

Chemical Analysis Report

NE-DIST-2016-12-20-01

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

Event Description: **Suwannee 2**
Request ID: **RQ-2016-12-19-09**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 13-JAN-2017 16:55



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: 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: OLUSTEE CREEK AT CR238

Collection Date/Time: 12/19/2016 11:10

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859067	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P317089	
	EPA 300.0 Rev. 2.1	Chloride	9.9		mg Cl/L	P317395	
		Sulfate	1.9		mg SO4/L	P317398	
	SM 2120 B	Color (true)	490		PCU	P317101	
	SM 2320 B-97	Total Alkalinity	6.7		mg CaCO3/L	P317268	
	SM 2540 C-97	TDS	132		mg/L	P317657	
	SM 2540 D-97	TSS	3	I	mg/L	P317635	
	SM 4500 F-C-97	Fluoride	0.092	I	mg F/L	P317273	
1859071	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P317459	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P317387	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P317370	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P317341	
	SM 5310 B-00	Organic Carbon	48		mg C/L	P317234	
1859075	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.15		mg P/L	P317098	

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

Sample Location: OLUSTEE CREEK AT CR238

Collection Date/Time: 12/19/2016 11:10

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859083	EPA 8321B	Glyphosate**	10	U	ug/L	P317203	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P316767	
		Diuron	0.0040	UJ	ug/L	P316767	MS, SUR
		Fenuron	0.0080	UJ	ug/L	P316767	SUR
		2,4,5-T	0.0020	U	ug/L	P316767	
		Acifluorfen	0.0020	U	ug/L	P316767	
		Imidacloprid	0.0040	UJ	ug/L	P316767	SUR
		Bentazon	0.0020	U	ug/L	P316767	MS
		Linuron	0.0040	UJ	ug/L	P316767	SUR
		Acetaminophen**	0.0040	U	ug/L	P316767	
		Carbamazepine**	4.0E-04	U	ug/L	P316767	
		Silvex	0.0020	U	ug/L	P316767	
		Primidone**	0.0080	U	ug/L	P316767	
		Fluridone**	4.0E-04	UJ	ug/L	P316767	SUR
1859085	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P317335	
1859087	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0019	U	ug/L	P317442	
		Alpha-BHC	0.0019	U	ug/L	P317442	
		Beta-BHC	0.0019	U	ug/L	P317442	
		Delta-BHC	0.0019	U	ug/L	P317442	
		Gamma-BHC	0.0019	U	ug/L	P317442	
		Carbophenothion	0.0057	U	ug/L	P317442	

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859087	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Chlordane	0.019	U	ug/L	P317442	
		Chlorothalonil	0.0076	U	ug/L	P317442	
		Cypermethrin	0.011	U	ug/L	P317442	
		DDD-p,p'	0.0038	U	ug/L	P317442	
		DDE-p,p'	0.0038	U	ug/L	P317442	
		DDT-p,p'	0.0038	U	ug/L	P317442	
		Dicofol	0.023	UJ	ug/L	P317442	CCV
		Diieldrin	0.0019	U	ug/L	P317442	
		Endosulfan I	0.0019	U	ug/L	P317442	
		Endosulfan II	0.0019	U	ug/L	P317442	
		Endosulfan Sulfate	0.0038	U	ug/L	P317442	
		Endrin	0.0038	U	ug/L	P317442	
		Endrin Aldehyde	0.0038	U	ug/L	P317442	
		Heptachlor	0.0019	U	ug/L	P317442	
		Heptachlor Epoxide	0.0019	U	ug/L	P317442	
		Methoxychlor	0.0095	U	ug/L	P317442	
		Mirex	0.0038	U	ug/L	P317442	
		Permethrin	0.0095	U	ug/L	P317442	
		Toxaphene	0.095	U	ug/L	P317442	
		PCB-1016	0.019	U	ug/L	P317442	
		PCB-1221	0.019	U	ug/L	P317442	
		PCB-1232	0.019	U	ug/L	P317442	
		PCB-1242	0.019	U	ug/L	P317442	
		PCB-1248	0.019	U	ug/L	P317442	
		PCB-1254	0.019	U	ug/L	P317442	
		PCB-1260	0.019	U	ug/L	P317442	
		Trifluralin	0.0076	U	ug/L	P317442	
		Hexachlorobenzene**	0.0019	U	ug/L	P317442	
		Hexachlorocyclopentadiene**	0.0076	U	ug/L	P317442	
		Alpha-Chlordane	0.0019	U	ug/L	P317442	
		Gamma-Chlordane	0.0019	U	ug/L	P317442	
		Endrin Ketone	0.0038	U	ug/L	P317442	
1859089	EPA 8270D	Ametryn	0.31	UJ	ng/L	P317346	LCS, RPD, SUR
		Atrazine	0.24	UJ	ng/L	P317346	SUR
		Chlorpyrifos Ethyl	0.24	UJ	ng/L	P317346	SUR
		Chlorpyrifos Methyl	0.094	UJ	ng/L	P317346	SUR
		Disulfoton	0.31	UJ	ng/L	P317346	SUR
		Ethion	0.14	UJ	ng/L	P317346	SUR
		Ethoprop	0.094	UJ	ng/L	P317346	LCS, MS, SUR
		Hexazinone	0.64	IJ	ng/L	P317346	SUR
		Malathion	0.33	UJ	ng/L	P317346	SUR
		Metribuzin	0.19	UJ	ng/L	P317346	SUR
		Mevinphos	0.47	UJ	ng/L	P317346	SUR

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859089	EPA 8270D	Norflurazon	0.47	UJ	ng/L	P317346	SUR
		Phorate	0.24	UJ	ng/L	P317346	MS, SUR
		Prometryn	0.19	UJ	ng/L	P317346	MS, SUR
		Simazine	0.47	UJ	ng/L	P317346	LCS, MS, SUR
		Atrazine Desethyl	1.4	UJ	ng/L	P317346	SUR
		Prometon	0.85	UJ	ng/L	P317346	LCS, SUR
		Fipronil	0.24	UJ	ng/L	P317346	SUR
		Molinate	0.28	UJ	ng/L	P317346	SUR
		Pendimethalin	1.4	UJ	ng/L	P317346	SUR
		Terbufos	0.094	UJ	ng/L	P317346	LCS, SUR
		EPTC	1.2	UJ	ng/L	P317346	SUR
		Terbutylazine	0.40	UJ	ng/L	P317346	SUR
		Bromacil	0.47	UJ	ng/L	P317346	SUR
		Fipronil Sulfide	0.14	UJ	ng/L	P317346	SUR
		Fipronil Sulfone	0.14	UJ	ng/L	P317346	SUR
		Alachlor	0.24	UJ	ng/L	P317346	SUR
		Azinphos Methyl	2.1	UJ	ng/L	P317346	SUR
		Butylate	0.38	UJ	ng/L	P317346	SUR
		Demeton	0.94	UJ	ng/L	P317346	MS, RPD, SUR
		Diazinon	0.12	UJ	ng/L	P317346	LCS, SUR
		Fenamiphos	0.24	UJ	ng/L	P317346	SUR
		Fonofos	0.19	UJ	ng/L	P317346	LCS, SUR
		Metaxyl	0.19	UJ	ng/L	P317346	SUR
		Metolachlor	0.24	UJ	ng/L	P317346	SUR
		Acetochlor	0.24	UJ	ng/L	P317346	SUR
		Cyanazine	0.47	UJ	ng/L	P317346	MS, SUR
		Parathion Ethyl	0.24	UJ	ng/L	P317346	SUR
		Parathion Methyl	0.24	UJ	ng/L	P317346	SUR

Ref. Method and Comment:

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. "J" - estimation due to diuron-d6 surrogate spike recovery exceeding the control limits. Results confirmed in re-extraction.

DEP SOP: GC-011-5 (based on EPA 608 and 617): Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes. Surrogate failures were observed in both original extraction and re-extraction. Analytical results were confirmed.

Sample Location: MILL CREEK @ BELLAMY/ALLIGATOR RD.

Collection Date/Time: 12/19/2016 12:20

Field ID: 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859068	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P317089	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P317397	
		Sulfate	4.3		mg SO4/L	P317400	
	SM 2120 B	Color (true)	61	A	PCU	P317101	
	SM 2320 B-97	Total Alkalinity	40	A	mg CaCO3/L	P317268	
	SM 2540 C-97	TDS	83		mg/L	P317657	
	SM 2540 D-97	TSS	50		mg/L	P317635	

Field ID: 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859068	SM 4500 F-C-97	Fluoride	0.36		mg F/L	P317273	
1859072	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P317459	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.34		mg N/L	P317109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P317370	
	EPA 365.1 Rev. 2.0	Total-P	1.3		mg P/L	P317341	
	SM 5310 B-00	Organic Carbon	6.5		mg C/L	P317234	
1859076	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	1.1		mg P/L	P317098	

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.

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

Sample Location: OLUSTEE CREEK AT CR238 DUP

Collection Date/Time: 12/19/2016 11:15

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859069	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P317089	
	EPA 300.0 Rev. 2.1	Chloride	9.8		mg Cl/L	P317395	
		Sulfate	1.9		mg SO4/L	P317398	
	SM 2120 B	Color (true)	500		PCU	P317101	
	SM 2320 B-97	Total Alkalinity	6.7		mg CaCO3/L	P317268	
	SM 2540 C-97	TDS	123		mg/L	P317657	
	SM 2540 D-97	TSS	3	I	mg/L	P317635	
	SM 4500 F-C-97	Fluoride	0.092	I	mg F/L	P317273	
1859073	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P317460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P317387	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P317370	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P317341	
	SM 5310 B-00	Organic Carbon	46		mg C/L	P317234	
1859077	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.14		mg P/L	P317098	

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

Sample Location: OLUSTEE CREEK AT CR238 DUP

Collection Date/Time: 12/19/2016 11:15

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859084	EPA 8321B	Glyphosate**	10	U	ug/L	P317203	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P316767	
		Diuron	0.0040	U	ug/L	P317243	MS
		Fenuron	0.0080	U	ug/L	P317243	
		2,4,5-T	0.0020	U	ug/L	P316767	
		Acifluorfen	0.0020	U	ug/L	P316767	
		Imidacloprid	0.0040	U	ug/L	P317243	
		Bentazon	0.0020	U	ug/L	P316767	MS
		Linuron	0.0040	U	ug/L	P317243	

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859084	USGS O-2060-01	Acetaminophen**	0.0040	U	ug/L	P317243	
		Carbamazepine**	4.0E-04	U	ug/L	P317243	
		Silvex	0.0020	U	ug/L	P316767	
		Primidone**	0.0080	U	ug/L	P317243	
		Fluridone**	4.0E-04	U	ug/L	P317243	MS
1859086	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P317335	
1859088	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0019	U	ug/L	P317442	
		Alpha-BHC	0.0019	U	ug/L	P317442	
		Beta-BHC	0.0019	U	ug/L	P317442	
		Delta-BHC	0.0019	U	ug/L	P317442	
		Gamma-BHC	0.0019	U	ug/L	P317442	
		Carbophenothion	0.0056	U	ug/L	P317442	
		Chlordane	0.019	U	ug/L	P317442	
		Chlorothalonil	0.0075	U	ug/L	P317442	
		Cypermethrin	0.011	U	ug/L	P317442	
		DDD-p,p'	0.0038	U	ug/L	P317442	
		DDE-p,p'	0.0038	U	ug/L	P317442	
		DDT-p,p'	0.0038	U	ug/L	P317442	
		Dicofol	0.023	UJ	ug/L	P317442	CCV
		Dieldrin	0.0019	U	ug/L	P317442	
		Endosulfan I	0.0019	U	ug/L	P317442	
		Endosulfan II	0.0019	U	ug/L	P317442	
		Endosulfan Sulfate	0.0038	U	ug/L	P317442	
		Endrin	0.0038	U	ug/L	P317442	
		Endrin Aldehyde	0.0038	U	ug/L	P317442	
		Heptachlor	0.0019	U	ug/L	P317442	
		Heptachlor Epoxide	0.0019	U	ug/L	P317442	
		Methoxychlor	0.0094	U	ug/L	P317442	
		Mirex	0.0038	U	ug/L	P317442	
		Permethrin	0.0094	U	ug/L	P317442	
		Toxaphene	0.094	U	ug/L	P317442	
		PCB-1016	0.019	U	ug/L	P317442	
		PCB-1221	0.019	U	ug/L	P317442	
		PCB-1232	0.019	U	ug/L	P317442	
		PCB-1242	0.019	U	ug/L	P317442	
		PCB-1248	0.019	U	ug/L	P317442	
		PCB-1254	0.019	U	ug/L	P317442	
		PCB-1260	0.019	U	ug/L	P317442	
		Trifluralin	0.0075	U	ug/L	P317442	
		Hexachlorobenzene**	0.0019	U	ug/L	P317442	
		Hexachlorocyclopentadiene**	0.0075	U	ug/L	P317442	
		Alpha-Chlordane	0.0019	U	ug/L	P317442	
		Gamma-Chlordane	0.0019	U	ug/L	P317442	
		Endrin Ketone	0.0038	U	ug/L	P317442	

Field ID: G1NE0332 12192016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859090	EPA 8270D	Ametryn	0.31	UJ	ng/L	P317346	LCS, RPD
		Atrazine	0.24	U	ng/L	P317346	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P317346	
		Chlorpyrifos Methyl	0.094	U	ng/L	P317346	
		Disulfoton	0.31	U	ng/L	P317346	
		Ethion	0.14	U	ng/L	P317346	
		Ethoprop	0.094	UJ	ng/L	P317346	LCS, MS
		Hexazinone	0.73	I	ng/L	P317346	
		Malathion	0.33	U	ng/L	P317346	
		Metribuzin	0.19	U	ng/L	P317346	
		Mevinphos	0.47	U	ng/L	P317346	
		Norflurazon	0.47	U	ng/L	P317346	
		Phorate	0.24	UJ	ng/L	P317346	MS
		Prometryn	0.19	UJ	ng/L	P317346	MS
		Simazine	0.47	UJ	ng/L	P317346	LCS, MS
		Atrazine Desethyl	1.4	U	ng/L	P317346	
		Prometon	0.85	UJ	ng/L	P317346	LCS
		Fipronil	0.24	U	ng/L	P317346	
		Molinate	0.28	U	ng/L	P317346	
		Pendimethalin	1.4	U	ng/L	P317346	
		Terbufos	0.094	UJ	ng/L	P317346	LCS
		EPTC	1.2	U	ng/L	P317346	
		Terbuthylazine	0.40	U	ng/L	P317346	
		Bromacil	0.47	U	ng/L	P317346	
		Fipronil Sulfide	0.14	U	ng/L	P317346	
		Fipronil Sulfone	0.14	U	ng/L	P317346	
		Alachlor	0.24	U	ng/L	P317346	
		Azinphos Methyl	2.1	U	ng/L	P317346	
		Butylate	0.38	U	ng/L	P317346	
		Demeton	0.94	UJ	ng/L	P317346	MS, RPD
		Diazinon	0.12	UJ	ng/L	P317346	LCS
		Fenamiphos	0.24	U	ng/L	P317346	
		Fonofos	0.19	UJ	ng/L	P317346	LCS
		Metaxyl	0.19	U	ng/L	P317346	
		Metolachlor	0.24	U	ng/L	P317346	
		Acetochlor	0.24	U	ng/L	P317346	
		Cyanazine	0.47	UJ	ng/L	P317346	MS
		Parathion Ethyl	0.24	U	ng/L	P317346	
		Parathion Methyl	0.24	U	ng/L	P317346	

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for acetaminophen could not be assessed due to high concentration of parameter in the spiked sample.

DEP SOP: GC-011-5 (based on EPA 608 and 617): Refer to the narrative for an explanation of QC Codes.

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

Sample Location: FIELD BLANK

Collection Date/Time: 12/19/2016 11:20

Field ID: 12192016

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1859070	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P317089	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P317397	
		Sulfate	0.20	U	mg SO4/L	P317400	
	SM 2120 B	Color (true)	2.5	U	PCU	P317101	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P317268	
	SM 2540 C-97	TDS	15	U	mg/L	P317656	
	SM 2540 D-97	TSS	2	U	mg/L	P317634	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P317273	
1859074	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P317460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P317109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P317370	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P317341	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P317234	
1859078	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P317098	

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.

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

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Batch ID: P317442

Component	Result	Code	Units
Aldrin	0.0020	U	ug/L
Alpha-BHC	0.0020	U	ug/L
Alpha-Chlordane	0.0020	U	ug/L
Beta-BHC	0.0020	U	ug/L
Carbophenothion	0.0060	U	ug/L
Chlordane	0.020	U	ug/L
Chlorothalonil	0.0080	U	ug/L
Cypermethrin	0.012	U	ug/L
DDD-p,p'	0.0040	U	ug/L
DDE-p,p'	0.0040	U	ug/L
DDT-p,p'	0.0040	U	ug/L
Delta-BHC	0.0020	U	ug/L
Dicofol	0.024	U	ug/L
Dieldrin	0.0020	U	ug/L
Endosulfan I	0.0020	U	ug/L
Endosulfan II	0.0020	U	ug/L
Endosulfan Sulfate	0.0040	U	ug/L
Endrin	0.0040	U	ug/L
Endrin Aldehyde	0.0040	U	ug/L
Endrin Ketone	0.0040	U	ug/L
Gamma-BHC	0.0020	U	ug/L
Gamma-Chlordane	0.0020	U	ug/L
Heptachlor	0.0020	U	ug/L
Heptachlor Epoxide	0.0020	U	ug/L
Hexachlorobenzene	0.0020	U	ug/L
Hexachlorocyclopentadiene	0.0080	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Batch ID: P317442

Component	Result	Code	Units
Methoxychlor	0.010	U	ug/L
Mirex	0.0040	U	ug/L
PCB-1016	0.020	U	ug/L
PCB-1221	0.020	U	ug/L
PCB-1232	0.020	U	ug/L
PCB-1242	0.020	U	ug/L
PCB-1248	0.020	U	ug/L
PCB-1254	0.020	U	ug/L
PCB-1260	0.020	U	ug/L
Permethrin	0.010	U	ug/L
Toxaphene	0.10	U	ug/L
Trifluralin	0.0080	U	ug/L

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P317089

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P317395

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P317397

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P317398

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P317400

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P317459

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317460

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317109

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317387

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317370

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P317341

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317098

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

Reference Method: EPA 8270D
Batch ID: P317346

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	1.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P317346

Component	Result	Code	Units
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 8321B
Batch ID: P317203

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P317335

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P317101

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P317268

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

Reference Method: SM 2540 C-97
Batch ID: P317656

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P317656

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P317657

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P317634

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P317635

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P317273

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P317234

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

Reference Method: USGS O-2060-01
Batch ID: P316767

Component	Result	Code	Units
2,4,5-T	0.0020	U	ug/L
2,4-D	0.0040	U	ug/L
Acetaminophen	0.0040	U	ug/L
Acifluorfen	0.0020	U	ug/L
Bentazon	0.0020	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Silvex	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P317243

Component	Result	Code	Units
Acetaminophen	0.0040	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0040	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
Primidone	0.0080	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P317442

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	81.4	86.1	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317395

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317397

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317398

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317400

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.9		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P317460

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P317109

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

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P317387

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P317370

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

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P317341

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P317098

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

Reference Method: EPA 8270D

Batch ID: P317346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	114	P/P	78 - 118
Alachlor	107	117	P/P	77 - 119
Ametryn	139	144	F/F	61 - 136
Atrazine	101	116	P/P	73 - 120
Atrazine Desethyl	85.5	93.3	P/P	16 - 122
Azinphos Methyl	121	108	P/P	69 - 186
Bromacil	105	103	P/P	40 - 125
Butylate	63.0	75.7	P/P	32 - 87.0
Chlorpyrifos Ethyl	88.4	90.4	P/P	53 - 110
Chlorpyrifos Methyl	97.3	103	P/P	31 - 119
Cyanazine	134	116	P/P	36 - 224
Demeton	88.1	104	P/P	39 - 122
Diazinon	103	122	P/F	75 - 119
Disulfoton	114	128	P/P	42 - 139
EPTC	58.0	64.4	P/P	33 - 96.0
Ethion	92.4	97.7	P/P	63 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P317346

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	106	109	P/F	65 - 107
Fenamiphos	102	103	P/P	64 - 137
Fipronil	109	109	P/P	60 - 126
Fipronil Sulfide	90.5	81.0	P/P	58 - 124
Fipronil Sulfone	83.7	90.2	P/P	57 - 126
Fonofos	98.1	115	P/F	65 - 111
Hexazinone	96.3	103	P/P	46 - 151
Malathion	114	112	P/P	68 - 132
Metalaxyl	99.4	111	P/P	51 - 132
Metolachlor	98.8	109	P/P	78 - 119
Metribuzin	105	89.6	P/P	64 - 138
Mevinphos	99.1	104	P/P	34 - 128
Molinate	47.3	46.0	P/P	44 - 101
Norflurazon	97.9	90.5	P/P	63 - 129
Parathion Ethyl	93.5	96.5	P/P	80 - 109
Parathion Methyl	118	119	P/P	74 - 125
Pendimethalin	82.2	80.2	P/P	48 - 134
Phorate	106	113	P/P	52 - 119
Prometon	106	136	P/F	69 - 124
Prometryn	89.0	93.5	P/P	66 - 124
Simazine	171	191	F/F	61 - 134
Terbufos	102	121	P/F	58 - 115
Terbutylazine	97.2	102	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P317203

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	63.4		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P317335

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	123		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P317268

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.1		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P317273

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P317234

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

Reference Method: SM 5310 B-00
Batch ID: P317234

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

Reference Method: USGS O-2060-01
Batch ID: P316767

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	97.2		P	40 - 140
2,4-D	88.8		P	40 - 140
Acetaminophen	138		P	40 - 140
Acifluorfen	75.2		P	40 - 140
Bentazon	96.4		P	40 - 140
Carbamazepine	136		P	40 - 140
Diuron	82.0		P	40 - 140
Fenuron	103		P	40 - 140
Fluridone	104		P	40 - 140
Imidacloprid	98.8		P	40 - 160
Linuron	70.0		P	40 - 140
Primidone	99.2		P	40 - 140
Silvex	92.4		P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P317243

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	80.4		P	40 - 140
Carbamazepine	131		P	40 - 140
Diuron	72.8		P	40 - 140
Fenuron	97.2		P	40 - 140
Fluridone	82.8		P	40 - 140
Imidacloprid	92.0		P	40 - 160
Linuron	82.0		P	40 - 140
Primidone	96.8		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P317442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859517	Toxaphene	85.5	88.3	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317395

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1857477	Chloride	99.1		P	90 - 110
1859067	Chloride	98.8		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317397

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859044	Chloride	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317398

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1857477	Sulfate	95.8		P	90 - 110
1859067	Sulfate	95.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317400

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859044	Sulfate	93.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859002	Ammonia-N	96.1	95.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859073	Ammonia-N	95.2	90.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859947	Kjeldahl Nitrogen	98.7	98.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859045	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859055	O-Phosphate-P	99.5	100	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P317346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859090	Acetochlor	101	87.2	P/P	74 - 123
1859090	Alachlor	104	96.0	P/P	73 - 124
1859090	Ametryn	125	84.8	P/P	56 - 149

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P317346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859090	Atrazine	104	105	P/P	73 - 124
1859090	Atrazine Desethyl	79.4	79.1	P/P	12 - 103
1859090	Azinphos Methyl	97.6	90.6	P/P	60 - 202
1859090	Bromacil	102	97.4	P/P	42 - 133
1859090	Butylate	66.1	54.2	P/P	10 - 85.0
1859090	Chlorpyrifos Ethyl	85.5	82.2	P/P	53 - 113
1859090	Chlorpyrifos Methyl	97.2	87.7	P/P	40 - 115
1859090	Cyanazine	234	215	F/F	22 - 210
1859090	Demeton	150	65.8	F/P	17 - 149
1859090	Diazinon	105	97.0	P/P	72 - 124
1859090	Disulfoton	131	121	P/P	43 - 139
1859090	EPTC	59.4	58.7	P/P	10 - 86.0
1859090	Ethion	92.5	85.0	P/P	65 - 131
1859090	Ethoprop	119	103	F/P	59 - 110
1859090	Fenamiphos	86.6	84.7	P/P	57 - 138
1859090	Fipronil	98.7	92.0	P/P	40 - 130
1859090	Fipronil Sulfide	84.8	81.9	P/P	36 - 128
1859090	Fipronil Sulfone	81.8	77.9	P/P	16 - 145
1859090	Fonofos	112	102	P/P	60 - 112
1859090	Hexazinone	112	105	P/P	69 - 142
1859090	Malathion	107	90.1	P/P	68 - 132
1859090	Metalaxyl	108	103	P/P	66 - 118
1859090	Metolachlor	101	90.2	P/P	71 - 124
1859090	Metribuzin	122	103	P/P	61 - 140
1859090	Mevinphos	110	114	P/P	38 - 130
1859090	Molinate	37.9	32.5	P/P	23 - 99.0
1859090	Norflurazon	77.3	67.3	P/P	39 - 139
1859090	Parathion Ethyl	96.9	91.3	P/P	75 - 111
1859090	Parathion Methyl	113	105	P/P	64 - 130
1859090	Pendimethalin	83.2	80.2	P/P	26 - 173
1859090	Phorate	132	112	F/P	43 - 127
1859090	Prometon	123	98.4	P/P	50 - 144
1859090	Prometryn	127	115	F/P	69 - 126
1859090	Simazine	136	160	P/F	51 - 152
1859090	Terbufos	123	120	P/P	54 - 125
1859090	Terbutylazine	102	89.9	P/P	76 - 113

Reference Method: EPA 8321B
Batch ID: P317203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859084	Glyphosate	62.2	67.6	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P317335

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859086	Pyraclostrobin	112	124	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P317273

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859068	Fluoride	97.9	101	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P317234

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1858998	Organic Carbon	94.0	94.5	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P316767

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1858318	2,4,5-T	122	127	P/P	40 - 140
1858318	2,4-D	130	131	P/P	40 - 140
1858318	Acetaminophen	66.4	58.8	P/P	40 - 140
1858318	Acifluorfen	126	118	P/P	40 - 140
1858318	Bentazon	171	174	F/F	40 - 140
1858318	Carbamazepine	52.4	59.6	P/P	40 - 140
1858318	Diuron	30.2	27.2	F/F	40 - 140
1858318	Fenuron	40.8	45.2	P/P	40 - 140
1858318	Fluridone	50.4	48.0	P/P	40 - 140
1858318	Imidacloprid	92.8	91.2	P/P	40 - 160
1858318	Linuron	49.6	61.2	P/P	40 - 140
1858318	Primidone	49.6	45.6	P/P	40 - 140
1858318	Silvex	135	139	P/P	40 - 140

Reference Method: USGS O-2060-01
Batch ID: P317243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1859491	Carbamazepine	81.1	82.3	P/P	40 - 140
1859491	Diuron	31.4	28.5	F/F	40 - 140
1859491	Fenuron	56.8	56.4	P/P	40 - 140
1859491	Fluridone	27.7	28.0	F/F	40 - 140
1859491	Imidacloprid	56.6	54.2	P/P	40 - 160
1859491	Linuron	42.8	46.0	P/P	40 - 140
1859491	Primidone	59.2	58.4	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P317442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859517	Toxaphene	2.72	Spike	P	0 - 30
LFB	Toxaphene	5.59	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P317089

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859050	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1857477	Chloride	0.00303	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859044	Chloride	0.838	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317398

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1857477	Sulfate	0.0475	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P317400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859044	Sulfate	1.15	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859002	Ammonia-N	0.667	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P317460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859073	Ammonia-N	4.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859100	Kjeldahl Nitrogen	3.37	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P317387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859947	Kjeldahl Nitrogen	0.499	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P317370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859045	NO2NO3-N	0.935	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P317341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859072	Total-P	17.7	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P317098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859055	O-Phosphate-P	0.505	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P317346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859090	Acetochlor	14.3	Spike	P	0 - 30
1859090	Alachlor	8.43	Spike	P	0 - 30
1859090	Ametryn	38.2	Spike	F	0 - 30
1859090	Atrazine	0.413	Spike	P	0 - 30
1859090	Atrazine Desethyl	0.431	Spike	P	0 - 30
1859090	Azinphos Methyl	7.45	Spike	P	0 - 30
1859090	Bromacil	4.96	Spike	P	0 - 30
1859090	Butylate	19.8	Spike	P	0 - 30
1859090	Chlorpyrifos Ethyl	3.97	Spike	P	0 - 30
1859090	Chlorpyrifos Methyl	10.3	Spike	P	0 - 30
1859090	Cyanazine	8.15	Spike	P	0 - 30
1859090	Demeton	77.8	Spike	F	0 - 30
1859090	Diazinon	7.74	Spike	P	0 - 30
1859090	Disulfoton	7.41	Spike	P	0 - 30
1859090	EPTC	1.16	Spike	P	0 - 30
1859090	Ethion	8.45	Spike	P	0 - 30
1859090	Ethoprop	14.3	Spike	P	0 - 30
1859090	Fenamiphos	2.31	Spike	P	0 - 30
1859090	Fipronil	7.01	Spike	P	0 - 30
1859090	Fipronil Sulfide	3.44	Spike	P	0 - 30
1859090	Fipronil Sulfone	4.93	Spike	P	0 - 30
1859090	Fonofos	9.09	Spike	P	0 - 30
1859090	Hexazinone	5.78	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P317346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859090	Malathion	17.5	Spike	P	0 - 30
1859090	Metalaxyl	4.27	Spike	P	0 - 30
1859090	Metolachlor	11.7	Spike	P	0 - 30
1859090	Metribuzin	16.8	Spike	P	0 - 30
1859090	Mevinphos	3.43	Spike	P	0 - 30
1859090	Molinate	15.3	Spike	P	0 - 30
1859090	Norflurazon	13.8	Spike	P	0 - 30
1859090	Parathion Ethyl	6.01	Spike	P	0 - 30
1859090	Parathion Methyl	7.16	Spike	P	0 - 30
1859090	Pendimethalin	3.66	Spike	P	0 - 30
1859090	Phorate	15.7	Spike	P	0 - 30
1859090	Prometon	22.4	Spike	P	0 - 30
1859090	Prometryn	9.90	Spike	P	0 - 30
1859090	Simazine	16.6	Spike	P	0 - 30
1859090	Terbufos	2.58	Spike	P	0 - 30
1859090	Terbutylazine	12.8	Spike	P	0 - 30
LFB	Acetochlor	9.81	LCS	P	0 - 30
LFB	Alachlor	9.23	LCS	P	0 - 30
LFB	Ametryn	3.24	LCS	P	0 - 30
LFB	Atrazine	13.7	LCS	P	0 - 30
LFB	Atrazine Desethyl	8.70	LCS	P	0 - 30
LFB	Azinphos Methyl	10.9	LCS	P	0 - 30
LFB	Bromacil	1.39	LCS	P	0 - 30
LFB	Butylate	18.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.26	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.92	LCS	P	0 - 30
LFB	Cyanazine	14.2	LCS	P	0 - 30
LFB	Demeton	16.5	LCS	P	0 - 30
LFB	Diazinon	16.7	LCS	P	0 - 30
LFB	Disulfoton	11.6	LCS	P	0 - 30
LFB	EPTC	10.5	LCS	P	0 - 30
LFB	Ethion	5.65	LCS	P	0 - 30
LFB	Ethoprop	3.15	LCS	P	0 - 30
LFB	Fenamiphos	1.06	LCS	P	0 - 30
LFB	Fipronil	0.220	LCS	P	0 - 30
LFB	Fipronil Sulfide	11.1	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.41	LCS	P	0 - 30
LFB	Fonofos	15.5	LCS	P	0 - 30
LFB	Hexazinone	6.95	LCS	P	0 - 30
LFB	Malathion	2.12	LCS	P	0 - 30
LFB	Metalaxyl	11.4	LCS	P	0 - 30
LFB	Metolachlor	9.51	LCS	P	0 - 30
LFB	Metribuzin	15.4	LCS	P	0 - 30
LFB	Mevinphos	4.85	LCS	P	0 - 30
LFB	Molinate	2.70	LCS	P	0 - 30
LFB	Norflurazon	7.81	LCS	P	0 - 30
LFB	Parathion Ethyl	3.12	LCS	P	0 - 30
LFB	Parathion Methyl	0.719	LCS	P	0 - 30
LFB	Pendimethalin	2.51	LCS	P	0 - 30
LFB	Phorate	6.40	LCS	P	0 - 30
LFB	Prometon	24.2	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P317346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometryn	4.96	LCS	P	0 - 30
LFB	Simazine	10.7	LCS	P	0 - 30
LFB	Terbufos	17.2	LCS	P	0 - 30
LFB	Terbutylazine	4.64	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P317203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859084	Glyphosate	8.32	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P317335

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859086	Pyraclostrobin	10.2	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P317101

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859068	Color (true)	0.225	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P317268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859068	Total Alkalinity	0.444	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P317656

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859049	TDS	3.51	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P317657

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859097	TDS	6.32	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P317273

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859068	Fluoride	1.43	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P317234

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1858998	Organic Carbon	0.390	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P316767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1858318	2,4,5-T	4.19	Spike	P	0 - 30
1858318	2,4-D	1.23	Spike	P	0 - 30
1858318	Acetaminophen	12.1	Spike	P	0 - 30
1858318	Acifluorfen	6.87	Spike	P	0 - 30
1858318	Bentazon	1.62	Spike	P	0 - 30
1858318	Carbamazepine	12.8	Spike	P	0 - 30
1858318	Diuron	10.4	Spike	P	0 - 30
1858318	Fenuron	10.2	Spike	P	0 - 30
1858318	Fluridone	4.88	Spike	P	0 - 30
1858318	Imidacloprid	1.74	Spike	P	0 - 30
1858318	Linuron	20.9	Spike	P	0 - 30
1858318	Primidone	8.40	Spike	P	0 - 30
1858318	Silvex	2.63	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P317243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1859491	Acetaminophen	16.2	Spike	P	0 - 30
1859491	Carbamazepine	1.37	Spike	P	0 - 30
1859491	Diuron	9.88	Spike	P	0 - 30
1859491	Fenuron	0.707	Spike	P	0 - 30
1859491	Fluridone	1.15	Spike	P	0 - 30
1859491	Imidacloprid	3.51	Spike	P	0 - 30
1859491	Linuron	7.21	Spike	P	0 - 30
1859491	Primidone	1.36	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

Quality Assurance Report Surrogates

Lab Sample ID: 1859083
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	74.0	P	50 - 150
USGS O-2060-01	2,4-D-d3	94.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	64.8	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	57.2	P	40 - 160
USGS O-2060-01	Diuron-d6	31.2	F	40 - 150
USGS O-2060-01	Primidone-d5	50.6	P	40 - 150

Lab Sample ID: 1859084
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	74.8	P	50 - 150
USGS O-2060-01	2,4-D-d3	87.8	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	95.6	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	65.8	P	40 - 160
USGS O-2060-01	Diuron-d6	43.6	P	40 - 150
USGS O-2060-01	Primidone-d5	63.0	P	40 - 150

Lab Sample ID: 1859085
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	87.0	P	40 - 150

Lab Sample ID: 1859086
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	94.2	P	40 - 150

Lab Sample ID: 1859087
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	57.1	P	41 - 134

Lab Sample ID: 1859088
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	45.8	P	41 - 134

Lab Sample ID: 1859089
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	49.9	F	62 - 132
EPA 8270D	Simazine-d10	57.8	F	72 - 127

Quality Assurance Report Surrogates

Lab Sample ID: 1859090
Field Sample ID: G1NE0332 12192016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	76.3	P	62 - 132
EPA 8270D	Simazine-d10	88.6	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A73489
Included Lab Sample IDs: 1859067, 1859068, 1859069, 1859070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A73491
Included Lab Sample IDs: 1859075, 1859076, 1859077, 1859078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.9	97.1	P/P	90 - 110
O-Phosphate-P	98.4	97.9	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A73492
Included Lab Sample IDs: 1859067, 1859068, 1859069, 1859070

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

Reference Method: SM 5310 B-00
Run ID: A73539
Included Lab Sample IDs: 1859071, 1859072, 1859073, 1859074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	97.7	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A73550
Included Lab Sample IDs: 1859067, 1859068, 1859069, 1859070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.9	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97
Run ID: A73550
Included Lab Sample IDs: 1859067, 1859068, 1859069, 1859070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A73555
Included Lab Sample IDs: 1859072, 1859074

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

Reference Method: USGS O-2060-01
Run ID: A73556
Included Lab Sample IDs: 1859083, 1859084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	98.6	102	P/P	50 - 150
2,4-D	95.2	98.0	P/P	50 - 150
Acifluorfen	97.6	99.2	P/P	50 - 150
Bentazon	90.0	101	P/P	50 - 150
Silvex	92.6	95.8	P/P	50 - 150

Reference Method: USGS O-2060-01
Run ID: A73563
Included Lab Sample IDs: 1859083

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	90.0	136	P/P	60 - 150
Carbamazepine	101	138	P/P	60 - 150
Diuron	92.8	110	P/P	60 - 150
Fenuron	103	118	P/P	60 - 150
Fluridone	126	120	P/P	60 - 150
Imidacloprid	94.0	98.0	P/P	60 - 150
Linuron	74.4	126	P/P	60 - 150
Primidone	97.2	128	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A73570
Included Lab Sample IDs: 1859083, 1859084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	91.4	122	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A73576
Included Lab Sample IDs: 1859067, 1859068, 1859069, 1859070

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	99.8	P/P	90 - 110
Chloride	101	102	P/P	90 - 110
Chloride	99.3	101	P/P	90 - 110
Sulfate	90.5	94.0	P/P	90 - 110
Sulfate	95.6	98.6	P/P	90 - 110
Sulfate	98.6	96.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A73580
Included Lab Sample IDs: 1859071, 1859072, 1859073, 1859074

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A73580

Included Lab Sample IDs: 1859071, 1859072, 1859073, 1859074

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A73601

Included Lab Sample IDs: 1859071, 1859072, 1859073, 1859074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.0	96.1	P/P	90 - 110
Ammonia-N	96.1	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A73602

Included Lab Sample IDs: 1859071, 1859073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A73608

Included Lab Sample IDs: 1859071, 1859072, 1859073

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	102	101	P/P	90 - 110
Total-P	98.6	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A73615

Included Lab Sample IDs: 1859074

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A73699

Included Lab Sample IDs: 1859085, 1859086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	128	140	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A73699

Included Lab Sample IDs: 1859084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	96.0	104	P/P	60 - 150
Carbamazepine	149	147	P/P	60 - 150
Diuron	80.0	90.0	P/P	60 - 150
Fenuron	114	119	P/P	60 - 150
Fluridone	91.2	102	P/P	60 - 150
Imidacloprid	96.0	93.2	P/P	60 - 150
Linuron	94.8	112	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A73699

Included Lab Sample IDs: 1859084

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Primidone	87.2	98.4	P/P	60 - 150

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Run ID: A73728

Included Lab Sample IDs: 1859087, 1859088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	104	103	P/P	90 - 110
Chlordane	85.0	85.6	P/P	85 - 115
Chlorothalonil	104	98.5	P/P	90 - 110
Cypermethrin	107	99.6	P/P	85 - 115
Dicofol	146*	182*	F/F	90 - 110
Hexachlorobenzene	99.2	98.8	P/P	85 - 115
Hexachlorocyclopentadiene	104	104	P/P	85 - 115
Mirex	105	97.5	P/P	90 - 110
Permethrin	107	91.1	P/P	90 - 110
Toxaphene	91.9	111	P/P	85 - 115
Trifluralin	100	98.2	P/P	90 - 110

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Run ID: A73750

Included Lab Sample IDs: 1859087, 1859088

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	87.0	86.1	P/P	85 - 115
Alpha-BHC	89.5	94.7	P/P	85 - 115
Alpha-Chlordane	92.5	91.6	P/P	90 - 110
Beta-BHC	92.1	94.6	P/P	85 - 115
DDD-p,p'	91.7	93.3	P/P	85 - 115
DDE-p,p'	87.5	85.7	P/P	85 - 115
DDT-p,p'	94.6	98.8	P/P	85 - 115
Delta-BHC	91.6	99.6	P/P	85 - 115
Dieldrin	88.5	87.1	P/P	85 - 115
Endosulfan I	90.3	89.9	P/P	85 - 115
Endosulfan II	93.2	95.2	P/P	85 - 115
Endosulfan Sulfate	95.9	101	P/P	85 - 115
Endrin	88.7	90.7	P/P	85 - 115
Endrin Aldehyde	94.6	91.7	P/P	85 - 115
Endrin Ketone	98.0	100	P/P	85 - 115
Gamma-BHC	90.6	95.7	P/P	85 - 115
Gamma-Chlordane	92.9	91.9	P/P	90 - 110
Heptachlor	91.9	99.6	P/P	85 - 115
Heptachlor Epoxide	89.7	88.9	P/P	85 - 115
Methoxychlor	96.9	104	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A73836

Included Lab Sample IDs: 1859089, 1859090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A73836

Included Lab Sample IDs: 1859089, 1859090

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alachlor	102		P	80 - 120
Ametryn	96.1		P	80 - 120
Atrazine	91.2		P	80 - 120
Atrazine Desethyl	93.6		P	80 - 120
Azinphos Methyl	90.9		P	80 - 120
Bromacil	97.6		P	80 - 120
Butylate	97.6		P	80 - 120
Chlorpyrifos Ethyl	96.8		P	80 - 120
Chlorpyrifos Methyl	94.2		P	80 - 120
Cyanazine	84.9		P	80 - 120
Demeton	93.8		P	80 - 120
Diazinon	100		P	80 - 120
Disulfoton	93.7		P	80 - 120
EPTC	99.8		P	80 - 120
Ethion	91.3		P	80 - 120
Ethoprop	93.6		P	80 - 120
Fenamiphos	95.0		P	80 - 120
Fipronil	94.2		P	80 - 120
Fipronil Sulfide	89.5		P	80 - 120
Fipronil Sulfone	94.9		P	80 - 120
Fonofos	96.0		P	80 - 120
Hexazinone	96.5		P	80 - 120
Malathion	92.4		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	87.6		P	80 - 120
Mevinphos	94.6		P	80 - 120
Molinate	96.3		P	80 - 120
Norflurazon	87.7		P	80 - 120
Parathion Ethyl	93.1		P	80 - 120
Parathion Methyl	96.8		P	80 - 120
Pendimethalin	94.5		P	80 - 120
Phorate	104		P	80 - 120
Prometon	97.2		P	80 - 120
Prometryn	93.8		P	80 - 120
Simazine	92.3		P	80 - 120
Terbufos	93.8		P	80 - 120
Terbutylazine	96.6		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
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Toxaphene	81.4	86.1	85.5	88.3	5.59		2.72

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						0.0	
EPA 300.0 Rev. 2.1	Chloride	99.6		99.1	98.8		0.0030	
	Chloride	98.9		97.8			0.838	
	Sulfate	96.3		95.8	95.8		0.0475	
	Sulfate	92.6		93.7			1.15	
EPA 350.1 Rev. 2.0	Ammonia-N	96.9		96.1	95.3			0.667
	Ammonia-N	97.4		95.2	90.8			4.22
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104						3.37
	Kjeldahl Nitrogen	96.8		98.7	98.2			0.499
EPA 353.2 Rev. 2.0	NO2NO3-N	106		104	105			0.935
EPA 365.1 Rev. 2.0	Total-P	98.4						17.7
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	103		99.5	100			0.505
EPA 8270D	Acetochlor	103	114	101	87.2	9.81		14.3
	Alachlor	107	117	104	96.0	9.23		8.43
	Ametryn	139	144	125	84.8	3.24		38.2
	Atrazine	101	116	104	105	13.7		0.413
	Atrazine Desethyl	85.5	93.3	79.4	79.1	8.70		0.431
	Azinphos Methyl	121	108	97.6	90.6	10.9		7.45
	Bromacil	105	103	102	97.4	1.39		4.96
	Butylate	63.0	75.7	66.1	54.2	18.3		19.8
	Chlorpyrifos Ethyl	88.4	90.4	85.5	82.2	2.26		3.97
	Chlorpyrifos Methyl	97.3	103	97.2	87.7	5.92		10.3
	Cyanazine	134	116	234	215	14.2		8.15
	Demeton	88.1	104	150	65.8	16.5		77.8
	Diazinon	103	122	105	97.0	16.7		7.74
	Disulfoton	114	128	131	121	11.6		7.41
	EPTC	58.0	64.4	59.4	58.7	10.5		1.16
	Ethion	92.4	97.7	92.5	85.0	5.65		8.45
	Ethoprop	106	109	119	103	3.15		14.3
	Fenamiphos	102	103	86.6	84.7	1.06		2.31
	Fipronil	109	109	98.7	92.0	0.220		7.01
	Fipronil Sulfide	90.5	81.0	84.8	81.9	11.1		3.44
	Fipronil Sulfone	83.7	90.2	81.8	77.9	7.41		4.93
	Fonofos	98.1	115	112	102	15.5		9.09
	Hexazinone	96.3	103	112	105	6.95		5.78
	Malathion	114	112	107	90.1	2.12		17.5
	Metalaxyl	99.4	111	108	103	11.4		4.27
	Metolachlor	98.8	109	101	90.2	9.51		11.7
	Metribuzin	105	89.6	122	103	15.4		16.8
	Mevinphos	99.1	104	110	114	4.85		3.43
	Molinate	47.3	46.0	37.9	32.5	2.70		15.3
	Norflurazon	97.9	90.5	77.3	67.3	7.81		13.8
	Parathion Ethyl	93.5	96.5	96.9	91.3	3.12		6.01
	Parathion Methyl	118	119	113	105	0.719		7.16
	Pendimethalin	82.2	80.2	80.2	83.2	2.51		3.66
	Phorate	106	113	132	112	6.40		15.7
	Prometon	106	136	123	98.4	24.2		22.4
	Prometryn	89.0	93.5	127	115	4.96		9.90
	Simazine	171	191	136	160	10.7		16.6
	Terbufos	102	121	123	120	17.2		2.58
	Terbuthylazine	97.2	102	102	89.9	4.64		12.8
EPA 8321B	Glyphosate	63.4		62.2	67.6			8.32
	Pyraclostrobin	123		112	124			10.2
SM 2120 B	Color (true)						0.225	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2320 B-97	Total Alkalinity	99.1				0.444	
SM 2540 C-97	TDS					3.51	
	TDS					6.32	
SM 4500 F-C-97	Fluoride	98.7	97.9	101			1.43
SM 5310 B-00	Organic Carbon	95.8	94.0	94.5			0.390
USGS O-2060-01	2,4,5-T	97.2	122	127			4.19
	2,4-D	88.8	130	131			1.23
	Acetaminophen	138	58.8	66.4			12.1
	Acetaminophen	80.4					16.2
	Acifluorfen	75.2	126	118			6.87
	Bentazon	96.4	171	174			1.62
	Carbamazepine	136	59.6	52.4			12.8
	Carbamazepine	131	81.1	82.3			1.37
	Diuron	82.0	27.2	30.2			10.4
	Diuron	72.8	31.4	28.5			9.88
	Fenuron	103	45.2	40.8			10.2
	Fenuron	97.2	56.8	56.4			0.707
	Fluridone	104	48.0	50.4			4.88
	Fluridone	82.8	27.7	28.0			1.15
	Imidacloprid	98.8	91.2	92.8			1.74
	Imidacloprid	92.0	56.6	54.2			3.51
	Linuron	70.0	61.2	49.6			20.9
	Linuron	82.0	42.8	46.0			7.21
	Primidone	99.2	45.6	49.6			8.40
	Primidone	96.8	59.2	58.4			1.36
	Silvex	92.4	135	139			2.63

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617) / E31780	Organochlorine pesticides (low levels) in water matrices by GC/ECD.	1859087, 1859088
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1859067, 1859068, 1859069, 1859070
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1859067, 1859068, 1859069, 1859070
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1859067, 1859068, 1859069, 1859070
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1859071, 1859072, 1859073, 1859074
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1859071, 1859072, 1859073, 1859074
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1859071, 1859072, 1859073, 1859074
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1859071, 1859072, 1859073, 1859074
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1859075, 1859076, 1859077, 1859078
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1859089, 1859090
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1859083, 1859084
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1859085, 1859086
SM 2120 B / E31780	True Color measured at 450 nm	1859067, 1859068, 1859069, 1859070
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1859067, 1859068, 1859069, 1859070

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1859067, 1859068, 1859069, 1859070
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1859067, 1859068, 1859069, 1859070
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1859067, 1859068, 1859069, 1859070
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1859071, 1859072, 1859073, 1859074
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1859083, 1859084
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1859083, 1859084

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617)	12/20/2016	12/23/2016	Rasheda Ghaffari	01/04/2017	Vandana T. Nagar	1859087, 1859088
	12/20/2016	12/23/2016	Rasheda Ghaffari	12/30/2016	Vandana T. Nagar	1859087, 1859088
EPA 180.1 Rev. 2.0	12/20/2016			12/20/2016 13:27	Julie Michelle Frank	1859067, 1859068, 1859069, 1859070
EPA 300.0 Rev. 2.1	12/20/2016			12/23/2016	Ping Hua	1859067, 1859069
	12/20/2016			12/24/2016	Ping Hua	1859068, 1859070
EPA 350.1 Rev. 2.0	12/20/2016			12/27/2016	Julie Michelle Frank	1859071, 1859072, 1859073, 1859074
EPA 351.2 Rev. 2.0	12/20/2016	12/21/2016	Adrian Shelby	12/22/2016	Joseph Suarez	1859072, 1859074
	12/20/2016	12/27/2016	Adrian Shelby	12/27/2016	Joseph Suarez	1859071, 1859073
EPA 353.2 Rev. 2.0	12/20/2016			12/23/2016	Beverly Y. Sanders	1859071, 1859072, 1859073, 1859074
EPA 365.1 Rev. 2.0	12/20/2016	12/23/2016	Vijayalakshmi Reddy	12/27/2016	Lipi Saha	1859071, 1859072, 1859073
	12/20/2016	12/23/2016	Vijayalakshmi Reddy	12/28/2016	Lipi Saha	1859074
EPA 365.1 Rev. 2.0 dissolved	12/20/2016			12/20/2016 17:03	Julia Storbeck	1859078
	12/20/2016			12/20/2016 17:04	Julia Storbeck	1859077
	12/20/2016			12/20/2016 17:05	Julia Storbeck	1859075
	12/20/2016			12/20/2016 17:13	Julia Storbeck	1859076
EPA 8270D	12/20/2016	12/22/2016	Rasheda Ghaffari	12/28/2016	Irina Carbone	1859089, 1859090
EPA 8321B	12/20/2016	12/23/2016	Hoor Shaik	12/23/2016	Juyoung Kim	1859085, 1859086
	12/20/2016	12/23/2016	Mohammad Ghaffari	12/23/2016	Mohammad Ghaffari	1859083, 1859084
SM 2120 B	12/20/2016			12/20/2016 16:25	Jared I. Manley	1859068
	12/20/2016			12/20/2016 16:29	Jared I. Manley	1859070
	12/20/2016			12/20/2016 16:39	Jared I. Manley	1859067, 1859069
SM 2320 B-97	12/20/2016			12/22/2016	Dale L. Simmons	1859067, 1859068, 1859069, 1859070
SM 2540 C-97	12/20/2016			12/23/2016	Yijie Li	1859067, 1859068, 1859069, 1859070
SM 2540 D-97	12/20/2016			12/23/2016	Yijie Li	1859067, 1859068, 1859069, 1859070
SM 4500 F-C-97	12/20/2016			12/22/2016	Dale L. Simmons	1859067, 1859068, 1859069, 1859070
SM 5310 B-00	12/20/2016			12/21/2016	Julie Michelle Frank	1859071, 1859072, 1859073, 1859074
USGS O-2060-01	12/20/2016	12/20/2016	Hoor Shaik	12/21/2016	Juyoung Kim	1859083
	12/20/2016	12/23/2016	Hoor Shaik	12/24/2016	Juyoung Kim	1859084