Chemical Analysis Report

WQAP-2017-07-27-02

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

Event Description: **2017 SMP Kits A & C**
Request ID: **RQ-2017-06-26-03**
Customer: **WQAP**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2295 Victoria Ave.
Suite 364
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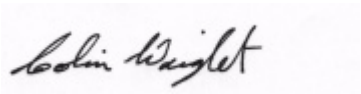
Certified by: Colin Wright, Program Administrator

Date Certified: 16-AUG-2017 12:23



NON-CONFORMANCE REPORT INCLUDED

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: ALLIGATOR CREEK NORTH PRONG ABOVE CR768 **Collection Date/Time: 07/26/2017 14:50**

Field ID: G2SD072617-1 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916980	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P329273	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P329310	
		Sulfate	27		mg SO4/L	P329307	
	SM 2120 B	Color (true)	110	A	PCU	P329255	
	SM 2320 B-97	Total Alkalinity	92		mg CaCO3/L	P329457	
	SM 2540 C-97	TDS	210		mg/L	P329996	
	SM 2540 D-97	TSS	3	I	mg/L	P329526	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P329461	
1916983	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P329491	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P329407	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.035		mg N/L	P329436	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P329413	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P329538	
1916986	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P329247	
1917007	EPA 200.7 Rev. 4.4	Calcium	48.0		mg/L	P329416	
		Iron	1.14E+03		ug/L	P329416	
		Magnesium	3.65		mg/L	P329416	
		Potassium	0.76	I	mg/L	P329416	
		Sodium	17.4		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	1.29		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.40	U	ug/L	P329416	
		Copper	0.20	U	ug/L	P329416	
		Lead	0.26		ug/L	P329416	
		Nickel	0.37	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 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: ALLIGATOR CREEK NORTH PRONG ABOVE CR768 **Collection Date/Time: 07/26/2017 14:50**

Field ID: G2SD072617-1 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916997	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P329108	MS, RPD
		Sucralose**	0.047		ug/L	P329067	
	USGS O-2060-01	2,4-D	0.0093		ug/L	P329234	
		Diuron	8.0E-04	U	ug/L	P329234	
		Fenuron	0.0080	U	ug/L	P329234	
		Imidacloprid	0.016		ug/L	P329234	MS
		Bentazon	8.2E-04	I	ug/L	P329234	

Field ID: G2SD072617-1 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916997	USGS O-2060-01	Linuron	0.0040	U	ug/L	P329234	
		Acetaminophen**	0.0080	U	ug/L	P329234	
		MCPP	0.0071	I	ug/L	P329234	
		Carbamazepine**	4.0E-04	U	ug/L	P329234	
		Triclopyr**	0.0040	U	ug/L	P329234	
		Primidone**	0.0040	U	ug/L	P329234	
		Fluridone**	4.0E-04	U	ug/L	P329234	
1917003	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	Chlordane**	2.7	UJ	ng/L	P329380	RPD
		Toxaphene**	13	UJ	ng/L	P329380	LCS, RPD
1917005	EPA 8270D	Alachlor	0.25	U	ng/L	P329167	
		Ametryn	0.32	U	ng/L	P329167	
		Atrazine	0.84	I	ng/L	P329167	
		Atrazine Desethyl	1.5	UJ	ng/L	P329167	RPD
		Azinphos Methyl	2.2	U	ng/L	P329167	
		Bromacil	1.8	I	ng/L	P329167	
		Butylate	0.39	UJ	ng/L	P329167	RPD
		Chlorpyrifos Ethyl	0.25	U	ng/L	P329167	
		Chlorpyrifos Methyl	0.098	UJ	ng/L	P329167	CCV

Field ID: G2SD072617-1 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1917005	EPA 8270D	Demeton	2.0	U	ng/L	P329167	
		Diazinon	0.12	U	ng/L	P329167	
		Disulfoton	0.32	U	ng/L	P329167	
		EPTC	1.2	UJ	ng/L	P329167	RPD
		Ethion	0.15	U	ng/L	P329167	
		Ethoprop	0.098	U	ng/L	P329167	
		Fenamiphos	0.25	U	ng/L	P329167	
		Fipronil	0.25	U	ng/L	P329167	
		Fipronil Sulfide	0.15	U	ng/L	P329167	
		Fipronil Sulfone	0.15	U	ng/L	P329167	
		Hexazinone	29		ng/L	P329167	
		Malathion	0.34	U	ng/L	P329167	
		Metribuzin	0.20	UJ	ng/L	P329167	LCS, MS, RPD
		Mevinphos	0.49	U	ng/L	P329167	
		Molinate	0.29	U	ng/L	P329167	
		Norflurazon	9.0		ng/L	P329167	
		Pendimethalin	1.5	U	ng/L	P329167	
		Phorate	0.25	U	ng/L	P329167	
		Prometon	0.88	U	ng/L	P329167	
		Prometryn	0.20	U	ng/L	P329167	
		Simazine	0.49	U	ng/L	P329167	
		Terbufos	0.098	U	ng/L	P329167	
		Terbuthylazine	0.42	U	ng/L	P329167	
		Fonofos	0.20	U	ng/L	P329167	
		Metalaxyl	0.20	U	ng/L	P329167	
		Metolachlor	0.25	U	ng/L	P329167	
		Acetochlor	0.25	U	ng/L	P329167	
		Cyanazine	0.49	UJ	ng/L	P329167	RPD
		Parathion Ethyl	0.25	U	ng/L	P329167	
		Parathion Methyl	0.25	U	ng/L	P329167	

Ref. Method and Comment:
EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.
USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Duplicate matrix spike not available due to spiking error.
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.

Sample Location: ALLIGATOR CR SOUTH BRANCH @ SR768 **Collection Date/Time: 07/26/2017 14:20**

Field ID: G2SD072617-2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916981	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P329273	
	EPA 300.0 Rev. 2.1	Chloride	12	A	mg Cl/L	P329310	
		Sulfate	1.4	A	mg SO4/L	P329307	
	SM 2120 B	Color (true)	160		PCU	P329255	
	SM 2320 B-97	Total Alkalinity	30		mg CaCO3/L	P329457	

Field ID: G2SD072617-2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916981	SM 2540 C-97	TDS	80		mg/L	P329996	
	SM 2540 D-97	TSS	4	I	mg/L	P329526	
	SM 4500 F-C-97	Fluoride	0.043	I	mg F/L	P329461	
1916984	EPA 350.1 Rev. 2.0	Ammonia-N	0.028		mg N/L	P329491	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P329407	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P329693	
	EPA 365.1 Rev. 2.0	Total-P	0.022		mg P/L	P329413	
	SM 5310 B-00	Organic Carbon	17		mg C/L	P329538	
1916987	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329248	
1917008	EPA 200.7 Rev. 4.4	Calcium	13.1		mg/L	P329416	
		Iron	630		ug/L	P329416	
		Magnesium	1.84		mg/L	P329416	
		Potassium	0.64	I	mg/L	P329416	
		Sodium	8.3		mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	0.92		ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.40	U	ug/L	P329416	
		Copper	0.21	I	ug/L	P329416	
		Lead	0.23		ug/L	P329416	
		Nickel	0.27	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.

Sample Location: ALLIGATOR CR SOUTH BRANCH @ SR768 Collection Date/Time: 07/26/2017 14:20

Field ID: G2SD072617-2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916998	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P329108	MS, RPD
		Sucralose**	0.010	U	ug/L	P329067	
	USGS O-2060-01	2,4-D	0.0052	I	ug/L	P329234	
		Diuron	8.8E-04	I	ug/L	P329234	
		Fenuron	0.0080	U	ug/L	P329234	
		Imidacloprid	0.018		ug/L	P329234	MS
		Bentazon	8.0E-04	U	ug/L	P329234	
		Linuron	0.0040	U	ug/L	P329234	
		Acetaminophen**	0.0080	U	ug/L	P329234	
		MCPP	0.0020	U	ug/L	P329234	
		Carbamazepine**	4.0E-04	U	ug/L	P329234	
		Triclopyr**	0.0040	U	ug/L	P329234	
		Primidone**	0.0040	U	ug/L	P329234	
		Fluridone**	4.0E-04	U	ug/L	P329234	
1917004	EPA 8270D	Aldrin	4.3	UJ	ng/L	P329380	LCS, MS
		Alpha-BHC	2.1	U	ng/L	P329380	

Field ID: G2SD072617-2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1917004	EPA 8270D	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	Chlordane**	2.7	UJ	ng/L	P329380	RPD
		Toxaphene**	13	UJ	ng/L	P329380	LCS, RPD
1917006	EPA 8270D	Alachlor	0.24	U	ng/L	P329167	
		Ametryn	0.32	U	ng/L	P329167	
		Atrazine	0.89	I	ng/L	P329167	
		Atrazine Desethyl	1.5	UJ	ng/L	P329167	RPD
		Azinphos Methyl	2.2	U	ng/L	P329167	
		Bromacil	0.49	U	ng/L	P329167	
		Butylate	0.39	UJ	ng/L	P329167	RPD
		Chlorpyrifos Ethyl	0.24	U	ng/L	P329167	
		Chlorpyrifos Methyl	0.098	UJ	ng/L	P329167	CCV
		Demeton	2.0	U	ng/L	P329167	
		Diazinon	0.12	U	ng/L	P329167	
		Disulfoton	0.32	U	ng/L	P329167	
		EPTC	1.2	UJ	ng/L	P329167	RPD
		Ethion	0.15	U	ng/L	P329167	
		Ethoprop	0.098	U	ng/L	P329167	
		Fenamiphos	0.24	U	ng/L	P329167	
		Fipronil	0.24	U	ng/L	P329167	
		Fipronil Sulfide	0.15	U	ng/L	P329167	

Field ID: G2SD072617-2 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1917006	EPA 8270D	Fipronil Sulfone	0.15	U	ng/L	P329167	
		Hexazinone	8.7		ng/L	P329167	
		Malathion	0.34	U	ng/L	P329167	
		Metribuzin	0.20	UJ	ng/L	P329167	LCS, MS, RPD
		Mevinphos	0.49	U	ng/L	P329167	
		Molinate	0.29	U	ng/L	P329167	
		Norflurazon	0.49	U	ng/L	P329167	
		Pendimethalin	1.5	U	ng/L	P329167	
		Phorate	0.24	U	ng/L	P329167	
		Prometon	0.88	U	ng/L	P329167	
		Prometryn	0.20	U	ng/L	P329167	
		Simazine	0.92	I	ng/L	P329167	
		Terbufos	0.098	U	ng/L	P329167	
		Terbuthylazine	0.41	U	ng/L	P329167	
		Fonofos	0.20	U	ng/L	P329167	
		Metalaxyl	0.20	U	ng/L	P329167	
		Metolachlor	0.34	I	ng/L	P329167	
		Acetochlor	0.24	U	ng/L	P329167	
		Cyanazine	0.49	UJ	ng/L	P329167	RPD
		Parathion Ethyl	0.24	U	ng/L	P329167	
		Parathion Methyl	0.24	U	ng/L	P329167	

Ref. Method and Comment:
EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample.
USGS O-2060-01: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270D: Refer to the narrative for an explanation of QC Codes. Duplicate matrix spike not available due to spiking error.
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.

Sample Location: YUCCA PEN CREEK @ BURNT STORE RD. **Collection Date/Time: 07/26/2017 13:40**

Field ID: G2SD072617-3 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916974	EPA 180.1 Rev. 2.0	Turbidity	0.80		NTU	P329273	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P329310	
		Sulfate	1.4		mg SO4/L	P329307	
	SM 2120 B	Color (true)	140		PCU	P329255	
	SM 2320 B-97	Total Alkalinity	45		mg CaCO3/L	P329457	
	SM 2540 C-97	TDS	107		mg/L	P329996	
	SM 2540 D-97	TSS	2	U	mg/L	P329526	
	SM 4500 F-C-97	Fluoride	0.047	I	mg F/L	P329461	
1916976	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P329491	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P329406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P329403	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P329412	
	SM 5310 B-00	Organic Carbon	22		mg C/L	P329538	
1916978	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329247	

Field ID: G2SD072617-3 Matrix: W-SURF-FRH

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 365.1 Rev. 2.0 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: 2081 @BURNT STORE ROAD **Collection Date/Time: 07/26/2017 14:00**

Field ID: G2SD072617-4 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916975	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P329273	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P329310	
		Sulfate	8.3		mg SO4/L	P329307	
	SM 2120 B	Color (true)	210		PCU	P329255	
	SM 2320 B-97	Total Alkalinity	126		mg CaCO3/L	P329457	
	SM 2540 C-97	TDS	216	A	mg/L	P329996	
	SM 2540 D-97	TSS	12		mg/L	P329526	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P329461	
1916977	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P329491	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P329406	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P329403	
	EPA 365.1 Rev. 2.0	Total-P	0.089		mg P/L	P329413	
	SM 5310 B-00	Organic Carbon	19		mg C/L	P329538	
1916979	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.034		mg P/L	P329247	

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 dissolved: O-Phosphate-P: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: FIELD BLANK **Collection Date/Time: 07/26/2017 12:30**

Field ID: 072617-6 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1916982	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P329273	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P329310	
		Sulfate	0.20	U	mg SO4/L	P329307	
	SM 2120 B	Color (true)	2.5	U	PCU	P329256	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P329457	
	SM 2540 C-97	TDS	15	U	mg/L	P329996	
	SM 2540 D-97	TSS	2	U	mg/L	P329526	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P329461	
1916985	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P329434	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P329814	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P329436	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P329454	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P329538	
1916988	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329248	
1917009	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P329416	

Field ID: 072617-6 Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1917009	EPA 200.7 Rev. 4.4	Iron	30	U	ug/L	P329416	
		Magnesium	0.040	U	mg/L	P329416	
		Potassium	0.30	U	mg/L	P329416	
		Sodium	0.50	U	mg/L	P329416	
		Zinc	5.0	U	ug/L	P329416	
	EPA 200.8 Rev. 5.4	Arsenic	0.050	U	ug/L	P329416	
		Cadmium	0.020	U	ug/L	P329416	
		Chromium	0.40	U	ug/L	P329416	
		Copper	0.20	U	ug/L	P329416	
		Lead	0.050	U	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.

Non-Conformance Report

NCR ID: 6571

Event(s)	Job(s)	Sample(s)	Test(s)
WQAP-2017-07-27-02	TLH-2017-07-27-73	1917003	

NCR Type: SHIPPING/RECEIVING **NCR Category: Receiving**

Observation: Sample received with cracked cap; sample not leaking.

Resolution: Additional container logged in.
Cracked cap replaced, sample not affected.

Authorized by/Date: Joshua Ayres 7/31/2017

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P329273

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

Quality Assurance Report
Method Blank Results

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

Component	Result	Code	Units
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: P329307

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329310

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329434

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329491

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329406

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329407

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329814

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329403

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329436

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329693

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329412

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329413

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329454

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329247

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329248

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: 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
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8270D
Batch ID: P329380

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

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: SM 2120 B
Batch ID: P329255

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P329256

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P329457

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

Reference Method: SM 2540 C-97
Batch ID: P329996

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P329526

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P329461

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P329538

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

Reference Method: USGS O-2060-01
Batch ID: P329234

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: P329416

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115

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
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: P329307

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329434

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329491

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329406

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: P329407

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329407

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329814

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.7		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329403

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: P329436

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329693

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329413

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329454

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	92.6		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329247

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329248

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
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
Terbuthylazine	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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P329380

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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
Chlordane	78.1	49.0	P/P	48 - 121
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

Reference Method: EPA 8321B
Batch ID: P329108

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

Reference Method: SM 2320 B-97
Batch ID: P329457

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P329461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P329538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.6		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329234

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	69.0		P	40 - 150
Acetaminophen	58.6		P	30 - 150
Bentazon	88.1		P	40 - 150
Carbamazepine	130		P	40 - 150
Diuron	99.8		P	40 - 150
Fenuron	113		P	40 - 150
Fluridone	89.3		P	40 - 150
Imidacloprid	112		P	40 - 160
Linuron	92.3		P	40 - 150
MCPP	72.8		P	40 - 150
Primidone	80.7		P	40 - 150
Triclopyr	64.7		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

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
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
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: P329307

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916818	Sulfate	93.3		P	90 - 110
1916981	Sulfate	94.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916818	Chloride	94.8		P	90 - 110
1916981	Chloride	96.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916868	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329491

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916976	Ammonia-N	101	99.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916976	Kjeldahl Nitrogen	95.2	90.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917106	Kjeldahl Nitrogen	108	106	P/P	90 - 110

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917856	Kjeldahl Nitrogen	91.1	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916977	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916983	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917480	NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916834	Total-P	98.5	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329413

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916983	Total-P	100	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916308	Total-P	95.4	96.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329248

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917059	O-Phosphate-P	96.8	98.4	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

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	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
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	Terbuthylazine	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

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	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
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	Chlordane	72.2	83.7	P/P	44 - 134
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: SM 4500 F-C-97
Batch ID: P329461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917171	Fluoride	96.2	95.6	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P329538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1916976	Organic Carbon	99.8		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917511	2,4-D	105	90.3	P/P	40 - 150
1917511	Acetaminophen	126	108	P/P	30 - 150
1917511	Carbamazepine	107	80.9	P/P	40 - 150
1917511	Diuron	64.9	59.2	P/P	40 - 150
1917511	Fenuron	60.9	48.1	P/P	40 - 150
1917511	Fluridone	47.3	41.3	P/P	40 - 150
1917511	Imidacloprid	162	169	F/F	40 - 160
1917511	Linuron	75.2	78.6	P/P	40 - 150
1917511	MCPP	107	102	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P329234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1917511	Primidone	56.6	47.4	P/P	40 - 150
1917511	Triclopyr	92.7	95.2	P/P	40 - 150

Quality Assurance Report
Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P329273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916939	Turbidity	3.64	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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329307

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916981	Sulfate	1.37	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916981	Chloride	1.41	Sample	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329434

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916868	Ammonia-N	0.372	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329491

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916976	Ammonia-N	1.25	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916976	Kjeldahl Nitrogen	2.67	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329407

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917106	Kjeldahl Nitrogen	1.56	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917856	Kjeldahl Nitrogen	11.2	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916977	NO2NO3-N	0.426	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916983	NO2NO3-N	1.25	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P329693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917480	NO2NO3-N	0.395	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916834	Total-P	1.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329413

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916983	Total-P	1.69	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916308	Total-P	0.563	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329247

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916936	O-Phosphate-P	0.271	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329248

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917059	O-Phosphate-P	1.64	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
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

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	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	Terbuthylazine	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
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

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	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	Terbuthylazine	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

Reference Method: EPA 8276
Batch ID: P329380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917505	Chlordane	14.8	Spike	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	Chlordane	45.8	LCS	F	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: SM 2120 B
Batch ID: P329255

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916980	Color (true)	2.05	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P329256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917048	Color (true)	2.45	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P329457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917171	Total Alkalinity	0.199	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P329996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916975	TDS	2.32	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P329461

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

Quality Assurance Report
Precision

Reference Method: SM 4500 F-C-97
Batch ID: P329461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917171	Fluoride	0.498	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P329538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1916976	Organic Carbon	0.942	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P329234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1917511	2,4-D	12.9	Spike	P	0 - 30
1917511	Acetaminophen	15.8	Spike	P	0 - 30
1917511	Bentazon	2.20	Spike	P	0 - 30
1917511	Carbamazepine	27.9	Spike	P	0 - 30
1917511	Diuron	8.16	Spike	P	0 - 30
1917511	Fenuron	23.4	Spike	P	0 - 30
1917511	Fluridone	11.6	Spike	P	0 - 30
1917511	Imidacloprid	3.46	Spike	P	0 - 30
1917511	Linuron	4.42	Spike	P	0 - 30
1917511	MCPP	5.06	Spike	P	0 - 30
1917511	Primidone	17.7	Spike	P	0 - 30
1917511	Triclopyr	2.62	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: 1916997
Field Sample ID: G2SD072617-1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.1	P	30 - 160
EPA 8321B	Diuron-d6	124	P	30 - 160
EPA 8321B	Diuron-d6	85.1	P	30 - 160
EPA 8321B	Primidone-d5	80.4	P	30 - 160
EPA 8321B	Sucralose-d6	64.4	P	40 - 160
USGS O-2060-01	2,4-D-d3	114	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	127	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	85.1	P	30 - 160
USGS O-2060-01	Diuron-d6	124	P	30 - 160
USGS O-2060-01	Diuron-d6	85.1	P	30 - 160
USGS O-2060-01	Primidone-d5	80.4	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 1916998
Field Sample ID: G2SD072617-2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	126	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.9	P	30 - 160
EPA 8321B	Diuron-d6	118	P	30 - 160
EPA 8321B	Diuron-d6	67.0	P	30 - 160
EPA 8321B	Primidone-d5	109	P	30 - 160
EPA 8321B	Sucralose-d6	65.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	120	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	126	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	94.9	P	30 - 160
USGS O-2060-01	Diuron-d6	118	P	30 - 160
USGS O-2060-01	Diuron-d6	67.0	P	30 - 160
USGS O-2060-01	Primidone-d5	109	P	30 - 160

Lab Sample ID: 1917003
Field Sample ID: G2SD072617-1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	71.5	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	52.0	P	32 - 103
EPA 8276	Decachlorobiphenyl	53.6	P	31 - 100

Lab Sample ID: 1917004
Field Sample ID: G2SD072617-2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	55.1	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	42.5	P	32 - 103
EPA 8276	Decachlorobiphenyl	43.3	P	31 - 100

Lab Sample ID: 1917005
Field Sample ID: G2SD072617-1

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	63.7	P	53 - 135
EPA 8270D	Simazine-d10	101	P	71 - 126

Lab Sample ID: 1917006
Field Sample ID: G2SD072617-2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	62.1	P	53 - 135
EPA 8270D	Simazine-d10	106	P	71 - 126

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A77948
Included Lab Sample IDs: 1916974, 1916975, 1916980, 1916981, 1916982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A77948
Included Lab Sample IDs: 1916974, 1916975, 1916980, 1916981, 1916982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	101	102	P/P	90 - 110
Chloride	102	104	P/P	90 - 110
Sulfate	101	104	P/P	90 - 110
Sulfate	99.0	99.8	P/P	90 - 110
Sulfate	99.8	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A77996
Included Lab Sample IDs: 1916978, 1916979, 1916986, 1916987, 1916988

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	98.5	P/P	90 - 110
O-Phosphate-P	98.9	98.6	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A77997
Included Lab Sample IDs: 1916974, 1916975, 1916980, 1916981, 1916982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	85 - 115
Color (true)	102	102	P/P	85 - 115
Color (true)	105	105	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A78004
Included Lab Sample IDs: 1916974, 1916975, 1916980, 1916981, 1916982

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A78053
Included Lab Sample IDs: 1916976, 1916977

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A78068
Included Lab Sample IDs: 1916985

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A78069
Included Lab Sample IDs: 1916977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.6	98.2	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A78075
Included Lab Sample IDs: 1916983, 1916985

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

Reference Method: SM 2320 B-97
Run ID: A78079
Included Lab Sample IDs: 1916974, 1916975, 1916980, 1916981, 1916982

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

Reference Method: SM 4500 F-C-97
Run ID: A78079
Included Lab Sample IDs: 1916974, 1916975, 1916980, 1916981, 1916982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A78080
Included Lab Sample IDs: 1916976, 1916983, 1916984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A78081
Included Lab Sample IDs: 1916976, 1916977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.3	92.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A78091
Included Lab Sample IDs: 1916976, 1916977, 1916983, 1916984

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A78092
Included Lab Sample IDs: 1916983, 1916984

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A78093
Included Lab Sample IDs: 1917007, 1917008, 1917009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	95 - 105

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A78093
Included Lab Sample IDs: 1917007, 1917008, 1917009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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
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: 1917007, 1917008, 1917009

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: SM 5310 B-00
Run ID: A78115
Included Lab Sample IDs: 1916976, 1916977, 1916983, 1916984, 1916985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A78118
Included Lab Sample IDs: 1916985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.2	99.0	P/P	90 - 110

Reference Method: EPA 8270D
Run ID: A78147
Included Lab Sample IDs: 1917005, 1917006

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A78147
Included Lab Sample IDs: 1917005, 1917006

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	103		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
Metalaxyl	97.1		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
Terbuthylazine	101		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A78187
Included Lab Sample IDs: 1916984

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

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A78239
Included Lab Sample IDs: 1916997, 1916998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	81.4	83.6	P/P	60 - 150

Reference Method: USGS O-2060-01
Run ID: A78239
Included Lab Sample IDs: 1916997, 1916998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	82.2	63.0	P/P	50 - 150
2,4-D	91.6	82.2	P/P	50 - 150
Acetaminophen	127	132	P/P	60 - 150
Acetaminophen	132	138	P/P	60 - 150
Bentazon	111	98.9	P/P	50 - 150
Bentazon	138	111	P/P	50 - 150
Carbamazepine	121	130	P/P	60 - 150
Carbamazepine	130	136	P/P	60 - 150
Diuron	112	131	P/P	60 - 150
Diuron	123	112	P/P	60 - 150
Fenuron	130	141	P/P	60 - 150
Fenuron	141	129	P/P	60 - 150
Fluridone	104	117	P/P	60 - 160
Fluridone	117	97.4	P/P	60 - 160
Imidacloprid	105	121	P/P	60 - 150
Imidacloprid	121	118	P/P	60 - 150
Linuron	122	118	P/P	60 - 150
Linuron	126	122	P/P	60 - 150
MCPP	102	93.8	P/P	50 - 150
MCPP	93.8	92.5	P/P	50 - 150
Primidone	101	105	P/P	60 - 150
Primidone	102	101	P/P	60 - 150
Triclopyr	86.2	91.3	P/P	50 - 150
Triclopyr	91.3	94.3	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A78247
Included Lab Sample IDs: 1916997, 1916998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	60.3	67.8	P/P	60 - 160

Reference Method: EPA 8270D
Run ID: A78286
Included Lab Sample IDs: 1917003, 1917004

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
Carbophenothion	112		P	80 - 120
Chlorothalonil	129*		F	80 - 120
Cypermethrin	101		P	80 - 120

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8270D
Run ID: A78286
Included Lab Sample IDs: 1917003, 1917004

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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 351.2 Rev. 2.0
Run ID: A78295
Included Lab Sample IDs: 1916985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.8	101	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A78296
Included Lab Sample IDs: 1917003, 1917004

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	100		P	80 - 120
Chlordane	102		P	80 - 120
Toxaphene	113		P	80 - 120
Toxaphene	113		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			Precision		
						LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						3.64	
EPA 200.7 Rev. 4.4	Calcium	102	105	106				1.49
	Iron	107	109	111	111			2.00

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision		
							LCS	SMP	MS
EPA 200.7 Rev. 4.4	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	97.5		96.1	94.8			1.41	
	Sulfate	94.3		94.3	93.3			1.37	
EPA 350.1 Rev. 2.0	Ammonia-N	101		100	100				0.372
	Ammonia-N	99.1		101	99.2				1.25
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102		95.2	90.1				2.67
	Kjeldahl Nitrogen	106		108	106				1.56
	Kjeldahl Nitrogen	94.7		91.1	104				11.2
EPA 353.2 Rev. 2.0	NO2NO3-N	104		101	100				0.426
	NO2NO3-N	103		103	102				1.25
	NO2NO3-N	105		102					0.395
EPA 365.1 Rev. 2.0	Total-P	99.4		98.5	97.0				1.46
	Total-P	98.4		100	98.3				1.69
	Total-P	92.6		95.4	96.1				0.563
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	104							0.271
	O-Phosphate-P	100		96.8	98.4				1.64
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		Precision		
						LCS	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
	Terbuthylazine	81.4	91.4	78.3	92.2	11.6		16.4
	Trifluralin	101	103	125		1.19		
EPA 8276	Chlordane	78.1	49.0	72.2	83.7	45.8		14.8
	Toxaphene	77.2	28.7	91.9	104	91.7		12.3
EPA 8321B	Pyraclostrobin	42.5		43.9	27.8			44.9
	Sucralose	61.6						8.70
SM 2120 B	Color (true)						2.05	
	Color (true)						2.45	
SM 2320 B-97	Total Alkalinity	102					0.199	
SM 2540 C-97	TDS						2.32	
SM 4500 F-C-97	Fluoride	96.1		96.2	95.6			0.498
SM 5310 B-00	Organic Carbon	95.6		99.8				0.942
USGS O-2060-01	2,4-D	69.0		105	90.3			12.9
	Acetaminophen	58.6		126	108			15.8
	Bentazon	88.1						2.20
	Carbamazepine	130		107	80.9			27.9
	Diuron	99.8		64.9	59.2			8.16
	Fenuron	113		60.9	48.1			23.4

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
USGS O-2060-01	Fluridone	89.3	47.3	41.3			11.6
	Imidacloprid	112	162	169			3.46
	Linuron	92.3	75.2	78.6			4.42
	MCPP	72.8	107	102			5.06
	Primidone	80.7	56.6	47.4			17.7
	Triclopyr	64.7	92.7	95.2			2.62

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1916974, 1916975, 1916980, 1916981, 1916982
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1917007, 1917008, 1917009
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1917007, 1917008, 1917009
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1916974, 1916975, 1916980, 1916981, 1916982
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1916974, 1916975, 1916980, 1916981, 1916982
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1916976, 1916977, 1916983, 1916984, 1916985
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1916976, 1916977, 1916983, 1916984, 1916985
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1916976, 1916977, 1916983, 1916984, 1916985
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1916976, 1916977, 1916983, 1916984, 1916985
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1916978, 1916979, 1916986, 1916987, 1916988
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1917003, 1917004
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1917005, 1917006
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1917003, 1917004
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1916997, 1916998
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1916997, 1916998
SM 2120 B / E31780	True Color measured at 450 nm	1916974, 1916975, 1916980, 1916981, 1916982
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1916974, 1916975, 1916980, 1916981, 1916982
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1916974, 1916975, 1916980, 1916981, 1916982
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1916974, 1916975, 1916980, 1916981, 1916982
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1916974, 1916975, 1916980, 1916981, 1916982
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1916976, 1916977, 1916983, 1916984, 1916985
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1916997, 1916998
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1916997, 1916998

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	1916974, 1916975, 1916980, 1916981, 1916982
EPA 200.7 Rev. 4.4	07/27/2017	07/31/2017	Elliott D. Healy	08/01/2017	Betina Topolski	1917007, 1917008, 1917009
EPA 200.8 Rev. 5.4	07/27/2017	07/31/2017	Elliott D. Healy	08/01/2017	Nadine Brooks	1917007, 1917008, 1917009
EPA 300.0 Rev. 2.1	07/27/2017			07/27/2017	Julia Storbeck	1916981
	07/27/2017			07/28/2017	Julia Storbeck	1916974, 1916975, 1916980, 1916982
EPA 350.1 Rev. 2.0	07/27/2017			07/31/2017	Sofia Elnemr	1916985
	07/27/2017			08/01/2017	Sofia Elnemr	1916976, 1916977, 1916983, 1916984
EPA 351.2 Rev. 2.0	07/27/2017	07/31/2017	Adrian Shelby	08/01/2017	Joseph Suarez	1916976, 1916977, 1916983, 1916984
	07/27/2017	08/08/2017	Adrian Shelby	08/09/2017	Joseph Suarez	1916985
EPA 353.2 Rev. 2.0	07/27/2017			07/31/2017	Beverly Y. Sanders	1916976, 1916977
	07/27/2017			08/01/2017	Beverly Y. Sanders	1916983, 1916985
	07/27/2017			08/04/2017	Beverly Y. Sanders	1916984
EPA 365.1 Rev. 2.0	07/27/2017	07/31/2017	Adrian Shelby	08/01/2017	Lipi Saha	1916976, 1916977, 1916983, 1916984
	07/27/2017	08/01/2017	Sima Feizi	08/02/2017	Lipi Saha	1916985
EPA 365.1 Rev. 2.0 dissolved	07/27/2017			07/27/2017 15:17	Ping Hua	1916978, 1916979
	07/27/2017			07/27/2017 15:18	Ping Hua	1916986
	07/27/2017			07/27/2017 15:19	Ping Hua	1916987
	07/27/2017			07/27/2017 15:24	Ping Hua	1916988
EPA 8270D	07/27/2017	07/28/2017	Fe-Val Siddell	08/03/2017	Irina Carbone	1917005, 1917006
	07/27/2017	07/31/2017	John Kaba	08/03/2017	Marek Topolski	1917003, 1917004
EPA 8276	07/27/2017	07/31/2017	John Kaba	08/03/2017	John P. Burgos	1917003, 1917004
EPA 8321B	07/27/2017	07/27/2017	Julie Michelle Frank	08/04/2017	Mohammad Ghaffari	1916997, 1916998
	07/27/2017	07/31/2017	Fe-Val Siddell	08/06/2017	Juyoung Kim	1916997, 1916998
SM 2120 B	07/27/2017			07/27/2017 15:24	Tanya Welborn	1916974
	07/27/2017			07/27/2017 15:27	Tanya Welborn	1916980
	07/27/2017			07/27/2017 15:30	Tanya Welborn	1916982
	07/27/2017			07/27/2017 15:58	Tanya Welborn	1916975, 1916981
SM 2320 B-97	07/27/2017			08/01/2017	Dale L. Simmons	1916974, 1916975, 1916980, 1916981, 1916982
SM 2540 C-97	07/27/2017			07/31/2017	DeAsia Armster	1916974, 1916975, 1916980, 1916981, 1916982
SM 2540 D-97	07/27/2017			07/31/2017	DeAsia Armster	1916974, 1916975, 1916980, 1916981, 1916982
SM 4500 F-C-97	07/27/2017			08/01/2017	Dale L. Simmons	1916974, 1916975, 1916980, 1916981, 1916982
SM 5310 B-00	07/27/2017			08/01/2017	Ping Hua	1916976
	07/27/2017			08/02/2017	Ping Hua	1916977, 1916983, 1916984, 1916985
USGS O-2060-01	07/27/2017	08/02/2017	Fe-Val Siddell	08/05/2017	Juyoung Kim	1916997, 1916998