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: ICW @ Palmetto Park

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

Field ID: 28010770

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935700	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P333193	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P333538	
	SM 2540 D-97	TSS	3	UA	mg/L	P333548	
	SM 4500 F-C-97	Fluoride	0.91		mg F/L	P333541	
1935701	EPA 350.1 Rev. 2.0	Ammonia-N	0.068		mg N/L	P333390	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P333457	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P333420	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P333271	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P333821	
1935702	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.042		mg P/L	P333218	

Field ID: 28010770

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.							

Sample Location: E1 Canal @ Palmetto Park Rd

Collection Date/Time: 10/10/2017 11:00

Field ID: 28010589

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935691	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P333257	
		Sulfate	26		mg SO4/L	P333261	
	SM 2120 B	Color (true)	42	A	PCU	P333200	
	SM 2320 B-97	Total Alkalinity	152		mg CaCO3/L	P333704	
	SM 2540 C-97	TDS	263		mg/L	P333562	
	SM 2540 D-97	TSS	2	I	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P333708	
1935692	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P333447	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P333584	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.01	I	mg N/L	P333489	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	9.2		mg C/L	P333899	
1935693	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.077		mg P/L	P333215	
1935714	EPA 8321B	Sucralose**	0.23		ug/L	P333208	
	USGS O-2060-01	2,4-D	0.024		ug/L	P333230	
		Diuron	0.012		ug/L	P333230	
		Fenuron	0.0080	U	ug/L	P333230	
		Imidacloprid	0.12		ug/L	P333230	
		Bentazon	0.077		ug/L	P333230	
		Linuron	0.0040	U	ug/L	P333230	
		Acetaminophen**	0.0080	U	ug/L	P333230	
		MCP	0.0020	U	ug/L	P333230	
		Carbamazepine**	7.4E-04	I	ug/L	P333230	
		Triclopyr**	0.0040	U	ug/L	P333230	
		Primidone**	0.0040	U	ug/L	P333230	
		Fluridone**	0.17		ug/L	P333230	MS

Ref. Method and Comment:
SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
USGS O-2060-01: MS accuracy for 2,4-D and bentazon could not be assessed due to high concentration of parameter in the spiked sample.
USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: E-2 Canal West @ Yamato Rd

Collection Date/Time: 10/10/2017 11:30

Field ID: 32012012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935680	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	39		mg Cl/L	P333257	
		Sulfate	33		mg SO4/L	P333261	

Field ID: 32012012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935680	SM 2120 B	Color (true)	76		PCU	P333200	
	SM 2320 B-97	Total Alkalinity	169		mg CaCO3/L	P333703	
	SM 2540 C-97	TDS	310		mg/L	P333562	
	SM 2540 D-97	TSS	5	I	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.23		mg F/L	P333707	
1935684	EPA 350.1 Rev. 2.0	Ammonia-N	0.095		mg N/L	P333447	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P333583	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.070		mg N/L	P333488	
	EPA 365.1 Rev. 2.0	Total-P	0.44		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P333899	
1935688	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.33		mg P/L	P333215	
1935719	EPA 200.7 Rev. 4.4	Calcium	71.5		mg/L	P333272	
		Iron	39	I	ug/L	P333272	
		Magnesium	6.38		mg/L	P333272	
		Potassium	10		mg/L	P333272	
		Sodium	23.7		mg/L	P333272	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P333272	
		Arsenic	2.82		ug/L	P333272	
		Cadmium	0.020	U	ug/L	P333272	
		Chromium	0.78	I	ug/L	P333272	
		Copper	3.75		ug/L	P333272	
		Lead	0.26		ug/L	P333272	
		Nickel	0.58	I	ug/L	P333272	
		Silver	0.010	U	ug/L	P333272	

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: E-3 Canal @ Clint Moore Rd

Collection Date/Time: 10/10/2017 11:55

Field ID: 28010165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935681	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	42		mg Cl/L	P333257	
		Sulfate	33		mg SO4/L	P333261	
	SM 2120 B	Color (true)	69		PCU	P333200	
	SM 2320 B-97	Total Alkalinity	149		mg CaCO3/L	P333703	
	SM 2540 C-97	TDS	293		mg/L	P333562	
	SM 2540 D-97	TSS	3	I	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P333707	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P333447	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P333583	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P333488	
	EPA 365.1 Rev. 2.0	Total-P	0.22		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P333899	
1935689	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P333215	

Field ID: 28010165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935720	EPA 200.7 Rev. 4.4	Calcium	64.7		mg/L	P333272	
		Iron	30	U	ug/L	P333272	
		Magnesium	5.58		mg/L	P333272	
		Potassium	8.2		mg/L	P333272	
		Sodium	26.5		mg/L	P333272	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P333272	
		Arsenic	3.77		ug/L	P333272	
		Cadmium	0.020	U	ug/L	P333272	
		Chromium	1.0	I	ug/L	P333272	
		Copper	4.11		ug/L	P333272	
		Lead	0.058	I	ug/L	P333272	
		Nickel	0.49	I	ug/L	P333272	
		Silver	0.010	U	ug/L	P333272	

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: E-4 Canal @ Clint Moore

Collection Date/Time: 10/10/2017 12:45

Field ID: 28042459

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935697	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P333257	
		Sulfate	11		mg SO4/L	P333261	
		Color (true)	90		PCU	P333200	
	SM 2320 B-97	Total Alkalinity	185		mg CaCO3/L	P333704	
	SM 2540 C-97	TDS	288		mg/L	P333563	
	SM 2540 D-97	TSS	2	U	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P333708	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.33		mg N/L	P333448	
		Kjeldahl Nitrogen	1.2		mg N/L	P333584	
1935698	EPA 353.2 Rev. 2.0	NO2NO3-N	0.068		mg N/L	P333489	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P333899	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.076		mg P/L	P333216	

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: E-3 Canal @ Atlantic Ave

Collection Date/Time: 10/10/2017 13:15

Field ID: 28010164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935682	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P333257	
		Sulfate	15		mg SO4/L	P333261	
		Color (true)	63		PCU	P333200	
	SM 2320 B-97	Total Alkalinity	137		mg CaCO3/L	P333704	

Field ID: 28010164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935682	SM 2540 C-97	TDS	233		mg/L	P333562	
	SM 2540 D-97	TSS	2	I	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P333708	
1935686	EPA 350.1 Rev. 2.0	Ammonia-N	0.045		mg N/L	P333447	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.89		mg N/L	P333583	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.061		mg N/L	P333488	
	EPA 365.1 Rev. 2.0	Total-P	0.081		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P333899	
1935690	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.043		mg P/L	P333215	
1935721	EPA 200.7 Rev. 4.4	Calcium	54.9		mg/L	P333272	
		Iron	30	U	ug/L	P333272	
		Magnesium	3.76		mg/L	P333272	
		Potassium	3.0		mg/L	P333272	
		Sodium	21.6		mg/L	P333272	
		Zinc	5.0	U	ug/L	P333272	
	EPA 200.8 Rev. 5.4	Arsenic	1.76		ug/L	P333272	
		Cadmium	0.020	U	ug/L	P333272	
		Chromium	0.42	I	ug/L	P333272	
		Copper	4.09		ug/L	P333272	
		Lead	0.050	U	ug/L	P333272	
		Nickel	0.20	U	ug/L	P333272	
		Silver	0.010	U	ug/L	P333272	

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: E-2 Canal West @ Atlantic Ave

Collection Date/Time: 10/10/2017 13:30

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935694	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P333193	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P333257	
		Sulfate	41		mg SO4/L	P333261	
	SM 2120 B	Color (true)	91		PCU	P333200	
	SM 2320 B-97	Total Alkalinity	179		mg CaCO3/L	P333704	
	SM 2540 C-97	TDS	348		mg/L	P333563	
	SM 2540 D-97	TSS	4	I	mg/L	P333545	
	SM 4500 F-C-97	Fluoride	0.24		mg F/L	P333708	
1935695	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P333447	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P333584	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.26		mg N/L	P333489	
	EPA 365.1 Rev. 2.0	Total-P	0.51		mg P/L	P333364	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P333899	
1935696	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.41		mg P/L	P333215	
1935715	EPA 8321B	Glyphosate**	6.6		ug/L	P333126	
		Pyraclostrobin**	0.0020	U	ug/L	P333125	

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935715	EPA 8321B USGS O-2060-01	Sucralose**	0.30		ug/L	P333208	
		2,4-D	0.088		ug/L	P333230	
		Diuron	0.0074		ug/L	P333230	
		Fenuron	0.0080	U	ug/L	P333230	
		Imidacloprid	0.12		ug/L	P333230	
		Bentazon	0.067		ug/L	P333230	
		Linuron	0.0040	U	ug/L	P333230	
		Acetaminophen**	0.0080	U	ug/L	P333230	
		MCPD	0.0035	I	ug/L	P333230	
		Carbamazepine**	8.9E-04	I	ug/L	P333230	
		Triclopyr**	0.0040	U	ug/L	P333230	
		Primidone**	0.0040	U	ug/L	P333230	
		Fluridone**	0.023	J	ug/L	P333230	MS
1935716	EPA 8270D	Aldrin	4.4	U	ng/L	P333650	
		Alpha-BHC	2.2	U	ng/L	P333650	
		Beta-BHC	4.4	U	ng/L	P333650	
		Delta-BHC	4.4	U	ng/L	P333650	
		Gamma-BHC	4.4	U	ng/L	P333650	RPD
		Carbophenothion	4.4	U	ng/L	P333650	
		Chlorothalonil	2.2	U	ng/L	P333650	
		Cypermethrin	22	U	ng/L	P333650	
		DDD-p,p'	3.3	U	ng/L	P333650	
		DDE-p,p'	3.3	U	ng/L	P333650	
		DDT-p,p'	3.3	UJ	ng/L	P333650	LCS, MS
		Dieldrin	4.4	U	ng/L	P333650	
		Endosulfan I	4.4	U	ng/L	P333650	
		Endosulfan II	4.4	U	ng/L	P333650	
		Endosulfan Sulfate	2.2	U	ng/L	P333650	
		Endrin	2.2	U	ng/L	P333650	
		Endrin Aldehyde	2.2	U	ng/L	P333650	
		Heptachlor	1.7	U	ng/L	P333650	
		Heptachlor Epoxide	2.2	U	ng/L	P333650	
		Methoxychlor	4.4	U	ng/L	P333650	MS
		Mirex	2.2	UJ	ng/L	P333650	LCS
		Permethrin	11	U	ng/L	P333650	
		Trifluralin	1.1	U	ng/L	P333650	
		Alpha-Chlordane	1.1	U	ng/L	P333650	
		Gamma-Chlordane	1.1	U	ng/L	P333650	
		Endrin Ketone	2.2	U	ng/L	P333650	
		Dicofol	33	U	ng/L	P333650	
		Toxaphene**	14	U	ng/L	P333650	
1935717	EPA 8270D	Alachlor	0.25	U	ng/L	P333213	
		Ametryn	0.33	U	ng/L	P333213	
		Atrazine	12		ng/L	P333213	
		Atrazine Desethyl	2.1	I	ng/L	P333213	

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935717	EPA 8270D	Azinphos Methyl	2.3	U	ng/L	P333213	
		Bromacil	0.51	U	ng/L	P333213	
		Butylate	0.43	I	ng/L	P333213	
		Chlorpyrifos Ethyl	0.26	I	ng/L	P333213	
		Chlorpyrifos Methyl	0.10	U	ng/L	P333213	
		Demeton	2.0	U	ng/L	P333213	
		Diazinon	0.13	U	ng/L	P333213	
		Disulfoton	0.51	U	ng/L	P333213	
		EPTC	1.3	U	ng/L	P333213	
		Ethion	0.15	U	ng/L	P333213	
		Ethoprop	0.10	U	ng/L	P333213	
		Fenamiphos	0.25	U	ng/L	P333213	
		Fipronil	0.25	U	ng/L	P333213	
		Fipronil Sulfide	0.18	I	ng/L	P333213	
		Fipronil Sulfone	0.45	I	ng/L	P333213	
		Hexazinone	3.0		ng/L	P333213	
		Malathion	0.36	U	ng/L	P333213	
		Metribuzin	1.4	J	ng/L	P333213	LCS
		Mevinphos	0.51	U	ng/L	P333213	
		Molinate	0.31	U	ng/L	P333213	
		Norflurazon	0.51	U	ng/L	P333213	
		Pendimethalin	1.0	U	ng/L	P333213	
		Phorate	0.25	U	ng/L	P333213	
		Prometon	0.92	U	ng/L	P333213	
		Prometryn	0.20	U	ng/L	P333213	
		Simazine	0.51	U	ng/L	P333213	
		Terbufos	0.10	U	ng/L	P333213	
		Terbuthylazine	0.43	U	ng/L	P333213	
		Fonofos	0.20	U	ng/L	P333213	
		Metalaxyl	22		ng/L	P333213	
		Metolachlor	110		ng/L	P333213	
		Acetochlor	0.25	U	ng/L	P333213	
		Cyanazine	0.51	U	ng/L	P333213	
		Parathion Ethyl	0.25	U	ng/L	P333213	
		Parathion Methyl	0.25	U	ng/L	P333213	
1935722	EPA 200.7 Rev. 4.4	Calcium	73.4		mg/L	P333272	
		Iron	62	I	ug/L	P333272	
		Magnesium	7.27		mg/L	P333272	
		Potassium	11.6		mg/L	P333272	
		Sodium	25.9		mg/L	P333272	
		Zinc	5.0	U	ug/L	P333272	
	EPA 200.8 Rev. 5.4	Arsenic	2.67		ug/L	P333272	
		Cadmium	0.020	U	ug/L	P333272	
		Chromium	0.95	I	ug/L	P333272	
		Copper	3.43		ug/L	P333272	

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1935722	EPA 200.8 Rev. 5.4	Lead	0.16	I	ug/L	P333272	
		Nickel	0.82		ug/L	P333272	
		Silver	0.010	U	ug/L	P333272	

Ref. Method and Comment:

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

EPA 8321B: Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy for 2,4-D and bentazon could not be assessed due to high concentration of parameter in the spiked sample.

USGS O-2060-01: MS accuracy for imidacloprid could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

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

EPA 8270D: MS accuracy for Metalaxyl not assessed due to high content of this parameter in the sample spiked. 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: P333193

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P333272

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: P333272

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P333257

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P333261

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333390

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333447

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333448

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333457

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333583

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333584

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333420

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333488

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333489

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333271

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333364

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333216

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333218

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

Reference Method: EPA 8270D
Batch ID: P333213

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P333213

Component	Result	Code	Units
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	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
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: P333650

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P333650

Component	Result	Code	Units
Toxaphene	12	U	ng/L

Reference Method: EPA 8321B
Batch ID: P333125

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P333126

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: EPA 8321B
Batch ID: P333208

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P333199

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P333200

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P333538

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

Reference Method: SM 2320 B-97
Batch ID: P333703

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

Reference Method: SM 2320 B-97
Batch ID: P333704

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P333562

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P333563

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333545

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P333548

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P333541

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P333707

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P333708

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P333821

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

Reference Method: SM 5310 B-00
Batch ID: P333899

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

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
 Batch ID: P333230

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
MCPP	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: P333272

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	108		P	85 - 115
Magnesium	109		P	85 - 115
Potassium	101		P	85 - 115
Sodium	105		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P333272

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	97.9		P	85 - 115
Copper	98.9		P	85 - 115
Lead	95.7		P	85 - 115
Nickel	101		P	85 - 115
Silver	95.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P333257

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P333261

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333390

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333447

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333448

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333457

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333583

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333584

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333420

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333488

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333489

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333271

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333364

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: P333215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333216

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333218

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

Reference Method: EPA 8270D
Batch ID: P333213

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	101	105	P/P	78 - 118
Alachlor	102	105	P/P	77 - 119
Ametryn	99.1	97.9	P/P	61 - 136
Atrazine	93.6	105	P/P	73 - 120
Atrazine Desethyl	99.8	99.8	P/P	16 - 122
Azinphos Methyl	111	117	P/P	69 - 186
Bromacil	85.0	87.9	P/P	40 - 125
Butylate	42.0	51.4	P/P	32 - 87.0
Chlorpyrifos Ethyl	92.1	91.0	P/P	53 - 110
Chlorpyrifos Methyl	106	101	P/P	31 - 119
Cyanazine	129	132	P/P	36 - 224
Demeton	90.8	84.1	P/P	39 - 122
Diazinon	113	117	P/P	75 - 119
Disulfoton	105	113	P/P	42 - 139
EPTC	40.8	47.4	P/P	33 - 96.0
Ethion	83.9	87.6	P/P	63 - 127
Ethoprop	84.5	87.6	P/P	65 - 107
Fenamiphos	90.0	86.7	P/P	64 - 137
Fipronil	97.5	100	P/P	60 - 126
Fipronil Sulfide	87.5	85.3	P/P	58 - 124
Fipronil Sulfone	72.7	73.5	P/P	57 - 126
Fonofos	95.1	93.8	P/P	65 - 111

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P333213

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hexazinone	94.6	96.2	P/P	46 - 151
Malathion	88.0	85.4	P/P	68 - 132
Metalaxyl	101	102	P/P	51 - 132
Metolachlor	87.7	91.5	P/P	78 - 119
Metribuzin	148	123	F/P	58 - 148
Mevinphos	79.6	78.6	P/P	34 - 128
Molinate	49.8	57.1	P/P	44 - 101
Norflurazon	88.4	92.5	P/P	63 - 129
Parathion Ethyl	100	94.2	P/P	80 - 109
Parathion Methyl	109	113	P/P	74 - 125
Pendimethalin	96.2	95.1	P/P	48 - 134
Phorate	85.3	78.5	P/P	52 - 119
Prometon	84.1	90.0	P/P	69 - 124
Prometryn	93.8	96.0	P/P	66 - 124
Simazine	99.8	103	P/P	61 - 134
Terbufos	92.5	90.4	P/P	58 - 115
Terbutylazine	95.1	99.2	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P333650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	85.7	83.1	P/P	26 - 88.0
Alpha-BHC	105	105	P/P	63 - 114
Alpha-Chlordane	102	107	P/P	56 - 117
Beta-BHC	127	112	P/P	57 - 138
Carbophenothion	147	147	P/P	36 - 148
Chlorothalonil	83.9	103	P/P	26 - 173
Cypermethrin	151	144	P/P	42 - 159
DDD-p,p'	109	111	P/P	62 - 126
DDE-p,p'	103	105	P/P	53 - 115
DDT-p,p'	120	118	F/F	54 - 117
Delta-BHC	122	128	P/P	68 - 158
Dicofol	29.2	29.9	P/P	25 - 114
Dieldrin	117	125	P/P	59 - 126
Endosulfan I	112	114	P/P	62 - 138
Endosulfan II	118	119	P/P	61 - 150
Endosulfan Sulfate	114	112	P/P	63 - 132
Endrin	115	120	P/P	49 - 148
Endrin Aldehyde	102	116	P/P	50 - 144
Endrin Ketone	114	114	P/P	66 - 122
Gamma-BHC	116	122	P/P	60 - 137
Gamma-Chlordane	98.9	102	P/P	54 - 113
Heptachlor	89.1	87.7	P/P	43 - 104
Heptachlor Epoxide	99.9	109	P/P	64 - 118
Methoxychlor	127	128	P/P	63 - 129
Mirex	94.1	85.9	F/P	39 - 93.0
Permethrin	122	118	P/P	51 - 123
Trifluralin	93.6	91.9	P/P	35 - 187

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P333650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	78.1	88.5	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P333125

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	95.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P333126

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	115		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P333208

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	129		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P333538

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

Reference Method: SM 2320 B-97
Batch ID: P333703

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 108

Reference Method: SM 2320 B-97
Batch ID: P333704

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

Reference Method: SM 4500 F-C-97
Batch ID: P333541

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P333707

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.0		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P333708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P333821

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.2		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P333899

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P333230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	77.9		P	40 - 150
Acetaminophen	118		P	30 - 150
Bentazon	84.3		P	30 - 150
Carbamazepine	130		P	40 - 150
Diuron	119		P	40 - 150
Fenuron	126		P	40 - 150
Fluridone	118		P	40 - 150
Imidacloprid	111		P	40 - 160
Linuron	120		P	40 - 150
MCP	84.0		P	40 - 150
Primidone	107		P	40 - 150
Triclopyr	82.8		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935568	Calcium	104		P	80 - 120
1935568	Iron	106		P	80 - 120
1935568	Magnesium	105		P	80 - 120
1935568	Potassium	101		P	80 - 120
1935568	Sodium	105		P	80 - 120
1935568	Zinc	99.3		P	80 - 120
1935790	Calcium	107		P	80 - 120
1935790	Iron	111	111	P/P	80 - 120
1935790	Magnesium	112	113	P/P	80 - 120
1935790	Potassium	102	102	P/P	80 - 120
1935790	Sodium	106	109	P/P	80 - 120
1935790	Zinc	104	105	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333272

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935568	Arsenic	102		P	80 - 120
1935568	Cadmium	103		P	80 - 120
1935568	Chromium	99.4		P	80 - 120
1935568	Copper	95.3		P	80 - 120
1935568	Lead	97.4		P	80 - 120
1935568	Nickel	98.9		P	80 - 120
1935568	Silver	98.5		P	80 - 120
1935790	Arsenic	101	103	P/P	80 - 120
1935790	Cadmium	102	105	P/P	80 - 120
1935790	Chromium	101	103	P/P	80 - 120
1935790	Copper	97.5	99.1	P/P	80 - 120
1935790	Lead	96.4	98.0	P/P	80 - 120
1935790	Nickel	101	101	P/P	80 - 120
1935790	Silver	95.6	98.1	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935768	Chloride	102		P	90 - 110
1935775	Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935768	Sulfate	100		P	90 - 110
1935775	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333447

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935625	Ammonia-N	99.7	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333448

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935732	Ammonia-N	101	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333457

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935669	Kjeldahl Nitrogen	102	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935625	Kjeldahl Nitrogen	96.5	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333584

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935774	Kjeldahl Nitrogen	104	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1934451	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333488

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935625	NO2NO3-N	104	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935692	NO2NO3-N	105	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333271

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935701	Total-P	97.1	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333364

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935683	Total-P	101	99.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935628	O-Phosphate-P	98.0	97.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935699	O-Phosphate-P	94.6	95.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P333218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935840	O-Phosphate-P	97.5	98.3	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P333213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935468	Acetochlor	97.0	102	P/P	74 - 123
1935468	Alachlor	97.3	99.4	P/P	73 - 124
1935468	Ametryn	96.8	93.1	P/P	56 - 149
1935468	Atrazine	96.9	88.1	P/P	73 - 124
1935468	Atrazine Desethyl	77.8	90.4	P/P	12 - 103
1935468	Azinphos Methyl	98.5	103	P/P	60 - 202
1935468	Bromacil	83.1	78.7	P/P	42 - 133
1935468	Butylate	39.7	38.8	P/P	10 - 85.0
1935468	Chlorpyrifos Ethyl	85.3	91.5	P/P	53 - 113
1935468	Chlorpyrifos Methyl	92.8	101	P/P	40 - 115
1935468	Cyanazine	104	111	P/P	22 - 210
1935468	Demeton	106	107	P/P	17 - 149
1935468	Diazinon	116	121	P/P	72 - 124
1935468	Disulfoton	107	110	P/P	43 - 139
1935468	EPTC	38.4	34.3	P/P	10 - 86.0
1935468	Ethion	85.6	88.4	P/P	65 - 131
1935468	Ethoprop	89.8	98.7	P/P	59 - 110
1935468	Fenamiphos	78.8	78.8	P/P	57 - 138
1935468	Fipronil	98.5	94.8	P/P	40 - 130
1935468	Fipronil Sulfide	84.5	85.5	P/P	36 - 128
1935468	Fipronil Sulfone	74.5	70.9	P/P	16 - 145
1935468	Fonofos	85.6	96.7	P/P	60 - 112
1935468	Hexazinone	95.6	99.1	P/P	69 - 142
1935468	Malathion	80.0	84.5	P/P	68 - 132
1935468	Metolachlor	89.3	91.3	P/P	71 - 124
1935468	Metribuzin	137	137	P/P	61 - 140
1935468	Mevinphos	77.3	82.6	P/P	38 - 130
1935468	Molinate	50.6	51.9	P/P	23 - 99.0
1935468	Norflurazon	85.0	89.1	P/P	39 - 139
1935468	Parathion Ethyl	90.3	91.3	P/P	75 - 111
1935468	Parathion Methyl	102	105	P/P	64 - 130
1935468	Pendimethalin	98.5	99.4	P/P	26 - 173
1935468	Phorate	82.8	76.7	P/P	43 - 127
1935468	Prometon	93.1	96.1	P/P	50 - 144
1935468	Prometryn	80.1	78.1	P/P	69 - 126
1935468	Simazine	105	112	P/P	51 - 152
1935468	Terbufos	85.3	95.4	P/P	54 - 125
1935468	Terbutylazine	95.8	94.7	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P333650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935886	Aldrin	81.4	89.4	P/P	22 - 97.0
1935886	Alpha-BHC	115	110	P/P	43 - 132
1935886	Alpha-Chlordane	103	109	P/P	36 - 126
1935886	Beta-BHC	109	118	P/P	41 - 150
1935886	Carbophenothion	168	163	P/P	13 - 196
1935886	Chlorothalonil	166	155	P/P	10 - 266
1935886	Cypermethrin	123	138	P/P	37 - 161
1935886	DDD-p,p'	106	112	P/P	44 - 131
1935886	DDE-p,p'	100	107	P/P	32 - 127

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P333650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935886	DDT-p,p'	116	118	P/F	45 - 116
1935886	Delta-BHC	123	150	P/P	50 - 201
1935886	Dicofol	31.0	30.9	P/P	10 - 100
1935886	Dieldrin	119	121	P/P	39 - 142
1935886	Endosulfan I	120	122	P/P	51 - 139
1935886	Endosulfan II	119	126	P/P	49 - 155
1935886	Endosulfan Sulfate	112	121	P/P	54 - 136
1935886	Endrin	123	124	P/P	38 - 141
1935886	Endrin Aldehyde	112	120	P/P	14 - 152
1935886	Endrin Ketone	115	118	P/P	60 - 128
1935886	Gamma-BHC	121	73.6	P/P	48 - 157
1935886	Gamma-Chlordane	98.8	105	P/P	35 - 123
1935886	Heptachlor	87.7	92.2	P/P	25 - 112
1935886	Heptachlor Epoxide	109	109	P/P	48 - 125
1935886	Methoxychlor	141	133	F/F	52 - 127
1935886	Mirex	79.3	87.8	P/P	25 - 108
1935886	Permethrin	108	116	P/P	46 - 133
1935886	Trifluralin	96.1	97.1	P/P	29 - 254

Reference Method: EPA 8276

Batch ID: P333650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935466	Toxaphene	90.2	100	P/P	36 - 147

Reference Method: EPA 8321B

Batch ID: P333125

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935464	Pyraclostrobin	90.1	93.8	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P333126

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935261	Glyphosate	122	123	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P333208

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935714	Sucralose	77.1	77.4	P/P	40 - 150

Reference Method: SM 4500 F-C-97

Batch ID: P333541

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936092	Fluoride	98.3	96.9	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P333707

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935767	Fluoride	95.8	96.4	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P333708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1936172	Fluoride	97.0	98.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P333821

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935517	Organic Carbon	90.9	90.1	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P333899

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935588	Organic Carbon	103		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P333230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1935715	Acetaminophen	99.5	87.9	P/P	30 - 150
1935715	Carbamazepine	108	101	P/P	40 - 150
1935715	Diuron	73.8	69.4	P/P	40 - 150
1935715	Fenuron	114	101	P/P	40 - 150
1935715	Fluridone	42.3	32.8	P/F	40 - 150
1935715	Linuron	90.5	85.1	P/P	40 - 150
1935715	MCP	58.0	55.4	P/P	40 - 150
1935715	Primidone	104	97.2	P/P	40 - 150
1935715	Triclopyr	59.6	58.3	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P333193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935679	Turbidity	1.20	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935790	Calcium	0.808	Spike	P	0 - 20
1935790	Iron	0.548	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P333272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935790	Magnesium	0.221	Spike	P	0 - 20
1935790	Potassium	0.371	Spike	P	0 - 20
1935790	Sodium	1.79	Spike	P	0 - 20
1935790	Zinc	0.904	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P333272

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935790	Arsenic	2.36	Spike	P	0 - 20
1935790	Cadmium	2.67	Spike	P	0 - 20
1935790	Chromium	1.43	Spike	P	0 - 20
1935790	Copper	1.45	Spike	P	0 - 20
1935790	Lead	1.64	Spike	P	0 - 20
1935790	Nickel	0.815	Spike	P	0 - 20
1935790	Silver	2.60	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935775	Chloride	0.756	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P333261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935775	Sulfate	0.793	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934985	Ammonia-N	1.26	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935625	Ammonia-N	1.06	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P333448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935732	Ammonia-N	1.27	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935669	Kjeldahl Nitrogen	3.20	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935625	Kjeldahl Nitrogen	4.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P333584

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935774	Kjeldahl Nitrogen	0.0639	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1934451	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333488

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935625	NO2NO3-N	1.43	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P333489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935692	NO2NO3-N	2.30	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P333271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935701	Total-P	4.82	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P333364

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935683	Total-P	1.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P333215

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935628	O-Phosphate-P	0.717	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P333216

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935699	O-Phosphate-P	0.758	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P333218

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935840	O-Phosphate-P	0.729	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P333213

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935468	Acetochlor	4.73	Spike	P	0 - 30
1935468	Alachlor	2.14	Spike	P	0 - 30
1935468	Ametryn	3.89	Spike	P	0 - 30
1935468	Atrazine	6.11	Spike	P	0 - 30
1935468	Atrazine Desethyl	15.0	Spike	P	0 - 30
1935468	Azinphos Methyl	4.62	Spike	P	0 - 30
1935468	Bromacil	5.40	Spike	P	0 - 30
1935468	Butylate	2.28	Spike	P	0 - 30
1935468	Chlorpyrifos Ethyl	7.06	Spike	P	0 - 30
1935468	Chlorpyrifos Methyl	8.64	Spike	P	0 - 30
1935468	Cyanazine	6.62	Spike	P	0 - 30
1935468	Demeton	1.54	Spike	P	0 - 30
1935468	Diazinon	3.76	Spike	P	0 - 30
1935468	Disulfoton	2.74	Spike	P	0 - 30
1935468	EPTC	11.2	Spike	P	0 - 30
1935468	Ethion	3.22	Spike	P	0 - 30
1935468	Ethoprop	9.38	Spike	P	0 - 30
1935468	Fenamiphos	0.0190	Spike	P	0 - 30
1935468	Fipronil	3.73	Spike	P	0 - 30
1935468	Fipronil Sulfide	1.18	Spike	P	0 - 30
1935468	Fipronil Sulfone	5.03	Spike	P	0 - 30
1935468	Fonofos	12.2	Spike	P	0 - 30
1935468	Hexazinone	3.54	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P333213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935468	Malathion	5.53	Spike	P	0 - 30
1935468	Metalaxyl	2.94	Spike	P	0 - 30
1935468	Metolachlor	2.12	Spike	P	0 - 30
1935468	Metribuzin	0.190	Spike	P	0 - 30
1935468	Mevinphos	6.63	Spike	P	0 - 30
1935468	Molinate	2.46	Spike	P	0 - 30
1935468	Norflurazon	4.72	Spike	P	0 - 30
1935468	Parathion Ethyl	1.11	Spike	P	0 - 30
1935468	Parathion Methyl	3.56	Spike	P	0 - 30
1935468	Pendimethalin	0.947	Spike	P	0 - 30
1935468	Phorate	7.70	Spike	P	0 - 30
1935468	Prometon	2.77	Spike	P	0 - 30
1935468	Prometryn	2.53	Spike	P	0 - 30
1935468	Simazine	6.27	Spike	P	0 - 30
1935468	Terbufos	11.1	Spike	P	0 - 30
1935468	Terbutylazine	1.08	Spike	P	0 - 30
LFB	Acetochlor	4.13	LCS	P	0 - 30
LFB	Alachlor	3.00	LCS	P	0 - 30
LFB	Ametryn	1.19	LCS	P	0 - 30
LFB	Atrazine	11.3	LCS	P	0 - 30
LFB	Atrazine Desethyl	0.0526	LCS	P	0 - 30
LFB	Azinphos Methyl	4.88	LCS	P	0 - 30
LFB	Bromacil	3.40	LCS	P	0 - 30
LFB	Butylate	20.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.27	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.79	LCS	P	0 - 30
LFB	Cyanazine	2.03	LCS	P	0 - 30
LFB	Demeton	7.62	LCS	P	0 - 30
LFB	Diazinon	3.51	LCS	P	0 - 30
LFB	Disulfoton	7.35	LCS	P	0 - 30
LFB	EPTC	15.1	LCS	P	0 - 30
LFB	Ethion	4.29	LCS	P	0 - 30
LFB	Ethoprop	3.59	LCS	P	0 - 30
LFB	Fenamiphos	3.76	LCS	P	0 - 30
LFB	Fipronil	2.57	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.55	LCS	P	0 - 30
LFB	Fipronil Sulfone	1.01	LCS	P	0 - 30
LFB	Fonofos	1.40	LCS	P	0 - 30
LFB	Hexazinone	1.73	LCS	P	0 - 30
LFB	Malathion	3.03	LCS	P	0 - 30
LFB	Metalaxyl	1.74	LCS	P	0 - 30
LFB	Metolachlor	4.26	LCS	P	0 - 30
LFB	Metribuzin	18.8	LCS	P	0 - 30
LFB	Mevinphos	1.32	LCS	P	0 - 30
LFB	Molinate	13.6	LCS	P	0 - 30
LFB	Norflurazon	4.57	LCS	P	0 - 30
LFB	Parathion Ethyl	6.21	LCS	P	0 - 30
LFB	Parathion Methyl	4.25	LCS	P	0 - 30
LFB	Pendimethalin	1.16	LCS	P	0 - 30
LFB	Phorate	8.30	LCS	P	0 - 30
LFB	Prometon	6.78	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P333213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometryn	2.38	LCS	P	0 - 30
LFB	Simazine	3.50	LCS	P	0 - 30
LFB	Terbufos	2.28	LCS	P	0 - 30
LFB	Terbutylazine	4.23	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P333650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935886	Aldrin	9.37	Spike	P	0 - 30
1935886	Alpha-BHC	4.82	Spike	P	0 - 30
1935886	Alpha-Chlordane	5.19	Spike	P	0 - 30
1935886	Beta-BHC	7.88	Spike	P	0 - 30
1935886	Carbophenothion	3.28	Spike	P	0 - 30
1935886	Chlorothalonil	7.22	Spike	P	0 - 30
1935886	Cypermethrin	11.6	Spike	P	0 - 30
1935886	DDD-p,p'	4.97	Spike	P	0 - 30
1935886	DDE-p,p'	6.38	Spike	P	0 - 30
1935886	DDT-p,p'	2.19	Spike	P	0 - 30
1935886	Delta-BHC	20.3	Spike	P	0 - 30
1935886	Dicofol	0.105	Spike	P	0 - 30
1935886	Dieldrin	1.29	Spike	P	0 - 30
1935886	Endosulfan I	2.38	Spike	P	0 - 30
1935886	Endosulfan II	5.91	Spike	P	0 - 30
1935886	Endosulfan Sulfate	7.41	Spike	P	0 - 30
1935886	Endrin	0.745	Spike	P	0 - 30
1935886	Endrin Aldehyde	7.24	Spike	P	0 - 30
1935886	Endrin Ketone	3.07	Spike	P	0 - 30
1935886	Gamma-BHC	49.1	Spike	F	0 - 30
1935886	Gamma-Chlordane	6.25	Spike	P	0 - 30
1935886	Heptachlor	5.05	Spike	P	0 - 30
1935886	Heptachlor Epoxide	0.398	Spike	P	0 - 30
1935886	Methoxychlor	6.00	Spike	P	0 - 30
1935886	Mirex	10.2	Spike	P	0 - 30
1935886	Permethrin	7.03	Spike	P	0 - 30
1935886	Trifluralin	1.10	Spike	P	0 - 30
LFB	Aldrin	3.14	LCS	P	0 - 30
LFB	Alpha-BHC	0.00239	LCS	P	0 - 30
LFB	Alpha-Chlordane	4.49	LCS	P	0 - 30
LFB	Beta-BHC	12.2	LCS	P	0 - 30
LFB	Carbophenothion	0.426	LCS	P	0 - 30
LFB	Chlorothalonil	20.0	LCS	P	0 - 30
LFB	Cypermethrin	4.13	LCS	P	0 - 30
LFB	DDD-p,p'	1.62	LCS	P	0 - 30
LFB	DDE-p,p'	2.03	LCS	P	0 - 30
LFB	DDT-p,p'	0.980	LCS	P	0 - 30
LFB	Delta-BHC	4.81	LCS	P	0 - 30
LFB	Dicofol	2.34	LCS	P	0 - 30
LFB	Dieldrin	7.10	LCS	P	0 - 30
LFB	Endosulfan I	1.51	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P333650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endosulfan II	0.640	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.16	LCS	P	0 - 30
LFB	Endrin	4.34	LCS	P	0 - 30
LFB	Endrin Aldehyde	12.9	LCS	P	0 - 30
LFB	Endrin Ketone	0.0586	LCS	P	0 - 30
LFB	Gamma-BHC	5.24	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.52	LCS	P	0 - 30
LFB	Heptachlor	1.59	LCS	P	0 - 30
LFB	Heptachlor Epoxide	8.77	LCS	P	0 - 30
LFB	Methoxychlor	1.09	LCS	P	0 - 30
LFB	Mirex	9.17	LCS	P	0 - 30
LFB	Permethrin	2.76	LCS	P	0 - 30
LFB	Trifluralin	1.78	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P333650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935466	Toxaphene	10.8	Spike	P	0 - 30
LFB	Toxaphene	12.5	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P333125

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935464	Pyraclostrobin	4.02	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P333126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935261	Glyphosate	1.35	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P333208

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935714	Sucralose	0.400	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P333199

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935623	Color (true)	4.68	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P333200

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935691	Color (true)	1.71	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P333538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936092	Total Alkalinity	0.292	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P333703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935767	Total Alkalinity	0.443	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P333704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936172	Total Alkalinity	0.0763	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P333562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935610	TDS	0.182	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P333563

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935777	TDS	1.55	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P333541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936092	Fluoride	0.986	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P333707

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935767	Fluoride	0.472	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
 Batch ID: P333708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1936172	Fluoride	0.979	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
 Batch ID: P333821

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935517	Organic Carbon	0.568	Spike	P	0 - 20

Reference Method: SM 5310 B-00
 Batch ID: P333899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935588	Organic Carbon	0.154	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P333230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1935715	2,4-D	2.31	Spike	P	0 - 30
1935715	Acetaminophen	12.4	Spike	P	0 - 30
1935715	Bentazon	2.17	Spike	P	0 - 30
1935715	Carbamazepine	6.43	Spike	P	0 - 30
1935715	Diuron	4.82	Spike	P	0 - 30
1935715	Fenuron	11.9	Spike	P	0 - 30
1935715	Fluridone	10.0	Spike	P	0 - 30
1935715	Imidacloprid	3.52	Spike	P	0 - 30
1935715	Linuron	6.19	Spike	P	0 - 30
1935715	MCP	4.01	Spike	P	0 - 30
1935715	Primidone	6.99	Spike	P	0 - 30
1935715	Triclopyr	2.20	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: 1935714
 Field Sample ID: 28010589

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	89.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	154	P	30 - 160
EPA 8321B	Diuron-d6	113	P	30 - 160
EPA 8321B	Primidone-d5	156	P	30 - 160
EPA 8321B	Sucralose-d6	72.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	92.1	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1935714
Field Sample ID: 28010589

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Acetaminophen-d4	89.3	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	154	P	30 - 160
USGS O-2060-01	Diuron-d6	113	P	30 - 160
USGS O-2060-01	Primidone-d5	156	P	30 - 160
USGS O-2060-01	Sucralose-d6	72.2	P	40 - 160

Lab Sample ID: 1935715
Field Sample ID: 32012014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	95.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	95.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	126	P	30 - 160
EPA 8321B	Carbamazepine-d10	126	P	30 - 160
EPA 8321B	Diuron-d6	106	P	30 - 160
EPA 8321B	Diuron-d6	88.9	P	30 - 160
EPA 8321B	Diuron-d6	106	P	30 - 160
EPA 8321B	Diuron-d6	88.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	139	P	40 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Sucralose-d6	70.2	P	40 - 160
EPA 8321B	Sucralose-d6	70.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	90.9	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	95.0	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	126	P	30 - 160
USGS O-2060-01	Diuron-d6	106	P	30 - 160
USGS O-2060-01	Diuron-d6	88.9	P	30 - 160
USGS O-2060-01	Primidone-d5	127	P	30 - 160
USGS O-2060-01	Sucralose-d6	70.2	P	40 - 160

Lab Sample ID: 1935716
Field Sample ID: 32012014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	80.3	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	53.0	P	32 - 103
EPA 8276	Decachlorobiphenyl	94.1	P	31 - 100

Lab Sample ID: 1935717
Field Sample ID: 32012014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	68.7	P	53 - 135
EPA 8270D	Simazine-d10	103	P	71 - 126

Quality Assurance Report Calibration Verification

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A79473

Included Lab Sample IDs: 1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	106	107	P/P	90 - 110
Chloride	107	107	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A79495

Included Lab Sample IDs: 1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700

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

Reference Method: SM 2120 B

Run ID: A79497

Included Lab Sample IDs: 1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	101	P/P	85 - 115
Color (true)	104	102	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A79502

Included Lab Sample IDs: 1935687, 1935688, 1935689, 1935690, 1935693, 1935696, 1935699, 1935702

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.5	P/P	90 - 110
O-Phosphate-P	96.4	97.1	P/P	90 - 110
O-Phosphate-P	98.4	96.4	P/P	90 - 110
O-Phosphate-P	99.7	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79537

Included Lab Sample IDs: 1935715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	96.1	93.1	P/P	70 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79555

Included Lab Sample IDs: 1935701

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79568

Included Lab Sample IDs: 1935701

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79578

Included Lab Sample IDs: 1935701

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A79581

Included Lab Sample IDs: 1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A79583

Included Lab Sample IDs: 1935718, 1935719, 1935720, 1935721, 1935722

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	100	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Magnesium	102	101	P/P	90 - 110
Potassium	98.6	97.7	P/P	90 - 110
Sodium	98.6	99.0	P/P	90 - 110
Zinc	97.9	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79585

Included Lab Sample IDs: 1935715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	98.7	99.6	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A79589

Included Lab Sample IDs: 1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79591

Included Lab Sample IDs: 1935718, 1935719, 1935720, 1935721, 1935722

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	106	107	P/P	90 - 110
Arsenic	107	106	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	104	105	P/P	90 - 110
Chromium	105	105	P/P	90 - 110
Copper	105	105	P/P	90 - 110
Copper	105	106	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A79591

Included Lab Sample IDs: 1935718, 1935719, 1935720, 1935721, 1935722

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	101	101	P/P	90 - 110
Lead	100	101	P/P	90 - 110
Nickel	105	106	P/P	90 - 110
Nickel	106	105	P/P	90 - 110
Silver	98.4	98.7	P/P	90 - 110
Silver	98.7	99.1	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A79594

Included Lab Sample IDs: 1935714, 1935715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	115	107	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A79597

Included Lab Sample IDs: 1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698

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

Reference Method: SM 2320 B-97

Run ID: A79625

Included Lab Sample IDs: 1935700

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79625

Included Lab Sample IDs: 1935700

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79645

Included Lab Sample IDs: 1935701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	98.0	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A79661

Included Lab Sample IDs: 1935714, 1935715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	109	111	P/P	50 - 150
2,4-D	111	110	P/P	50 - 150
Acetaminophen	109	110	P/P	60 - 150
Acetaminophen	110	109	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A79661

Included Lab Sample IDs: 1935714, 1935715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	114	125	P/P	50 - 150
Bentazon	125	122	P/P	50 - 150
Carbamazepine	108	114	P/P	60 - 150
Carbamazepine	114	109	P/P	60 - 150
Diuron	111	112	P/P	60 - 150
Diuron	112	102	P/P	60 - 150
Fenuron	107	106	P/P	60 - 150
Fenuron	108	107	P/P	60 - 150
Fluridone	109	113	P/P	60 - 160
Fluridone	113	112	P/P	60 - 160
Imidacloprid	106	99.6	P/P	60 - 150
Imidacloprid	93.9	106	P/P	60 - 150
Linuron	105	110	P/P	60 - 150
Linuron	110	108	P/P	60 - 150
MCP	101	104	P/P	50 - 150
MCP	107	101	P/P	50 - 150
Primidone	103	91.7	P/P	60 - 150
Primidone	105	103	P/P	60 - 150
Triclopyr	107	110	P/P	50 - 150
Triclopyr	113	107	P/P	50 - 150

Reference Method: SM 2320 B-97

Run ID: A79666

Included Lab Sample IDs: 1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.9	P/P	90 - 110
Total Alkalinity	99.9	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A79666

Included Lab Sample IDs: 1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	99.0	P/P	90 - 110
Fluoride	99.0	110	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79688

Included Lab Sample IDs: 1935692, 1935695, 1935698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.1	103	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A79713

Included Lab Sample IDs: 1935701

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	90.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A79722
Included Lab Sample IDs: 1935717

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.6		P	80 - 120
Alachlor	100		P	80 - 120
Ametryn	92.1		P	80 - 120
Atrazine	93.6		P	80 - 120
Atrazine Desethyl	92.2		P	80 - 120
Azinphos Methyl	87.0		P	80 - 120
Bromacil	92.6		P	80 - 120
Butylate	89.6		P	80 - 120
Chlorpyrifos Ethyl	95.9		P	80 - 120
Chlorpyrifos Methyl	95.9		P	80 - 120
Cyanazine	84.1		P	80 - 120
Demeton	92.9		P	80 - 120
Diazinon	92.8		P	80 - 120
Disulfoton	94.4		P	80 - 120
EPTC	94.5		P	80 - 120
Ethion	91.9		P	80 - 120
Ethoprop	95.9		P	80 - 120
Fenamiphos	92.2		P	80 - 120
Fipronil	91.4		P	80 - 120
Fipronil Sulfide	96.9		P	80 - 120
Fipronil Sulfone	93.2		P	80 - 120
Fonofos	93.5		P	80 - 120
Hexazinone	99.1		P	80 - 120
Malathion	92.0		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	94.5		P	80 - 120
Metribuzin	92.6		P	80 - 120
Mevinphos	96.0		P	80 - 120
Molinate	94.3		P	80 - 120
Norflurazon	97.5		P	80 - 120
Parathion Ethyl	94.4		P	80 - 120
Parathion Methyl	97.5		P	80 - 120
Pendimethalin	93.1		P	80 - 120
Phorate	93.7		P	80 - 120
Prometon	93.1		P	80 - 120
Prometryn	95.5		P	80 - 120
Simazine	89.8		P	80 - 120
Terbufos	93.6		P	80 - 120
Terbutylazine	97.3		P	80 - 120

Reference Method: EPA 8270D
Run ID: A79724
Included Lab Sample IDs: 1935716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.3		P	80 - 120
Alpha-BHC	99.8		P	80 - 120
Alpha-Chlordane	97.4		P	80 - 120
Beta-BHC	98.0		P	80 - 120
Carbophenothion	95.3		P	80 - 120
Chlorothalonil	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A79724

Included Lab Sample IDs: 1935716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cypermethrin	93.4		P	80 - 120
DDD-p,p'	95.1		P	80 - 120
DDE-p,p'	99.0		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	97.7		P	80 - 120
Dicofol	86.5		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	98.9		P	80 - 120
Endosulfan II	93.7		P	80 - 120
Endosulfan Sulfate	95.4		P	80 - 120
Endrin	99.9		P	80 - 120
Endrin Aldehyde	88.9		P	80 - 120
Endrin Ketone	96.5		P	80 - 120
Gamma-BHC	89.6		P	80 - 120
Gamma-Chlordane	97.1		P	80 - 120
Heptachlor	98.4		P	80 - 120
Heptachlor Epoxide	97.8		P	80 - 120
Methoxychlor	111		P	80 - 120
Mirex	98.4		P	80 - 120
Permethrin	97.2		P	80 - 120
Trifluralin	98.4		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A79735

Included Lab Sample IDs: 1935683, 1935684, 1935685, 1935686

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	101	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A79736

Included Lab Sample IDs: 1935716

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Toxaphene	105		P	80 - 120

Reference Method: SM 5310 B-00

Run ID: A79756

Included Lab Sample IDs: 1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.3	97.7	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.20	
EPA 200.7 Rev. 4.4	Calcium	106		104	107				0.808
	Iron	108		106	111	111			0.548
	Magnesium	109		105	112	113			0.221
	Potassium	101		101	102	102			0.371
	Sodium	105		105	106	109			1.79
	Zinc	101		99.3	104	105			0.904
EPA 200.8 Rev. 5.4	Arsenic	101		102	101	103			2.36
	Cadmium	98.9		103	102	105			2.67
	Chromium	97.9		99.4	101	103			1.43
	Copper	98.9		95.3	97.5	99.1			1.45
	Lead	95.7		97.4	96.4	98.0			1.64
	Nickel	101		98.9	101	101			0.815
	Silver	95.8		98.5	95.6	98.1			2.60
EPA 300.0 Rev. 2.1	Chloride	103		102	102			0.756	
	Sulfate	101		101	100			0.793	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0							1.26
	Ammonia-N	106		99.7	101				1.06
	Ammonia-N	105		101	100				1.27
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109		102	107				3.20
	Kjeldahl Nitrogen	97.2		96.5	102				4.08
	Kjeldahl Nitrogen	102		104	104				0.0639
EPA 353.2 Rev. 2.0	NO2NO3-N	104		102					0.0
	NO2NO3-N	104		104	106				1.43
	NO2NO3-N	104		105	103				2.30
EPA 365.1 Rev. 2.0	Total-P	104		97.1	102				4.82
	Total-P	103		101	99.6				1.22
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		98.0	97.3				0.717
	O-Phosphate-P	98.1		94.6	95.9				0.758
	O-Phosphate-P	102		97.5	98.3				0.729
EPA 8270D	Acetochlor	101	105	97.0	102		4.13		4.73
	Alachlor	102	105	97.3	99.4		3.00		2.14
	Aldrin	85.7	83.1	81.4	89.4		3.14		9.37
	Alpha-BHC	105	105	115	110		0.0023		4.82
	Alpha-Chlordane	102	107	103	109		4.49		5.19
	Ametryn	99.1	97.9	96.8	93.1		1.19		3.89
	Atrazine	93.6	105	96.9	88.1		11.3		6.11
	Atrazine Desethyl	99.8	99.8	77.8	90.4		0.0526		15.0
	Azinphos Methyl	111	117	98.5	103		4.88		4.62
	Beta-BHC	127	112	109	118		12.2		7.88
	Bromacil	85.0	87.9	83.1	78.7		3.40		5.40
	Butylate	42.0	51.4	39.7	38.8		20.3		2.28
	Carbophenothion	147	147	168	163		0.426		3.28
	Chlorothalonil	83.9	103	166	155		20.0		7.22
	Chlorpyrifos Ethyl	92.1	91.0	85.3	91.5		1.27		7.06
	Chlorpyrifos Methyl	106	101	92.8	101		4.79		8.64
	Cyanazine	129	132	104	111		2.03		6.62
	Cypermethrin	151	144	123	138		4.13		11.6
	DDD-p,p'	109	111	106	112		1.62		4.97
	DDE-p,p'	103	105	100	107		2.03		6.38
	DDT-p,p'	120	118	116	118		0.980		2.19
	Delta-BHC	122	128	123	150		4.81		20.3
	Demeton	90.8	84.1	106	107		7.62		1.54
	Diazinon	113	117	116	121		3.51		3.76

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Dicofol	29.2	29.9	31.0	30.9	2.34	0.105
	Dieldrin	117	125	119	121	7.10	1.29
	Disulfoton	105	113	107	110	7.35	2.74
	Endosulfan I	112	114	120	122	1.51	2.38
	Endosulfan II	118	119	119	126	0.640	5.91
	Endosulfan Sulfate	114	112	112	121	2.16	7.41
	Endrin	115	120	123	124	4.34	0.745
	Endrin Aldehyde	102	116	112	120	12.9	7.24
	Endrin Ketone	114	114	115	118	0.0586	3.07
	EPTC	40.8	47.4	38.4	34.3	15.1	11.2
	Ethion	83.9	87.6	85.6	88.4	4.29	3.22
	Ethoprop	84.5	87.6	89.8	98.7	3.59	9.38
	Fenamiphos	90.0	86.7	78.8	78.8	3.76	0.0190
	Fipronil	97.5	100	98.5	94.8	2.57	3.73
	Fipronil Sulfide	87.5	85.3	84.5	85.5	2.55	1.18
	Fipronil Sulfone	72.7	73.5	74.5	70.9	1.01	5.03
	Fonofos	95.1	93.8	85.6	96.7	1.40	12.2
	Gamma-BHC	116	122	121	73.6	5.24	49.1
	Gamma-Chlordane	98.9	102	98.8	105	3.52	6.25
	Heptachlor	89.1	87.7	87.7	92.2	1.59	5.05
	Heptachlor Epoxide	99.9	109	109	109	8.77	0.398
	Hexazinone	94.6	96.2	95.6	99.1	1.73	3.54
	Malathion	88.0	85.4	80.0	84.5	3.03	5.53
	Metalaxyl	101	102			1.74	2.94
	Methoxychlor	127	128	141	133	1.09	6.00
	Metolachlor	87.7	91.5	89.3	91.3	4.26	2.12
	Metribuzin	148	123	137	137	18.8	0.190
	Mevinphos	79.6	78.6	77.3	82.6	1.32	6.63
	Mirex	94.1	85.9	79.3	87.8	9.17	10.2
	Molinate	49.8	57.1	50.6	51.9	13.6	2.46
	Norflurazon	88.4	92.5	85.0	89.1	4.57	4.72
	Parathion Ethyl	100	94.2	90.3	91.3	6.21	1.11
	Parathion Methyl	109	113	102	105	4.25	3.56
	Pendimethalin	96.2	95.1	98.5	99.4	1.16	0.947
	Permethrin	122	118	108	116	2.76	7.03
	Phorate	85.3	78.5	82.8	76.7	8.30	7.70
	Prometon	84.1	90.0	93.1	96.1	6.78	2.77
	Prometryn	93.8	96.0	80.1	78.1	2.38	2.53
	Simazine	99.8	103	105	112	3.50	6.27
	Terbufos	92.5	90.4	85.3	95.4	2.28	11.1
	Terbuthylazine	95.1	99.2	95.8	94.7	4.23	1.08
	Trifluralin	93.6	91.9	96.1	97.1	1.78	1.10
EPA 8276	Toxaphene	78.1	88.5	90.2	100	12.5	10.8
EPA 8321B	Glyphosate	115		122	123		1.35
	Pyraclostrobin	95.2		90.1	93.8		4.02
	Sucralose	129		77.1	77.4		0.400
SM 2120 B	Color (true)					4.68	
	Color (true)					1.71	
SM 2320 B-97	Total Alkalinity	102				0.292	
	Total Alkalinity	103				0.443	
	Total Alkalinity	102				0.0763	
SM 2540 C-97	TDS					0.182	
	TDS					1.55	
SM 4500 F-C-97	Fluoride	98.9		98.3	96.9		0.986

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 4500 F-C-97	Fluoride	96.0	95.8	96.4		0.472
	Fluoride	96.9	97.0	98.3		0.979
SM 5310 B-00	Organic Carbon	95.2	90.9	90.1		0.568
	Organic Carbon	98.0	103			0.154
USGS O-2060-01	2,4-D	77.9				2.31
	Acetaminophen	118	99.5	87.9		12.4
	Bentazon	84.3				2.17
	Carbamazepine	130	108	101		6.43
	Diuron	119	73.8	69.4		4.82
	Fenuron	126	114	101		11.9
	Fluridone	118	42.3	32.8		10.0
	Imidacloprid	111				3.52
	Linuron	120	90.5	85.1		6.19
	MCPP	84.0	58.0	55.4		4.01
	Primidone	107	104	97.2		6.99
	Triclopyr	82.8	59.6	58.3		2.20

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1935718, 1935719, 1935720, 1935721, 1935722
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1935718, 1935719, 1935720, 1935721, 1935722
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698, 1935701
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698, 1935701
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698, 1935701
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698, 1935701
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1935687, 1935688, 1935689, 1935690, 1935693, 1935696, 1935699, 1935702
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1935716
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1935717
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1935716
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1935714, 1935715
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1935715
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1935715
SM 2120 B / E31780	True Color measured at 450 nm	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698, 1935701
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1935714, 1935715
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1935714, 1935715

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	10/11/2017			10/11/2017 16:38	DeAsia Armster	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700
EPA 200.7 Rev. 4.4	10/11/2017	10/12/2017	Elliott D. Healy	10/16/2017	Betina Topolski	1935718, 1935719, 1935720, 1935721, 1935722
EPA 200.8 Rev. 5.4	10/11/2017	10/12/2017	Elliott D. Healy	10/16/2017	Robert K Palmer	1935718, 1935719, 1935720, 1935721, 1935722
EPA 300.0 Rev. 2.1	10/11/2017			10/12/2017	Julia Storbeck	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697
EPA 350.1 Rev. 2.0	10/11/2017			10/13/2017	Sofia Elnemr	1935701
	10/11/2017			10/16/2017	Sofia Elnemr	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698
EPA 351.2 Rev. 2.0	10/11/2017	10/16/2017	Sofia Elnemr	10/18/2017	Joseph Suarez	1935701
	10/11/2017	10/18/2017	Adrian Shelby	10/19/2017	Tanya Welborn	1935692, 1935695, 1935698
	10/11/2017	10/18/2017	Adrian Shelby	10/20/2017	Joseph Suarez	1935683, 1935684, 1935685, 1935686
EPA 353.2 Rev. 2.0	10/11/2017			10/16/2017	Beverly Y. Sanders	1935701
	10/11/2017			10/17/2017	Beverly Y. Sanders	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698
EPA 365.1 Rev. 2.0	10/11/2017	10/12/2017	Sima Feizi	10/16/2017	Lipi Saha	1935701
	10/11/2017	10/13/2017	Sima Feizi	10/16/2017	Lipi Saha	1935683, 1935684, 1935685, 1935686, 1935692, 1935695, 1935698
EPA 365.1 Rev. 2.0 dissolved	10/11/2017			10/11/2017 15:05	Megan Treadwell	1935699
	10/11/2017			10/11/2017 15:22	Megan Treadwell	1935696
	10/11/2017			10/11/2017 15:41	Megan Treadwell	1935687
	10/11/2017			10/11/2017 15:43	Megan Treadwell	1935689
	10/11/2017			10/11/2017 15:44	Megan Treadwell	1935690
	10/11/2017			10/11/2017 15:45	Megan Treadwell	1935693, 1935702
	10/11/2017			10/11/2017 16:00	Megan Treadwell	1935688
EPA 8270D	10/11/2017	10/12/2017	John Kaba	10/18/2017	Irina Carbone	1935717
	10/11/2017	10/12/2017	Rasheda Ghaffari	10/18/2017	Vandana T. Nagar	1935716
EPA 8276	10/11/2017	10/12/2017	Rasheda Ghaffari	10/19/2017	John P. Burgos	1935716
EPA 8321B	10/11/2017	10/12/2017	Juyoung Kim	10/15/2017	Juyoung Kim	1935714, 1935715
	10/11/2017	10/13/2017	Julie Michelle Frank	10/13/2017	Juyoung Kim	1935715
	10/11/2017	10/16/2017	Mohammad Ghaffari	10/16/2017	Juyoung Kim	1935715
SM 2120 B	10/11/2017			10/11/2017 16:20	Julia Storbeck	1935679
	10/11/2017			10/11/2017 16:24	Julia Storbeck	1935680, 1935691
	10/11/2017			10/11/2017 16:25	Julia Storbeck	1935681
	10/11/2017			10/11/2017 16:26	Julia Storbeck	1935682
	10/11/2017			10/11/2017 16:27	Julia Storbeck	1935694, 1935697
SM 2320 B-97	10/11/2017			10/18/2017	Dale L. Simmons	1935679, 1935680, 1935681, 1935700
	10/11/2017			10/19/2017	Dale L. Simmons	1935682, 1935691, 1935694, 1935697
SM 2540 C-97	10/11/2017			10/13/2017	DeAsia Armster	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-97	10/11/2017			10/13/2017	DeAsia Armster	1935679, 1935680, 1935681, 1935682, 1935691, 1935694, 1935697, 1935700
SM 4500 F-C-97	10/11/2017			10/17/2017	Dale L. Simmons	1935700
	10/11/2017			10/18/2017	Dale L. Simmons	1935679, 1935680, 1935681
	10/11/2017			10/19/2017	Dale L. Simmons	1935682, 1935691, 1935694, 1935697
SM 5310 B-00	10/11/2017			10/21/2017	Ping Hua	1935701
	10/11/2017			10/23/2017	Ping Hua	1935683, 1935684, 1935685, 1935686
	10/11/2017			10/24/2017	Ping Hua	1935692, 1935695, 1935698
USGS O-2060-01	10/11/2017	10/16/2017	Hoor Shaik	10/19/2017	Julie Michelle Frank	1935714, 1935715