

Chemical Analysis Report

SE-DIST-2017-07-27-01

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-2017-06-19-21**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 18-AUG-2017 13:37



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: ICW @ PALMETTO PARK

Collection Date/Time: 07/26/2017 10:45

Field ID: 28010770

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916771	EPA 180.1 Rev. 2.0	Turbidity	0.45		NTU	P329271	
	SM 2320 B-97	Total Alkalinity	126	A	mg CaCO3/L	P329528	
	SM 2540 D-97	TSS	3	UA	mg/L	P329864	
	SM 4500 F-C-97	Fluoride	1.2		mg F/L	P329531	
1916772	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P329496	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32	I	mg N/L	P329408	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P329675	
	EPA 365.1 Rev. 2.0	Total-P	0.015	J	mg P/L	P329458	MS
	SM 5310 B-00	Organic Carbon	2.9		mg C/L	P329613	
1916773	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329249	

Ref. Method and Comment:

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

EPA 365.1 Rev. 2.0: Total-P: Refer to the narrative for an explanation of QC Codes.

Sample Location: E-3 CANAL @ GLADES RD.

Collection Date/Time: 07/26/2017 11:10

Field ID: 32013006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916750	EPA 180.1 Rev. 2.0	Turbidity	1.1	A	NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	44		mg Cl/L	P329311	
		Sulfate	22		mg SO4/L	P329308	
	SM 2120 B	Color (true)	52	A	PCU	P329253	
	SM 2320 B-97	Total Alkalinity	211		mg CaCO3/L	P329455	
	SM 2540 C-97	TDS	343	A	mg/L	P329993	
	SM 2540 D-97	TSS	2	U	mg/L	P329523	
	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P329459	
1916754	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P329337	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.23		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P329611	
1916758	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.20		mg P/L	P329244	
1916792	EPA 200.7 Rev. 4.4	Calcium	92.9		mg/L	P329416	
		Iron	120	I	ug/L	P329416	
		Magnesium	4.31		mg/L	P329416	
		Potassium	4.1		mg/L	P329416	
		Sodium	29.6		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	1.08		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.74	I	ug/L	P329416	
		Copper	1.83		ug/L	P329416	
		Lead	0.14	I	ug/L	P329416	
		Nickel	0.36	I	ug/L	P329416	

Field ID: 32013006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916792	EPA 200.8 Rev. 5.4	Silver	0.010	U	ug/L	P329416	

Ref. Method and Comment:

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

EPA 351.2 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: 07/26/2017 12:10

Field ID: 28010589

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916762	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	37		mg Cl/L	P329311	
		Sulfate	27		mg SO4/L	P329308	
	SM 2120 B	Color (true)	42		PCU	P329253	
	SM 2320 B-97	Total Alkalinity	136	A	mg CaCO3/L	P329456	
	SM 2540 C-97	TDS	254		mg/L	P329994	
	SM 2540 D-97	TSS	2	U	mg/L	P329524	
	SM 4500 F-C-97	Fluoride	0.21	J	mg F/L	P329460	RPD
	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.81		mg N/L	P329338	
1916763	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P329611	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.030		mg P/L	P329245	
	dissolved						

Ref. Method and Comment:

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

SM 4500 F-C-97: Refer to the narrative for an explanation of QC Codes.

Sample Location: E2 CANAL @ YAMATO RD.

Collection Date/Time: 07/26/2017 12:40

Field ID: 32012012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916751	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P329311	
		Sulfate	21		mg SO4/L	P329308	
	SM 2120 B	Color (true)	65		PCU	P329253	
	SM 2320 B-97	Total Alkalinity	166		mg CaCO3/L	P329455	
	SM 2540 C-97	TDS	291		mg/L	P329994	
	SM 2540 D-97	TSS	2	I	mg/L	P329524	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P329459	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P329337	
1916755	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P329611	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.096		mg P/L	P329244	
	dissolved						
1916793	EPA 200.7 Rev. 4.4	Calcium	68.8		mg/L	P329416	

Field ID: 32012012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916793	EPA 200.7 Rev. 4.4	Iron	36	I	ug/L	P329416	
		Magnesium	5.98		mg/L	P329416	
		Potassium	7.5		mg/L	P329416	
		Sodium	27.6		mg/L	P329416	
		Zinc	5.7	I	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	1.74		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.51	I	ug/L	P329416	
		Copper	2.72		ug/L	P329416	
		Lead	0.070	I	ug/L	P329416	
		Nickel	0.45	I	ug/L	P329416	
		Silver	0.010	U	ug/L	P329416	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: E3 CANL @ CLINT MOORE RD.

Collection Date/Time: 07/26/2017 13:00

Field ID: 28010165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916752	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	54		mg Cl/L	P329311	
		Sulfate	30		mg SO4/L	P329308	
		Color (true)	64		PCU	P329253	
	SM 2320 B-97	Total Alkalinity	135		mg CaCO3/L	P329455	
	SM 2540 C-97	TDS	292		mg/L	P329994	
	SM 2540 D-97	TSS	3	I	mg/L	P329524	
	SM 4500 F-C-97	Fluoride	0.18		mg F/L	P329459	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P329337	
1916756	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.066		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P329611	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.028		mg P/L	P329244	
	EPA 200.7 Rev. 4.4	Calcium	57.6		mg/L	P329416	
		Iron	30	U	ug/L	P329416	
		Magnesium	6.95		mg/L	P329416	
		Potassium	6.9		mg/L	P329416	
		Sodium	37.0		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	2.65		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.44	I	ug/L	P329416	
		Copper	6.93		ug/L	P329416	
		Lead	0.050	U	ug/L	P329416	
		Nickel	0.34	I	ug/L	P329416	

Field ID: 28010165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916794	EPA 200.8 Rev. 5.4	Silver	0.010	U	ug/L	P329416	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: E4 CANAL @ CLINT MOORE RD.

Collection Date/Time: 07/26/2017 13:20

Field ID: 28042459

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916768	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P329311	
		Sulfate	10		mg SO4/L	P329308	
	SM 2120 B	Color (true)	89		PCU	P329253	
	SM 2320 B-97	Total Alkalinity	185		mg CaCO3/L	P329456	
	SM 2540 C-97	TDS	289		mg/L	P329994	
	SM 2540 D-97	TSS	2	I	mg/L	P329524	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P329460	RPD
	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P329338	
1916769	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P329611	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.078		mg P/L	P329245	
1916797	EPA 200.7 Rev. 4.4	Calcium	79.8		mg/L	P329416	
		Iron	630		ug/L	P329416	
		Magnesium	2.78		mg/L	P329416	
		Potassium	2.7		mg/L	P329416	
		Sodium	21.7		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	1.25		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	1.3	I	ug/L	P329416	
		Copper	0.73	I	ug/L	P329416	
		Lead	0.063	I	ug/L	P329416	
		Nickel	0.20	U	ug/L	P329416	
		Silver	0.010	U	ug/L	P329416	

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: E3 CANAL @ ATLANTIC AVE

Collection Date/Time: 07/26/2017 13:45

Field ID: 28010164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916753	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P329311	
		Sulfate	22		mg SO4/L	P329308	
	SM 2120 B	Color (true)	50		PCU	P329253	

Field ID: 28010164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916753	SM 2320 B-97	Total Alkalinity	109		mg CaCO3/L	P329456	
	SM 2540 C-97	TDS	236		mg/L	P329994	
	SM 2540 D-97	TSS	2	U	mg/L	P329524	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P329460	RPD
1916757	EPA 350.1 Rev. 2.0	Ammonia-N	0.019		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P329337	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.009	I	mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P329611	
1916761	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P329244	
1916795	EPA 200.7 Rev. 4.4	Calcium	45.6		mg/L	P329416	
		Iron	30	U	ug/L	P329416	
		Magnesium	4.85		mg/L	P329416	
		Potassium	4.1		mg/L	P329416	
		Sodium	28.6		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	1.96		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.40	U	ug/L	P329416	
		Copper	4.70		ug/L	P329416	
		Lead	0.089	I	ug/L	P329416	
		Nickel	0.26	I	ug/L	P329416	
		Silver	0.010	U	ug/L	P329416	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: E2 CANAL WEST @ ATLANTIC AVE

Collection Date/Time: 07/26/2017 14:10

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916765	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P329271	
	EPA 300.0 Rev. 2.1	Chloride	41		mg Cl/L	P329311	
		Sulfate	28		mg SO4/L	P329308	
		Color (true)	77		PCU	P329253	
	SM 2320 B-97	Total Alkalinity	170		mg CaCO3/L	P329456	
	SM 2540 C-97	TDS	312	A	mg/L	P329994	
	SM 2540 D-97	TSS	8	I	mg/L	P329524	
1916766	SM 4500 F-C-97	Fluoride	0.20		mg F/L	P329460	RPD
	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P329432	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P329338	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P329400	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P329330	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P329611	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P329245	

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916789	EPA 8321B USGS O-2060-01	Glyphosate**	12		ug/L	P329109	
		Pyraclostrobin**	0.0020	U	ug/L	P329108	MS, RPD
		Sucralose**	0.12		ug/L	P329067	
		2,4-D	0.15		ug/L	P329107	MS
		Diuron	0.0045		ug/L	P329107	
		Fenuron	0.0080	U	ug/L	P329107	
		Imidacloprid	0.078		ug/L	P329107	
		Bentazon	0.068		ug/L	P329107	MS
		Linuron	0.0040	U	ug/L	P329107	
		Acetaminophen**	0.0080	U	ug/L	P329107	
		MCP	0.015		ug/L	P329107	
		Carbamazepine**	5.5E-04	I	ug/L	P329107	
		Triclopyr**	0.0040	U	ug/L	P329107	
		Primidone**	0.0040	U	ug/L	P329107	
		Fluridone**	0.035		ug/L	P329107	MS, RPD
1916790	EPA 8270D	Aldrin	4.3	UJ	ng/L	P329380	LCS, MS
		Alpha-BHC	2.1	U	ng/L	P329380	
		Beta-BHC	4.3	U	ng/L	P329380	
		Delta-BHC	4.3	U	ng/L	P329380	
		Gamma-BHC	4.3	U	ng/L	P329380	
		Carbophenothion	4.3	U	ng/L	P329380	
		Chlorothalonil	2.1	UJ	ng/L	P329380	CCV
		Cypermethrin	21	U	ng/L	P329380	
		DDD-p,p'	3.2	U	ng/L	P329380	
		DDE-p,p'	3.2	U	ng/L	P329380	
		DDT-p,p'	3.2	U	ng/L	P329380	
		Dieldrin	4.3	U	ng/L	P329380	
		Endosulfan I	4.3	U	ng/L	P329380	
		Endosulfan II	4.3	U	ng/L	P329380	
		Endosulfan Sulfate	2.1	U	ng/L	P329380	
		Endrin	2.1	U	ng/L	P329380	
		Endrin Aldehyde	2.1	U	ng/L	P329380	
		Heptachlor	1.6	U	ng/L	P329380	
		Heptachlor Epoxide	2.1	U	ng/L	P329380	
		Methoxychlor	4.3	U	ng/L	P329380	
		Mirex	2.1	U	ng/L	P329380	
		Permethrin	11	U	ng/L	P329380	
		Trifluralin	1.1	U	ng/L	P329380	
		Alpha-Chlordane	1.1	U	ng/L	P329380	
		Gamma-Chlordane	1.1	U	ng/L	P329380	
		Endrin Ketone	2.1	U	ng/L	P329380	
		Dicofol	32	U	ng/L	P329380	
	EPA 8276	Toxaphene**	13	UJ	ng/L	P329380	LCS, RPD
1916791	EPA 8270D	Alachlor	0.26	U	ng/L	P329167	
		Ametryn	2.7		ng/L	P329167	

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916791	EPA 8270D	Atrazine	130		ng/L	P329167	
		Atrazine Desethyl	15	J	ng/L	P329167	RPD
		Azinphos Methyl	2.4	U	ng/L	P329167	
		Bromacil	0.52	U	ng/L	P329167	
		Butylate	0.47	IJ	ng/L	P329167	RPD
		Chlorpyrifos Ethyl	0.26	U	ng/L	P329167	
		Chlorpyrifos Methyl	0.10	UJ	ng/L	P329167	CCV
		Demeton	2.1	U	ng/L	P329167	
		Diazinon	0.43	I	ng/L	P329167	
		Disulfoton	0.34	U	ng/L	P329167	
		EPTC	1.3	UJ	ng/L	P329167	RPD
		Ethion	0.16	U	ng/L	P329167	
		Ethoprop	0.10	U	ng/L	P329167	
		Fenamiphos	0.26	U	ng/L	P329167	
		Fipronil	1.4		ng/L	P329167	
		Fipronil Sulfide	0.37	I	ng/L	P329167	
		Fipronil Sulfone	0.87		ng/L	P329167	
		Hexazinone	1.7	I	ng/L	P329167	
		Malathion	0.37	U	ng/L	P329167	
		Metribuzin	25	J	ng/L	P329167	LCS, MS, RPD
		Mevinphos	0.52	U	ng/L	P329167	
		Molinate	0.31	U	ng/L	P329167	
		Norflurazon	0.52	U	ng/L	P329167	
		Pendimethalin	9.0		ng/L	P329167	
		Phorate	0.26	U	ng/L	P329167	
		Prometon	0.94	U	ng/L	P329167	
		Prometryn	0.21	U	ng/L	P329167	
		Simazine	0.52	U	ng/L	P329167	
		Terbufos	0.10	U	ng/L	P329167	
		Terbutylazine	0.45	U	ng/L	P329167	
		Fonofos	0.21	U	ng/L	P329167	
		Metalaxyl	49		ng/L	P329167	
		Metolachlor	1.9		ng/L	P329167	
		Acetochlor	0.26	U	ng/L	P329167	
		Cyanazine	0.52	UJ	ng/L	P329167	RPD
		Parathion Ethyl	0.26	U	ng/L	P329167	
		Parathion Methyl	0.26	U	ng/L	P329167	
1916796	EPA 200.7 Rev. 4.4	Calcium	72.2		mg/L	P329416	
		Iron	48	I	ug/L	P329416	
		Magnesium	6.22		mg/L	P329416	
		Potassium	8.0		mg/L	P329416	
		Sodium	26.9		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	2.06		ug/L	P329416	

Field ID: 32012014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916796	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.63	I	ug/L	P329416	
		Copper	12.8		ug/L	P329416	
		Lead	0.065	I	ug/L	P329416	
		Nickel	0.62	I	ug/L	P329416	
		Silver	0.010	U	ug/L	P329416	

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.

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8270D: Duplicate matrix spike not available due to spiking error. Refer to the narrative for an explanation of QC Codes.

EPA 8276: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine and Ametryn not assessed due to high content of these parameters 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: P329271

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P329416

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: P329416

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: P329308

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329311

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329432

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329496

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329337

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329338

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329408

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329400

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329675

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329330

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329458

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329244

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329245

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329249

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

Reference Method: EPA 8270D
Batch ID: P329167

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	0.32	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
Metaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P329167

Component	Result	Code	Units
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	1.5	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 8270D
Batch ID: P329380

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

Reference Method: EPA 8276
Batch ID: P329380

Component	Result	Code	Units
Toxaphene	12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P329067

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P329108

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P329109

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: SM 2120 B
Batch ID: P329253

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P329455

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

Reference Method: SM 2320 B-97
Batch ID: P329456

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

Reference Method: SM 2320 B-97
Batch ID: P329528

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

Reference Method: SM 2540 C-97
Batch ID: P329993

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P329994

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P329523

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P329524

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P329864

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P329459

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P329460

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P329531

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P329611

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

Reference Method: SM 5310 B-00
Batch ID: P329613

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

Reference Method: USGS O-2060-01
Batch ID: P329107

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

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P329107

Component	Result	Code	Units
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: P329416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	107		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	102		P	85 - 115
Sodium	101		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.4		P	85 - 115
Copper	97.5		P	85 - 115
Lead	96.2		P	85 - 115
Nickel	99.5		P	85 - 115
Silver	99.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329308

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	92.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329432

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329432

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329496

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: P329337

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329338

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329408

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: P329400

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: P329675

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329330

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329458

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.9		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329244

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329245

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329249

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

Reference Method: EPA 8270D
 Batch ID: P329167

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	89.6	89.0	P/P	78 - 118
Alachlor	88.5	86.0	P/P	77 - 119
Ametryn	92.9	88.2	P/P	61 - 136
Atrazine	92.1	87.3	P/P	73 - 120
Atrazine Desethyl	93.2	64.6	P/P	16 - 122
Azinphos Methyl	105	83.9	P/P	69 - 186
Bromacil	87.9	82.2	P/P	40 - 125
Butylate	41.7	65.0	P/P	32 - 87.0
Chlorpyrifos Ethyl	83.3	70.1	P/P	53 - 110
Chlorpyrifos Methyl	84.9	66.5	P/P	31 - 119
Cyanazine	166	63.3	P/P	36 - 224
Demeton	77.2	75.5	P/P	39 - 122
Diazinon	88.1	82.8	P/P	75 - 119
Disulfoton	87.3	79.4	P/P	42 - 139
EPTC	41.3	62.7	P/P	33 - 96.0
Ethion	81.9	74.8	P/P	63 - 127
Ethoprop	76.7	67.8	P/P	65 - 107
Fenamiphos	85.3	78.9	P/P	64 - 137
Fipronil	88.3	88.4	P/P	60 - 126
Fipronil Sulfide	81.3	74.0	P/P	58 - 124
Fipronil Sulfone	74.0	68.7	P/P	57 - 126
Fonofos	82.1	74.1	P/P	65 - 111
Hexazinone	86.7	86.4	P/P	46 - 151
Malathion	82.7	73.3	P/P	68 - 132
Metalaxyl	93.9	80.4	P/P	51 - 132
Metolachlor	81.1	87.7	P/P	78 - 119
Metribuzin	155	94.0	F/P	64 - 138
Mevinphos	69.4	60.9	P/P	34 - 128
Molinate	52.5	64.9	P/P	44 - 101
Norflurazon	86.1	87.0	P/P	63 - 129
Parathion Ethyl	85.1	83.0	P/P	80 - 109
Parathion Methyl	97.4	82.5	P/P	74 - 125
Pendimethalin	80.9	73.9	P/P	48 - 134
Phorate	86.8	70.5	P/P	52 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P329167

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometon	84.0	92.0	P/P	69 - 124
Prometryn	93.4	94.6	P/P	66 - 124
Simazine	89.9	88.3	P/P	61 - 134
Terbufos	82.7	73.8	P/P	58 - 115
Terbutylazine	81.4	91.4	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P329380

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	19.2	17.1	F/F	26 - 88.0
Alpha-BHC	89.9	83.0	P/P	63 - 114
Alpha-Chlordane	83.5	77.7	P/P	56 - 117
Beta-BHC	101	88.6	P/P	57 - 138
Carbophenothion	75.0	78.5	P/P	36 - 148
Chlorothalonil	54.4	72.4	P/P	26 - 173
Cypermethrin	133	130	P/P	42 - 159
DDD-p,p'	99.8	91.7	P/P	62 - 126
DDE-p,p'	76.3	72.7	P/P	53 - 115
DDT-p,p'	82.0	83.6	P/P	54 - 117
Delta-BHC	145	135	P/P	68 - 158
Dicofol	26.8	35.6	P/P	25 - 114
Dieldrin	92.1	86.9	P/P	59 - 126
Endosulfan I	110	101	P/P	62 - 138
Endosulfan II	123	107	P/P	61 - 150
Endosulfan Sulfate	112	97.3	P/P	63 - 132
Endrin	93.0	93.9	P/P	49 - 148
Endrin Aldehyde	112	95.1	P/P	50 - 144
Endrin Ketone	104	93.7	P/P	66 - 122
Gamma-BHC	95.9	93.3	P/P	60 - 137
Gamma-Chlordane	82.7	75.6	P/P	54 - 113
Heptachlor	70.4	59.8	P/P	43 - 104
Heptachlor Epoxide	86.2	78.2	P/P	64 - 118
Methoxychlor	115	111	P/P	63 - 129
Mirex	68.4	69.8	P/P	39 - 93.0
Permethrin	91.6	89.4	P/P	51 - 123
Trifluralin	101	103	P/P	35 - 187

Reference Method: EPA 8276
Batch ID: P329380

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	77.2	28.7	P/F	43 - 135

Reference Method: EPA 8321B
Batch ID: P329067

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	61.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P329108

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	42.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329109

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	109		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P329455

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

Reference Method: SM 2320 B-97
Batch ID: P329456

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

Reference Method: SM 2320 B-97
Batch ID: P329528

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

Reference Method: SM 4500 F-C-97
Batch ID: P329459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P329460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.1		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P329531

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P329611

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P329613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	105		P	40 - 150
Acetaminophen	91.9		P	30 - 150
Bentazon	107		P	40 - 150
Carbamazepine	96.7		P	40 - 150
Diuron	116		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	94.1		P	40 - 150
Imidacloprid	102		P	40 - 160
Linuron	97.0		P	40 - 150
MCP	94.4		P	40 - 150
Primidone	116		P	40 - 150
Triclopyr	94.4		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916795	Calcium	105		P	80 - 120
1916795	Iron	109	111	P/P	80 - 120
1916795	Magnesium	108		P	80 - 120
1916795	Potassium	106		P	80 - 120
1916795	Sodium	105		P	80 - 120
1916795	Zinc	107	110	P/P	80 - 120
1917021	Calcium	106		P	80 - 120
1917021	Iron	111		P	80 - 120
1917021	Magnesium	106		P	80 - 120
1917021	Potassium	104		P	80 - 120
1917021	Sodium	106		P	80 - 120
1917021	Zinc	105		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916795	Arsenic	107	104	P/P	80 - 120
1916795	Cadmium	103	102	P/P	80 - 120
1916795	Chromium	99.9	97.0	P/P	80 - 120
1916795	Copper	97.5	94.3	P/P	80 - 120
1916795	Lead	99.1	95.5	P/P	80 - 120
1916795	Nickel	99.0	96.1	P/P	80 - 120
1916795	Silver	99.5	96.8	P/P	80 - 120
1917021	Arsenic	105		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917021	Cadmium	103		P	80 - 120
1917021	Chromium	100		P	80 - 120
1917021	Copper	95.1		P	80 - 120
1917021	Lead	98.1		P	80 - 120
1917021	Nickel	96.9		P	80 - 120
1917021	Silver	98.6		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329308

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916695	Sulfate	93.5		P	90 - 110
1916809	Sulfate	91.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916695	Chloride	95.7		P	90 - 110
1916809	Chloride	93.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329432

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916747	Ammonia-N	97.2	98.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329496

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916772	Ammonia-N	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329338

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916829	Kjeldahl Nitrogen	102	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916772	Kjeldahl Nitrogen	98.0	98.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916756	NO2NO3-N	104	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P329675

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916312	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P329330

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916754	Total-P	96.2	96.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P329458

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916772	Total-P	88.6	94.0	F/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916735	O-Phosphate-P	93.0	96.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916770	O-Phosphate-P	95.1	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916773	O-Phosphate-P	98.5	102	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P329167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916017	Acetochlor	83.3	91.3	P/P	74 - 123
1916017	Alachlor	80.3	93.8	P/P	73 - 124
1916017	Atrazine Desethyl	60.5	81.7	P/P	12 - 103
1916017	Azinphos Methyl	86.0	106	P/P	60 - 202
1916017	Bromacil	86.2	101	P/P	42 - 133
1916017	Butylate	31.1	43.0	P/P	10 - 85.0
1916017	Chlorpyrifos Ethyl	73.6	86.6	P/P	53 - 113
1916017	Chlorpyrifos Methyl	74.9	87.0	P/P	40 - 115
1916017	Cyanazine	149	185	P/P	22 - 210
1916017	Demeton	67.9	86.7	P/P	17 - 149
1916017	Diazinon	89.5	104	P/P	72 - 124
1916017	Disulfoton	77.7	96.0	P/P	43 - 139
1916017	EPTC	30.4	47.1	P/P	10 - 86.0
1916017	Ethion	71.4	83.0	P/P	65 - 131
1916017	Ethoprop	63.0	76.0	P/P	59 - 110
1916017	Fenamiphos	80.9	85.5	P/P	57 - 138

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P329167

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916017	Fipronil	95.1	101	P/P	40 - 130
1916017	Fipronil Sulfide	73.3	80.7	P/P	36 - 128
1916017	Fipronil Sulfone	71.7	88.4	P/P	16 - 145
1916017	Fonofos	80.1	98.0	P/P	60 - 112
1916017	Hexazinone	79.3	96.4	P/P	69 - 142
1916017	Malathion	74.0	80.2	P/P	68 - 132
1916017	Metalaxyl	87.3	98.1	P/P	66 - 118
1916017	Metolachlor	88.0	93.8	P/P	71 - 124
1916017	Metribuzin	249	283	F/F	61 - 140
1916017	Mevinphos	68.1	82.5	P/P	38 - 130
1916017	Molinate	48.3	58.9	P/P	23 - 99.0
1916017	Norflurazon	83.5	88.8	P/P	39 - 139
1916017	Parathion Ethyl	77.9	89.6	P/P	75 - 111
1916017	Parathion Methyl	89.8	96.7	P/P	64 - 130
1916017	Pendimethalin	75.4	87.9	P/P	26 - 173
1916017	Phorate	89.5	94.8	P/P	43 - 127
1916017	Prometon	87.5	98.6	P/P	50 - 144
1916017	Prometryn	91.7	98.1	P/P	69 - 126
1916017	Simazine	103	122	P/P	51 - 152
1916017	Terbufos	76.7	96.2	P/P	54 - 125
1916017	Terbutylazine	78.3	92.2	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P329380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916678	Aldrin	17.4		F	22 - 97.0
1916678	Alpha-BHC	86.7		P	43 - 132
1916678	Alpha-Chlordane	83.0		P	36 - 126
1916678	Beta-BHC	96.5		P	41 - 150
1916678	Carbophenothion	56.5		P	13 - 196
1916678	Chlorothalonil	123		P	10 - 266
1916678	Cypermethrin	97.6		P	37 - 161
1916678	DDD-p,p'	93.3		P	44 - 131
1916678	DDE-p,p'	85.2		P	32 - 127
1916678	DDT-p,p'	86.3		P	45 - 116
1916678	Delta-BHC	125		P	50 - 201
1916678	Dicofol	30.2		P	10 - 100
1916678	Dieldrin	92.8		P	39 - 142
1916678	Endosulfan I	94.4		P	51 - 139
1916678	Endosulfan II	109		P	49 - 155
1916678	Endosulfan Sulfate	82.3		P	54 - 136
1916678	Endrin	82.7		P	38 - 141
1916678	Endrin Aldehyde	96.1		P	14 - 152
1916678	Endrin Ketone	87.2		P	60 - 128
1916678	Gamma-BHC	96.2		P	48 - 157
1916678	Gamma-Chlordane	84.5		P	35 - 123
1916678	Heptachlor	71.9		P	25 - 112
1916678	Heptachlor Epoxide	83.0		P	48 - 125
1916678	Methoxychlor	106		P	52 - 127
1916678	Mirex	75.1		P	25 - 108
1916678	Permethrin	85.1		P	46 - 133

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P329380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916678	Trifluralin	125		P	29 - 254

Reference Method: EPA 8276
Batch ID: P329380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917505	Toxaphene	91.9	104	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P329108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917168	Pyraclostrobin	43.9	27.8	P/F	40 - 150

Reference Method: EPA 8321B
Batch ID: P329109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916003	Glyphosate	110	118	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P329459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917116	Fluoride	92.6	94.2	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P329460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916762	Fluoride	94.3	101	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P329531

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916863	Fluoride	97.9	97.9	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P329611

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1915916	Organic Carbon	94.6	95.8	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P329613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916007	Organic Carbon	91.3	91.6	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P329107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916003	2,4-D	150	148	F/P	40 - 150
1916003	Acetaminophen	95.9	124	P/P	30 - 150
1916003	Bentazon	38.5	32.7	F/F	40 - 150
1916003	Carbamazepine	104	97.1	P/P	40 - 150
1916003	Diuron	68.4	74.7	P/P	40 - 150
1916003	Fenuron	69.8	72.5	P/P	40 - 150
1916003	Fluridone	37.7	60.2	F/P	40 - 150
1916003	Imidacloprid	107	135	P/P	40 - 160
1916003	Linuron	70.9	81.7	P/P	40 - 150
1916003	MCP	123	127	P/P	40 - 150
1916003	Primidone	103	112	P/P	40 - 150
1916003	Triclopyr	108	128	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P329271

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916750	Turbidity	6.45	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916795	Calcium	1.49	Spike	P	0 - 20
1916795	Iron	2.00	Spike	P	0 - 20
1916795	Magnesium	3.09	Spike	P	0 - 20
1916795	Potassium	2.56	Spike	P	0 - 20
1916795	Sodium	2.01	Spike	P	0 - 20
1916795	Zinc	3.10	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916795	Arsenic	3.03	Spike	P	0 - 20
1916795	Cadmium	1.37	Spike	P	0 - 20
1916795	Chromium	2.98	Spike	P	0 - 20
1916795	Copper	2.72	Spike	P	0 - 20
1916795	Lead	3.73	Spike	P	0 - 20
1916795	Nickel	2.90	Spike	P	0 - 20
1916795	Silver	2.80	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329308

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916809	Sulfate	4.46	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916809	Chloride	0.526	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916747	Ammonia-N	0.739	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329496

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916772	Ammonia-N	0.0418	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916734	Kjeldahl Nitrogen	0.721	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329338

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916829	Kjeldahl Nitrogen	3.70	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916772	Kjeldahl Nitrogen	0.604	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916756	NO2NO3-N	1.45	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329675

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916312	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329330

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916754	Total-P	0.0809	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329458

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916772	Total-P	5.91	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916735	O-Phosphate-P	3.28	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916770	O-Phosphate-P	1.60	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916773	O-Phosphate-P	3.69	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P329167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916017	Acetochlor	9.16	Spike	P	0 - 30
1916017	Alachlor	15.5	Spike	P	0 - 30
1916017	Ametryn	4.08	Spike	P	0 - 30
1916017	Atrazine	9.32	Spike	P	0 - 30
1916017	Atrazine Desethyl	17.6	Spike	P	0 - 30
1916017	Azinphos Methyl	20.7	Spike	P	0 - 30
1916017	Bromacil	16.2	Spike	P	0 - 30
1916017	Butylate	31.9	Spike	F	0 - 30
1916017	Chlorpyrifos Ethyl	16.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P329167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916017	Chlorpyrifos Methyl	14.9	Spike	P	0 - 30
1916017	Cyanazine	21.4	Spike	P	0 - 30
1916017	Demeton	24.3	Spike	P	0 - 30
1916017	Diazinon	14.7	Spike	P	0 - 30
1916017	Disulfoton	21.1	Spike	P	0 - 30
1916017	EPTC	43.1	Spike	F	0 - 30
1916017	Ethion	15.0	Spike	P	0 - 30
1916017	Ethoprop	18.8	Spike	P	0 - 30
1916017	Fenamiphos	5.57	Spike	P	0 - 30
1916017	Fipronil	5.92	Spike	P	0 - 30
1916017	Fipronil Sulfide	7.62	Spike	P	0 - 30
1916017	Fipronil Sulfone	12.7	Spike	P	0 - 30
1916017	Fonofos	20.1	Spike	P	0 - 30
1916017	Hexazinone	13.1	Spike	P	0 - 30
1916017	Malathion	8.08	Spike	P	0 - 30
1916017	Metalaxyl	11.6	Spike	P	0 - 30
1916017	Metolachlor	6.40	Spike	P	0 - 30
1916017	Metribuzin	12.6	Spike	P	0 - 30
1916017	Mevinphos	19.2	Spike	P	0 - 30
1916017	Molinate	19.8	Spike	P	0 - 30
1916017	Norflurazon	6.22	Spike	P	0 - 30
1916017	Parathion Ethyl	14.0	Spike	P	0 - 30
1916017	Parathion Methyl	7.42	Spike	P	0 - 30
1916017	Pendimethalin	15.3	Spike	P	0 - 30
1916017	Phorate	5.80	Spike	P	0 - 30
1916017	Prometon	11.9	Spike	P	0 - 30
1916017	Prometryn	6.77	Spike	P	0 - 30
1916017	Simazine	16.9	Spike	P	0 - 30
1916017	Terbufos	22.5	Spike	P	0 - 30
1916017	Terbutylazine	16.4	Spike	P	0 - 30
LFB	Acetochlor	0.744	LCS	P	0 - 30
LFB	Alachlor	2.87	LCS	P	0 - 30
LFB	Ametryn	5.22	LCS	P	0 - 30
LFB	Atrazine	5.28	LCS	P	0 - 30
LFB	Atrazine Desethyl	36.3	LCS	F	0 - 30
LFB	Azinphos Methyl	22.7	LCS	P	0 - 30
LFB	Bromacil	6.63	LCS	P	0 - 30
LFB	Butylate	43.7	LCS	F	0 - 30
LFB	Chlorpyrifos Ethyl	17.3	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	24.3	LCS	P	0 - 30
LFB	Cyanazine	89.8	LCS	F	0 - 30
LFB	Demeton	2.18	LCS	P	0 - 30
LFB	Diazinon	6.27	LCS	P	0 - 30
LFB	Disulfoton	9.52	LCS	P	0 - 30
LFB	EPTC	41.1	LCS	F	0 - 30
LFB	Ethion	9.09	LCS	P	0 - 30
LFB	Ethoprop	12.3	LCS	P	0 - 30
LFB	Fenamiphos	7.70	LCS	P	0 - 30
LFB	Fipronil	0.137	LCS	P	0 - 30
LFB	Fipronil Sulfide	9.46	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.37	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P329167

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fonofos	10.2	LCS	P	0 - 30
LFB	Hexazinone	0.291	LCS	P	0 - 30
LFB	Malathion	12.0	LCS	P	0 - 30
LFB	Metalaxyl	15.5	LCS	P	0 - 30
LFB	Metolachlor	7.80	LCS	P	0 - 30
LFB	Metribuzin	48.9	LCS	F	0 - 30
LFB	Mevinphos	13.1	LCS	P	0 - 30
LFB	Molinate	21.1	LCS	P	0 - 30
LFB	Norflurazon	0.983	LCS	P	0 - 30
LFB	Parathion Ethyl	2.54	LCS	P	0 - 30
LFB	Parathion Methyl	16.6	LCS	P	0 - 30
LFB	Pendimethalin	9.07	LCS	P	0 - 30
LFB	Phorate	20.7	LCS	P	0 - 30
LFB	Prometon	9.14	LCS	P	0 - 30
LFB	Prometryn	1.30	LCS	P	0 - 30
LFB	Simazine	1.79	LCS	P	0 - 30
LFB	Terbufos	11.4	LCS	P	0 - 30
LFB	Terbutylazine	11.6	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P329380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	11.6	LCS	P	0 - 30
LFB	Alpha-BHC	7.90	LCS	P	0 - 30
LFB	Alpha-Chlordane	7.21	LCS	P	0 - 30
LFB	Beta-BHC	13.4	LCS	P	0 - 30
LFB	Carbophenothion	4.52	LCS	P	0 - 30
LFB	Chlorothalonil	28.5	LCS	P	0 - 30
LFB	Cypermethrin	1.95	LCS	P	0 - 30
LFB	DDD-p,p'	8.37	LCS	P	0 - 30
LFB	DDE-p,p'	4.90	LCS	P	0 - 30
LFB	DDT-p,p'	1.94	LCS	P	0 - 30
LFB	Delta-BHC	7.10	LCS	P	0 - 30
LFB	Dicofol	28.2	LCS	P	0 - 30
LFB	Dieldrin	5.78	LCS	P	0 - 30
LFB	Endosulfan I	9.10	LCS	P	0 - 30
LFB	Endosulfan II	14.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	14.0	LCS	P	0 - 30
LFB	Endrin	0.982	LCS	P	0 - 30
LFB	Endrin Aldehyde	16.1	LCS	P	0 - 30
LFB	Endrin Ketone	10.2	LCS	P	0 - 30
LFB	Gamma-BHC	2.74	LCS	P	0 - 30
LFB	Gamma-Chlordane	8.85	LCS	P	0 - 30
LFB	Heptachlor	16.2	LCS	P	0 - 30
LFB	Heptachlor Epoxide	9.80	LCS	P	0 - 30
LFB	Methoxychlor	3.49	LCS	P	0 - 30
LFB	Mirex	2.05	LCS	P	0 - 30
LFB	Permethrin	2.48	LCS	P	0 - 30
LFB	Trifluralin	1.19	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P329380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917505	Toxaphene	12.3	Spike	P	0 - 30
LFB	Toxaphene	91.7	LCS	F	0 - 30

Reference Method: EPA 8321B
Batch ID: P329067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916053	Sucralose	8.70	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P329108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917168	Pyraclostrobin	44.9	Spike	F	0 - 30

Reference Method: EPA 8321B
Batch ID: P329109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916003	Glyphosate	6.86	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P329253

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916750	Color (true)	0.832	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P329455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917116	Total Alkalinity	0.714	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P329456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916762	Total Alkalinity	0.105	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P329528

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916771	Total Alkalinity	0.366	Sample	P	0 - 4.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P329993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916750	TDS	1.17	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P329994

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916765	TDS	0.320	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P329459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917116	Fluoride	1.53	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P329460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916762	Fluoride	4.56	Spike	F	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P329531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916863	Fluoride	0.0	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P329611

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1915916	Organic Carbon	1.02	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P329613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916007	Organic Carbon	0.332	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P329107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916003	2,4-D	0.772	Spike	P	0 - 30
1916003	Acetaminophen	19.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P329107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916003	Bentazon	7.55	Spike	P	0 - 30
1916003	Carbamazepine	6.79	Spike	P	0 - 30
1916003	Diuron	8.46	Spike	P	0 - 30
1916003	Fenuron	3.82	Spike	P	0 - 30
1916003	Fluridone	41.3	Spike	F	0 - 30
1916003	Imidacloprid	7.60	Spike	P	0 - 30
1916003	Linuron	14.2	Spike	P	0 - 30
1916003	MCPP	3.20	Spike	P	0 - 30
1916003	Primidone	8.76	Spike	P	0 - 30
1916003	Triclopyr	17.3	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: 1916789
Field Sample ID: 32012014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	113	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	114	P	30 - 160
EPA 8321B	Diuron-d6	79.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	113	P	40 - 150
EPA 8321B	Primidone-d5	96.4	P	30 - 160
EPA 8321B	Sucralose-d6	41.9	P	40 - 160
USGS O-2060-01	2,4-D-d3	110	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	113	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	108	P	30 - 160
USGS O-2060-01	Diuron-d6	114	P	30 - 160
USGS O-2060-01	Diuron-d6	79.0	P	30 - 160
USGS O-2060-01	Primidone-d5	96.4	P	30 - 160

Lab Sample ID: 1916790
Field Sample ID: 32012014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	72.3	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	57.4	P	32 - 103
EPA 8276	Decachlorobiphenyl	53.4	P	31 - 100

Lab Sample ID: 1916791
Field Sample ID: 32012014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	64.8	P	53 - 135
EPA 8270D	Simazine-d10	93.1	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77948

Included Lab Sample IDs: 1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Chloride	102	101	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110
Sulfate	102	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A77996

Included Lab Sample IDs: 1916758, 1916759, 1916760, 1916761, 1916764, 1916767, 1916770, 1916773

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.2	99.2	P/P	90 - 110
O-Phosphate-P	98.6	98.5	P/P	90 - 110
O-Phosphate-P	99.0	99.4	P/P	90 - 110
O-Phosphate-P	99.4	99.6	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A77997

Included Lab Sample IDs: 1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78004

Included Lab Sample IDs: 1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768, 1916771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A78025

Included Lab Sample IDs: 1916789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	112	111	P/P	70 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78045

Included Lab Sample IDs: 1916754, 1916755, 1916756, 1916763, 1916766, 1916769

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.7	99.0	P/P	90 - 110
Total-P	99.0	99.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78053

Included Lab Sample IDs: 1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769

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: A78060

Included Lab Sample IDs: 1916757

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78068

Included Lab Sample IDs: 1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78071

Included Lab Sample IDs: 1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.1	100	P/P	90 - 110
Kjeldahl Nitrogen	99.3	99.1	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78079

Included Lab Sample IDs: 1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.8	P/P	90 - 110
Total Alkalinity	99.8	103	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78079

Included Lab Sample IDs: 1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	96.1	99.5	P/P	90 - 110
Fluoride	99.5	96.1	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78091

Included Lab Sample IDs: 1916772

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78093

Included Lab Sample IDs: 1916792, 1916793, 1916794, 1916795, 1916796, 1916797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	95 - 105
Calcium	102	101	P/P	90 - 110
Iron	101	102	P/P	95 - 105
Iron	102	103	P/P	90 - 110
Magnesium	101	102	P/P	95 - 105
Magnesium	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78093

Included Lab Sample IDs: 1916792, 1916793, 1916794, 1916795, 1916796, 1916797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	100	100	P/P	90 - 110
Potassium	99.7	100	P/P	95 - 105
Sodium	101	101	P/P	95 - 105
Sodium	101	102	P/P	90 - 110
Zinc	103	104	P/P	95 - 105
Zinc	104	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78094

Included Lab Sample IDs: 1916792, 1916793, 1916794, 1916795, 1916796, 1916797

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	101	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Cadmium	102	103	P/P	90 - 110
Chromium	100	101	P/P	90 - 110
Chromium	101	100	P/P	90 - 110
Copper	101	99.9	P/P	90 - 110
Copper	99.9	99.6	P/P	90 - 110
Lead	96.5	97.0	P/P	90 - 110
Lead	97.0	97.0	P/P	90 - 110
Nickel	100	99.6	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Silver	96.7	97.6	P/P	90 - 110
Silver	97.6	97.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78102

Included Lab Sample IDs: 1916772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	97.7	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78103

Included Lab Sample IDs: 1916771

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

Reference Method: SM 4500 F-C-97

Run ID: A78103

Included Lab Sample IDs: 1916771

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.1	98.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78118

Included Lab Sample IDs: 1916772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	98.8	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A78147

Included Lab Sample IDs: 1916791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	98.4		P	80 - 120
Ametryn	97.9		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	93.5		P	80 - 120
Bromacil	95.0		P	80 - 120
Butylate	88.8		P	80 - 120
Chlorpyrifos Ethyl	85.8		P	80 - 120
Chlorpyrifos Methyl	77.6*		F	80 - 120
Cyanazine	112		P	80 - 120
Demeton	88.4		P	80 - 120
Diazinon	102		P	80 - 120
Disulfoton	85.7		P	80 - 120
EPTC	92.4		P	80 - 120
Ethion	82.6		P	80 - 120
Ethoprop	98.2		P	80 - 120
Fenamiphos	86.5		P	80 - 120
Fipronil	88.7		P	80 - 120
Fipronil Sulfide	84.3		P	80 - 120
Fipronil Sulfone	84.5		P	80 - 120
Fonofos	94.2		P	80 - 120
Hexazinone	106		P	80 - 120
Malathion	83.7		P	80 - 120
Metolachlor	97.5		P	80 - 120
Metribuzin	113		P	80 - 120
Mevinphos	92.4		P	80 - 120
Molinate	106		P	80 - 120
Norflurazon	96.3		P	80 - 120
Parathion Ethyl	94.0		P	80 - 120
Parathion Methyl	100		P	80 - 120
Pendimethalin	88.6		P	80 - 120
Phorate	101		P	80 - 120
Prometon	94.1		P	80 - 120
Prometryn	99.8		P	80 - 120
Simazine	99.6		P	80 - 120
Terbufos	95.3		P	80 - 120
Terbutylazine	101		P	80 - 120

Reference Method: SM 5310 B-00

Run ID: A78156

Included Lab Sample IDs: 1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.5	98.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A78156

Included Lab Sample IDs: 1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.2	100	P/P	90 - 110
Organic Carbon	98.8	97.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78184

Included Lab Sample IDs: 1916772

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78239

Included Lab Sample IDs: 1916789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	80.5	81.4	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A78247

Included Lab Sample IDs: 1916789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	67.8	85.9	P/P	60 - 160

Reference Method: USGS O-2060-01

Run ID: A78250

Included Lab Sample IDs: 1916789

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	73.7	65.7	P/P	50 - 150
Acetaminophen	93.7	99.5	P/P	60 - 150
Bentazon	106	116	P/P	50 - 150
Carbamazepine	88.2	95.7	P/P	60 - 150
Diuron	96.9	89.7	P/P	60 - 150
Fenuron	103	103	P/P	60 - 150
Fluridone	89.3	99.1	P/P	60 - 160
Imidacloprid	95.1	92.6	P/P	60 - 150
Linuron	98.1	101	P/P	60 - 150
MCPP	78.0	86.1	P/P	50 - 150
Primidone	94.2	94.8	P/P	60 - 150
Triclopyr	72.9	73.4	P/P	50 - 150

Reference Method: EPA 8270D

Run ID: A78286

Included Lab Sample IDs: 1916790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.1		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	95.7		P	80 - 120
Beta-BHC	114		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A78286
Included Lab Sample IDs: 1916790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	112		P	80 - 120
Chlorothalonil	129*		F	80 - 120
Cypermethrin	101		P	80 - 120
DDD-p,p'	99.4		P	80 - 120
DDE-p,p'	96.7		P	80 - 120
DDT-p,p'	105		P	80 - 120
Delta-BHC	114		P	80 - 120
Dicofol	84.1		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	100		P	80 - 120
Endosulfan Sulfate	103		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	93.9		P	80 - 120
Endrin Ketone	99.5		P	80 - 120
Gamma-BHC	109		P	80 - 120
Gamma-Chlordane	97.8		P	80 - 120
Heptachlor	93.2		P	80 - 120
Heptachlor Epoxide	95.6		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	96.8		P	80 - 120
Trifluralin	93.8		P	80 - 120

Reference Method: EPA 8276
Run ID: A78296
Included Lab Sample IDs: 1916790

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Toxaphene	113		P	80 - 120

Reference Method: EPA 8270D
Run ID: A78367
Included Lab Sample IDs: 1916791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	97.5		P	80 - 120
Metalaxyl	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				6.45	
EPA 200.7 Rev. 4.4	Calcium	102	105 106			1.49

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision SMP	MS
EPA 200.7 Rev. 4.4	Iron	107		109	111	111		2.00
	Magnesium	104		108	106			3.09
	Potassium	102		106	104			2.56
	Sodium	101		105	106			2.01
	Zinc	107		107	110	105		3.10
EPA 200.8 Rev. 5.4	Arsenic	103		107	104	105		3.03
	Cadmium	101		103	102	103		1.37
	Chromium	99.4		99.9	97.0	100		2.98
	Copper	97.5		97.5	94.3	95.1		2.72
	Lead	96.2		99.1	95.5	98.1		3.73
	Nickel	99.5		99.0	96.1	96.9		2.90
	Silver	99.4		99.5	96.8	98.6		2.80
EPA 300.0 Rev. 2.1	Chloride	95.6		93.2	95.7		0.526	
	Sulfate	92.0		91.8	93.5		4.46	
EPA 350.1 Rev. 2.0	Ammonia-N	100		97.2	98.0			0.739
	Ammonia-N	101		105	105			0.0418
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102						0.721
	Kjeldahl Nitrogen	101		102	107			3.70
	Kjeldahl Nitrogen	102		98.0	98.7			0.604
EPA 353.2 Rev. 2.0	NO2NO3-N	104		104	102			1.45
	NO2NO3-N	102		104	104			0.0
EPA 365.1 Rev. 2.0	Total-P	96.6		96.2	96.3			0.0809
	Total-P	98.9		88.6	94.0			5.91
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7		93.0	96.1			3.28
	O-Phosphate-P	105		95.1	97.9			1.60
	O-Phosphate-P	100		98.5	102			3.69
EPA 8270D	Acetochlor	89.6	89.0	83.3	91.3	0.744		9.16
	Alachlor	88.5	86.0	80.3	93.8	2.87		15.5
	Aldrin	19.2	17.1	17.4		11.6		
	Alpha-BHC	89.9	83.0	86.7		7.90		
	Alpha-Chlordane	83.5	77.7	83.0		7.21		
	Ametryn	92.9	88.2			5.22		4.08
	Atrazine	92.1	87.3			5.28		9.32
	Atrazine Desethyl	93.2	64.6	60.5	81.7	36.3		17.6
	Azinphos Methyl	105	83.9	86.0	106	22.7		20.7
	Beta-BHC	101	88.6	96.5		13.4		
	Bromacil	87.9	82.2	86.2	101	6.63		16.2
	Butylate	41.7	65.0	31.1	43.0	43.7		31.9
	Carbophenothion	75.0	78.5	56.5		4.52		
	Chlorothalonil	54.4	72.4	123		28.5		
	Chlorpyrifos Ethyl	83.3	70.1	73.6	86.6	17.3		16.2
	Chlorpyrifos Methyl	84.9	66.5	74.9	87.0	24.3		14.9
	Cyanazine	166	63.3	149	185	89.8		21.4
	Cypermethrin	133	130	97.6		1.95		
	DDD-p,p'	99.8	91.7	93.3		8.37		
	DDE-p,p'	76.3	72.7	85.2		4.90		
	DDT-p,p'	82.0	83.6	86.3		1.94		
	Delta-BHC	145	135	125		7.10		
	Demeton	77.2	75.5	67.9	86.7	2.18		24.3
	Diazinon	88.1	82.8	89.5	104	6.27		14.7
	Dicofol	26.8	35.6	30.2		28.2		
	Dieldrin	92.1	86.9	92.8		5.78		
	Disulfoton	87.3	79.4	77.7	96.0	9.52		21.1
	Endosulfan I	110	101	94.4		9.10		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	
							SMP	MS
EPA 8270D	Endosulfan II	123	107	109		14.4		
	Endosulfan Sulfate	112	97.3	82.3		14.0		
	Endrin	93.0	93.9	82.7		0.982		
	Endrin Aldehyde	112	95.1	96.1		16.1		
	Endrin Ketone	104	93.7	87.2		10.2		
	EPTC	41.3	62.7	30.4	47.1	41.1		43.1
	Ethion	81.9	74.8	71.4	83.0	9.09		15.0
	Ethoprop	76.7	67.8	63.0	76.0	12.3		18.8
	Fenamiphos	85.3	78.9	80.9	85.5	7.70		5.57
	Fipronil	88.3	88.4	95.1	101	0.137		5.92
	Fipronil Sulfide	81.3	74.0	73.3	80.7	9.46		7.62
	Fipronil Sulfone	74.0	68.7	71.7	88.4	7.37		12.7
	Fonofos	82.1	74.1	80.1	98.0	10.2		20.1
	Gamma-BHC	95.9	93.3	96.2		2.74		
	Gamma-Chlordane	82.7	75.6	84.5		8.85		
	Heptachlor	70.4	59.8	71.9		16.2		
	Heptachlor Epoxide	86.2	78.2	83.0		9.80		
	Hexazinone	86.7	86.4	79.3	96.4	0.291		13.1
	Malathion	82.7	73.3	74.0	80.2	12.0		8.08
	Metalaxyl	93.9	80.4	87.3	98.1	15.5		11.6
	Methoxychlor	115	111	106		3.49		
	Metolachlor	81.1	87.7	88.0	93.8	7.80		6.40
	Metribuzin	155	94.0	249	283	48.9		12.6
	Mevinphos	69.4	60.9	68.1	82.5	13.1		19.2
	Mirex	68.4	69.8	75.1		2.05		
	Molinate	52.5	64.9	48.3	58.9	21.1		19.8
	Norflurazon	86.1	87.0	83.5	88.8	0.983		6.22
	Parathion Ethyl	85.1	83.0	77.9	89.6	2.54		14.0
	Parathion Methyl	97.4	82.5	89.8	96.7	16.6		7.42
	Pendimethalin	80.9	73.9	75.4	87.9	9.07		15.3
	Permethrin	91.6	89.4	85.1		2.48		
	Phorate	86.8	70.5	89.5	94.8	20.7		5.80
	Prometon	84.0	92.0	87.5	98.6	9.14		11.9
	Prometryn	93.4	94.6	91.7	98.1	1.30		6.77
	Simazine	89.9	88.3	103	122	1.79		16.9
	Terbufos	82.7	73.8	76.7	96.2	11.4		22.5
	Terbutylazine	81.4	91.4	78.3	92.2	11.6		16.4
	Trifluralin	101	103	125		1.19		
EPA 8276	Toxaphene	77.2	28.7	91.9	104	91.7		12.3
EPA 8321B	Glyphosate	109		110	118			6.86
	Pyraclostrobin	42.5		43.9	27.8			44.9
	Sucralose	61.6						8.70
SM 2120 B	Color (true)						0.832	
SM 2320 B-97	Total Alkalinity	103					0.714	
	Total Alkalinity	102					0.105	
	Total Alkalinity	103					0.366	
SM 2540 C-97	TDS						1.17	
	TDS						0.320	
SM 4500 F-C-97	Fluoride	94.6		92.6	94.2			1.53
	Fluoride	95.1		94.3	101			4.56
	Fluoride	96.4		97.9	97.9			0.0
SM 5310 B-00	Organic Carbon	96.4		94.6	95.8			1.02
	Organic Carbon	96.4		91.3	91.6			0.332
USGS O-2060-01	2,4-D	105		150	148			0.772

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Acetaminophen	91.9	95.9	124		19.0
	Bentazon	107	38.5	32.7		7.55
	Carbamazepine	96.7	104	97.1		6.79
	Diuron	116	68.4	74.7		8.46
	Fenuron	112	69.8	72.5		3.82
	Fluridone	94.1	37.7	60.2		41.3
	Imidacloprid	102	107	135		7.60
	Linuron	97.0	70.9	81.7		14.2
	MCPP	94.4	123	127		3.20
	Primidone	116	103	112		8.76
	Triclopyr	94.4	108	128		17.3

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768, 1916771
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1916792, 1916793, 1916794, 1916795, 1916796, 1916797
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1916792, 1916793, 1916794, 1916795, 1916796, 1916797
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1916758, 1916759, 1916760, 1916761, 1916764, 1916767, 1916770, 1916773
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1916790
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1916791
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1916790
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1916789
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1916789
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1916789
SM 2120 B / E31780	True Color measured at 450 nm	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768, 1916771
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768, 1916771
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768, 1916771
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769, 1916772
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1916789
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1916789

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	07/27/2017			07/27/2017 17:18	DeAsia Armster	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768, 1916771
EPA 200.7 Rev. 4.4	07/27/2017	07/31/2017	Elliott D. Healy	08/01/2017	Betina Topolski	1916792, 1916793, 1916794, 1916795, 1916796, 1916797
EPA 200.8 Rev. 5.4	07/27/2017	07/31/2017	Elliott D. Healy	08/01/2017	Nadine Brooks	1916792, 1916793, 1916794, 1916795, 1916796, 1916797
EPA 300.0 Rev. 2.1	07/27/2017			07/27/2017	Julia Storbeck	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
EPA 350.1 Rev. 2.0	07/27/2017			07/31/2017	Sofia Elnemr	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769
	07/27/2017			08/01/2017	Sofia Elnemr	1916772
EPA 351.2 Rev. 2.0	07/27/2017	07/28/2017	Adrian Shelby	08/01/2017	Joseph Suarez	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769
	07/27/2017	07/31/2017	Adrian Shelby	08/02/2017	Joseph Suarez	1916772
EPA 353.2 Rev. 2.0	07/27/2017			07/31/2017	Beverly Y. Sanders	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769
	07/27/2017			08/03/2017	Beverly Y. Sanders	1916772
EPA 365.1 Rev. 2.0	07/27/2017	07/28/2017	Adrian Shelby	07/31/2017	Lipi Saha	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769
	07/27/2017	08/01/2017	Sima Feizi	08/02/2017	Lipi Saha	1916772
EPA 365.1 Rev. 2.0 dissolved	07/27/2017			07/27/2017 13:59	Ping Hua	1916770
	07/27/2017			07/27/2017 14:25	Ping Hua	1916773
	07/27/2017			07/27/2017 14:36	Ping Hua	1916758
	07/27/2017			07/27/2017 14:37	Ping Hua	1916759, 1916760
	07/27/2017			07/27/2017 14:38	Ping Hua	1916761
	07/27/2017			07/27/2017 14:39	Ping Hua	1916764
	07/27/2017			07/27/2017 15:30	Ping Hua	1916767
EPA 8270D	07/27/2017	07/28/2017	Fe-Val Siddell	08/03/2017	Irina Carbone	1916791
	07/27/2017	07/28/2017	Fe-Val Siddell	08/04/2017	Irina Carbone	1916791
	07/27/2017	07/31/2017	John Kaba	08/03/2017	Marek Topolski	1916790
EPA 8276	07/27/2017	07/31/2017	John Kaba	08/03/2017	John P. Burgos	1916790
EPA 8321B	07/27/2017	07/27/2017	Julie Michelle Frank	08/04/2017	Mohammad Ghaffari	1916789
	07/27/2017	07/28/2017	Julie Michelle Frank	07/28/2017	Julie Michelle Frank	1916789
	07/27/2017	07/31/2017	Fe-Val Siddell	08/06/2017	Juyoung Kim	1916789
SM 2120 B	07/27/2017			07/27/2017 15:02	Tanya Welborn	1916750
	07/27/2017			07/27/2017 15:03	Tanya Welborn	1916751
	07/27/2017			07/27/2017 15:04	Tanya Welborn	1916752, 1916753
	07/27/2017			07/27/2017 15:05	Tanya Welborn	1916762
	07/27/2017			07/27/2017 15:06	Tanya Welborn	1916765
	07/27/2017			07/27/2017 15:07	Tanya Welborn	1916768
SM 2320 B-97	07/27/2017			08/01/2017	Dale L. Simmons	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-97	07/27/2017			08/02/2017	Dale L. Simmons	1916771
SM 2540 C-97	07/27/2017			07/31/2017	DeAsia Armster	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
SM 2540 D-97	07/27/2017			07/31/2017	DeAsia Armster	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
	07/27/2017			08/01/2017	Yijie Li	1916771
SM 4500 F-C-97	07/27/2017			08/01/2017	Dale L. Simmons	1916750, 1916751, 1916752, 1916753, 1916762, 1916765, 1916768
	07/27/2017			08/02/2017	Dale L. Simmons	1916771
SM 5310 B-00	07/27/2017			08/02/2017	Ping Hua	1916754, 1916755, 1916756, 1916757, 1916763, 1916766, 1916769
	07/27/2017			08/03/2017	Ping Hua	1916772
USGS O-2060-01	07/27/2017	07/28/2017	Hoor Shaik	08/02/2017	Juyoung Kim	1916789