

Chemical Analysis Report

SE-DIST-2017-06-01-01

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

Event Description: **SMP-G4 Broward Red**

Request ID: **RQ-2017-05-29-17**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

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

For additional information please contact

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

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 26-JUN-2017 15:17



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: North New River Canal @ University

Collection Date/Time: 05/31/2017 10:20

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902963	EPA 180.1 Rev. 2.0	Turbidity	1.0		NTU	P326120	
	EPA 300.0 Rev. 2.1	Chloride	88		mg Cl/L	P326786	
		Sulfate	9.9		mg SO4/L	P326789	
	SM 2120 B	Color (true)	55		PCU	P326233	
	SM 2320 B-97	Total Alkalinity	218		mg CaCO3/L	P326356	
	SM 2540 C-97	TDS	407	A	mg/L	P326996	
	SM 2540 D-97	TSS	2	UA	mg/L	P326742	
	SM 4500 F-C-97	Fluoride	0.38		mg F/L	P326359	
1902964	EPA 350.1 Rev. 2.0	Ammonia-N	0.085		mg N/L	P326186	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P326195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P326262	
	EPA 365.1 Rev. 2.0	Total-P	0.011		mg P/L	P326199	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P326192	
1902965	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326150	
1902995	EPA 8321B	Glyphosate**	10	U	ug/L	P326198	
		Pyraclostrobin**	0.0040	U	ug/L	P326203	
		Sucralose**	0.019	I	ug/L	P326155	
	USGS O-2060-01	2,4-D	0.0020	I	ug/L	P326112	
		Diuron	0.0036		ug/L	P326112	
		Fenuron	0.0045	I	ug/L	P326112	MS, RPD
		Imidacloprid	0.0047		ug/L	P326112	MS
		Bentazon	0.041		ug/L	P326112	MS
		Linuron	0.0040	U	ug/L	P326112	
		Acetaminophen**	0.0080	U	ug/L	P326112	
		MCP	0.0020	U	ug/L	P326112	
		Carbamazepine**	4.0E-04	U	ug/L	P326112	
		Triclopyr**	0.0040	U	ug/L	P326112	
		Primidone**	0.0040	U	ug/L	P326112	
		Fluridone**	0.0026		ug/L	P326112	
	EPA 8270D	Aldrin	4.3	U	ng/L	P326100	
		Alpha-BHC	2.2	U	ng/L	P326100	
		Beta-BHC	4.3	U	ng/L	P326100	
		Delta-BHC	4.3	U	ng/L	P326100	
		Gamma-BHC	4.3	U	ng/L	P326100	
		Carbophenothion	4.3	U	ng/L	P326100	
		Chlorothalonil	2.2	U	ng/L	P326100	
		Cypermethrin	22	U	ng/L	P326100	
		DDD-p,p'	2.2	U	ng/L	P326100	
		DDE-p,p'	3.2	U	ng/L	P326100	
		DDT-p,p'	3.2	U	ng/L	P326100	
		Dieldrin	4.3	U	ng/L	P326100	
		Endosulfan I	4.3	U	ng/L	P326100	
		Endosulfan II	4.3	U	ng/L	P326100	

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1903007	EPA 8270D	Endosulfan Sulfate	2.2	U	ng/L	P326100	
		Endrin	2.2	U	ng/L	P326100	
		Endrin Aldehyde	2.2	U	ng/L	P326100	RPD
		Heptachlor	1.6	U	ng/L	P326100	
		Heptachlor Epoxide	2.2	U	ng/L	P326100	
		Methoxychlor	4.3	U	ng/L	P326100	
		Mirex	2.2	U	ng/L	P326100	
		Permethrin	11	U	ng/L	P326100	
		Trifluralin	1.1	U	ng/L	P326100	MS
		Alpha-Chlordane	1.1	U	ng/L	P326100	
		Gamma-Chlordane	1.1	U	ng/L	P326100	
		Endrin Ketone	2.2	U	ng/L	P326100	
		Dicofol	32	UJ	ng/L	P326100	CCV
		Chlordane**	2.7	U	ng/L	P326100	MS
		Toxaphene**	13	U	ng/L	P326100	
		Alachlor	0.26	U	ng/L	P326082	
1903008	EPA 8270D	Ametryn	4.9		ng/L	P326082	
		Atrazine	99		ng/L	P326082	
		Atrazine Desethyl	10		ng/L	P326082	
		Azinphos Methyl	2.3	U	ng/L	P326082	
		Bromacil	0.51	U	ng/L	P326082	
		Butylate	0.41	UJ	ng/L	P326082	RPD
		Chlorpyrifos Ethyl	0.26	U	ng/L	P326082	
		Chlorpyrifos Methyl	0.10	U	ng/L	P326082	
		Demeton	2.1	U	ng/L	P326082	
		Diazinon	0.13	U	ng/L	P326082	
		Disulfoton	0.33	U	ng/L	P326082	
		EPTC	1.3	UJ	ng/L	P326082	CCV, RPD
		Ethion	0.15	UJ	ng/L	P326082	LCS
		Ethoprop	0.10	U	ng/L	P326082	
		Fenamiphos	0.26	U	ng/L	P326082	
		Fipronil	0.26	U	ng/L	P326082	
		Fipronil Sulfide	0.15	U	ng/L	P326082	
		Fipronil Sulfone	0.15	U	ng/L	P326082	
		Hexazinone	4.7		ng/L	P326082	
		Malathion	0.36	U	ng/L	P326082	
		Metribuzin	5.7		ng/L	P326082	
		Mevinphos	0.51	U	ng/L	P326082	RPD
		Molinate	0.31	U	ng/L	P326082	MS, RPD
		Norflurazon	0.51	U	ng/L	P326082	
		Pendimethalin	1.5	U	ng/L	P326082	
		Phorate	0.26	U	ng/L	P326082	
		Prometon	0.93	U	ng/L	P326082	
		Prometryn	0.22	I	ng/L	P326082	
		Simazine	1.7	I	ng/L	P326082	

Field ID: G4SENNR3

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1903008	EPA 8270D	Terbufos	0.10	U	ng/L	P326082	
		Terbuthylazine	0.44	U	ng/L	P326082	
		Fonofos	0.21	U	ng/L	P326082	MS
		Metalaxyl	1.8		ng/L	P326082	
		Metolachlor	8.1		ng/L	P326082	
		Acetochlor	0.26	U	ng/L	P326082	MS
		Cyanazine	0.51	U	ng/L	P326082	
		Parathion Ethyl	0.26	U	ng/L	P326082	
		Parathion Methyl	0.26	U	ng/L	P326082	
1903009	EPA 200.7 Rev. 4.4	Calcium	69.4		mg/L	P326217	
		Iron	880		ug/L	P326217	
		Magnesium	16.0		mg/L	P326217	
		Potassium	4.9		mg/L	P326217	
		Sodium	56.5		mg/L	P326217	
		Zinc	5.0	U	ug/L	P326217	
	EPA 200.8 Rev. 5.4	Arsenic	0.81		ug/L	P326217	
		Cadmium	0.020	U	ug/L	P326217	
		Chromium	0.40	U	ug/L	P326217	
		Copper	0.36	I	ug/L	P326217	
		Lead	0.058	I	ug/L	P326217	
		Nickel	0.20	U	ug/L	P326217	
		Silver	0.010	U	ug/L	P326217	

Ref. Method and Comment:

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

USGS O-2060-01: MS accuracy for fluridone 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.

EPA 8270D: MS accuracy for Atrazine, Metalaxyl, and Fipronil Sulfone 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: L-12 @ Ash ave and Sunrise

Collection Date/Time: 05/31/2017 11:00

Field ID: G4SEB128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902972	EPA 180.1 Rev. 2.0	Turbidity	9.4	A	NTU	P326121	
	EPA 300.0 Rev. 2.1	Chloride	58		mg Cl/L	P326787	
		Sulfate	7.2		mg SO4/L	P326790	
		Color (true)	39		PCU	P326233	
	SM 2320 B-97	Total Alkalinity	136		mg CaCO3/L	P326356	
	SM 2540 C-97	TDS	272	A	mg/L	P326995	
	SM 2540 D-97	TSS	7	IA	mg/L	P326741	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P326359	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P326186	
		Kjeldahl Nitrogen	0.85		mg N/L	P326195	
1902974	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P326262	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P326215	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P326192	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326150	

Field ID: G4SEB128

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902998	EPA 8321B	Sucralose**	0.038	I	ug/L	P326155	
	USGS O-2060-01	2,4-D	0.0092		ug/L	P326112	
		Diuron	0.12		ug/L	P326112	
		Fenuron	0.011	I	ug/L	P326112	MS, RPD
		Imidacloprid	0.040		ug/L	P326112	MS
		Bentazon	0.013		ug/L	P326112	MS
		Linuron	0.0040	U	ug/L	P326112	
		Acetaminophen**	0.0080	U	ug/L	P326112	
		MCPD	0.0020	U	ug/L	P326112	
		Carbamazepine**	4.0E-04	U	ug/L	P326112	
		Triclopyr**	0.0040	U	ug/L	P326112	
		Primidone**	0.0040	U	ug/L	P326112	
		Fluridone**	0.028		ug/L	P326112	
1903010	EPA 200.7 Rev. 4.4	Calcium	44.7		mg/L	P326217	
		Iron	100	I	ug/L	P326217	
		Magnesium	8.97		mg/L	P326217	
		Potassium	2.8		mg/L	P326217	
		Sodium	38.6		mg/L	P326217	
		Zinc	5.0	U	ug/L	P326217	
	EPA 200.8 Rev. 5.4	Arsenic	1.31		ug/L	P326217	
		Cadmium	0.020	U	ug/L	P326217	
		Chromium	0.82	I	ug/L	P326217	
		Copper	3.88		ug/L	P326217	
		Lead	1.0		ug/L	P326217	
		Nickel	0.47	I	ug/L	P326217	
		Silver	0.010	U	ug/L	P326217	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

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

Sample Location: New R.North Fork Sunrise

Collection Date/Time: 05/31/2017 11:15

Field ID: G4SEB064

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902966	EPA 180.1 Rev. 2.0	Turbidity	4.6		NTU	P326120	
	SM 2320 B-97	Total Alkalinity	212		mg CaCO3/L	P326356	
	SM 2540 D-97	TSS	9	I	mg/L	P326743	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P326359	
1902968	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P326186	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P326195	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.068		mg N/L	P326262	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P326215	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P326192	
1902970	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.051		mg P/L	P326149	
1902996	EPA 8321B	Sucralose**	0.11		ug/L	P326155	

Field ID: G4SEB064

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902996	USGS O-2060-01	2,4-D	0.0095		ug/L	P326112	
		Diuron	0.014		ug/L	P326112	
		Fenuron	0.0040	U	ug/L	P326112	MS, RPD
		Imidacloprid	0.049		ug/L	P326112	MS
		Bentazon	0.012		ug/L	P326112	MS
		Linuron	0.0040	U	ug/L	P326112	
		Acetaminophen**	0.0080	U	ug/L	P326112	
		MCP	0.0022	I	ug/L	P326112	
		Carbamazepine**	0.0013	I	ug/L	P326112	
		Triclopyr**	0.0040	U	ug/L	P326112	
		Primidone**	0.0040	U	ug/L	P326112	
		Fluridone**	0.014		ug/L	P326112	

Ref. Method and Comment:

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

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

Sample Location: New R. @ Andrews Ave

Collection Date/Time: 05/31/2017 11:40

Field ID: 28030521

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902967	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P326120	
	SM 2320 B-97	Total Alkalinity	182		mg CaCO3/L	P326354	
	SM 2540 D-97	TSS	4	I	mg/L	P326744	
	SM 4500 F-C-97	Fluoride	0.64		mg F/L	P326357	
1902969	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P326185	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P326197	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.047		mg N/L	P326207	
	EPA 365.1 Rev. 2.0	Total-P	0.033		mg P/L	P326213	
	SM 5310 B-00	Organic Carbon	9.2		mg C/L	P326317	
1902971	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326149	
1902997	EPA 8321B	Sucralose**	0.067		ug/L	P326155	
	USGS O-2060-01	2,4-D	0.032		ug/L	P326112	
		Diuron	0.15		ug/L	P326112	
		Fenuron	0.0056	I	ug/L	P326112	MS, RPD
		Imidacloprid	0.024		ug/L	P326112	MS
		Bentazon	0.018		ug/L	P326112	MS
		Linuron	0.0040	U	ug/L	P326112	
		Acetaminophen**	0.0080	U	ug/L	P326112	
		MCP	0.0020	U	ug/L	P326112	
		Carbamazepine**	0.0024		ug/L	P326112	
		Triclopyr**	0.0040	U	ug/L	P326112	
		Primidone**	0.0040	U	ug/L	P326112	
		Fluridone**	0.024		ug/L	P326112	

Ref. Method and Comment:

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

Sample Location: Flamingo Rd and Stirling Rd

Collection Date/Time: 05/31/2017 12:30

Field ID: 28030548

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1902973	EPA 180.1 Rev. 2.0	Turbidity	0.65		NTU	P326121	
	EPA 300.0 Rev. 2.1	Chloride	69		mg Cl/L	P326787	
		Sulfate	3.0		mg SO4/L	P326790	
	SM 2120 B	Color (true)	31		PCU	P326233	
	SM 2320 B-97	Total Alkalinity	206		mg CaCO3/L	P326356	
	SM 2540 C-97	TDS	326		mg/L	P326996	
	SM 2540 D-97	TSS	2	U	mg/L	P326742	
	SM 4500 F-C-97	Fluoride	0.28		mg F/L	P326359	
1902975	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P326186	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P326256	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.033		mg N/L	P326446	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P326215	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P326192	
1902977	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P326149	
1902999	EPA 8321B	Sucralose**	0.078		ug/L	P326155	
	USGS O-2060-01	2,4-D	0.033		ug/L	P326112	
		Diuron	0.0033		ug/L	P326112	
		Fenuron	0.0050	IJ	ug/L	P326112	MS, RPD
		Imidacloprid	0.017	J	ug/L	P326112	MS
		Bentazon	0.013	J	ug/L	P326112	MS
		Linuron	0.0040	U	ug/L	P326112	
		Acetaminophen**	0.0080	U	ug/L	P326112	
		MCP	0.0020	U	ug/L	P326112	
		Carbamazepine**	4.0E-04	U	ug/L	P326112	
		Triclopyr**	0.0040	U	ug/L	P326112	
		Primidone**	0.0040	U	ug/L	P326112	
		Fluridone**	0.14		ug/L	P326112	
	EPA 200.7 Rev. 4.4	Calcium	71.8		mg/L	P326217	
		Iron	30	U	ug/L	P326217	
		Magnesium	9.57		mg/L	P326217	
1903011		Potassium	3.3		mg/L	P326217	
		Sodium	47.3		mg/L	P326217	
		Zinc	5.0	U	ug/L	P326217	
	EPA 200.8 Rev. 5.4	Arsenic	0.92		ug/L	P326217	
		Cadmium	0.020	U	ug/L	P326217	
		Chromium	0.40	U	ug/L	P326217	
		Copper	1.23		ug/L	P326217	
		Lead	0.050	U	ug/L	P326217	
		Nickel	0.28	I	ug/L	P326217	
		Silver	0.010	U	ug/L	P326217	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

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

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P326120

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P326121

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P326217

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326217

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: P326786

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326787

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326789

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326790

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326185

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326186

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326195

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326197

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326256

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326207

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326262

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326446

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326199

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326213

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326149

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326150

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

Reference Method: EPA 8270D
Batch ID: P326082

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P326082

Component	Result	Code	Units
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	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
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D

Batch ID: P326100

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P326100

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

Reference Method: EPA 8321B
Batch ID: P326155

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P326198

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P326203

Component	Result	Code	Units
Pyraclostrobin	0.0040	U	ug/L

Reference Method: SM 2120 B
Batch ID: P326233

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P326354

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

Reference Method: SM 2320 B-97
Batch ID: P326356

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

Reference Method: SM 2540 C-97
Batch ID: P326995

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P326996

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P326741

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P326742

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P326743

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P326744

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P326357

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P326359

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P326192

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

Reference Method: SM 5310 B-00
Batch ID: P326317

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

Reference Method: USGS O-2060-01
Batch ID: P326112

Component	Result	Code	Units
2,4-D	8.0E-04	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P326112

Component	Result	Code	Units
Diuron	8.0E-04	U	ug/L
Fenuron	0.0040	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: P326217

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115
Iron	106		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	99.6		P	85 - 115
Sodium	101		P	85 - 115
Zinc	99.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326217

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	91.0		P	85 - 115
Cadmium	98.7		P	85 - 115
Chromium	90.5		P	85 - 115
Copper	96.5		P	85 - 115
Lead	91.6		P	85 - 115
Nickel	97.9		P	85 - 115
Silver	94.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326786

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326787

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326789

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326789

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326790

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326185

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: P326186

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326195

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326197

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326256

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326207

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: P326262

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326446

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326199

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326213

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	95.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326149

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.8		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P326082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	84.4	79.1	P/P	78 - 118
Alachlor	84.7	82.3	P/P	77 - 119
Ametryn	102	95.9	P/P	61 - 136
Atrazine	93.2	90.4	P/P	73 - 120
Atrazine Desethyl	66.5	65.3	P/P	16 - 122
Azinphos Methyl	139	129	P/P	69 - 186
Bromacil	73.1	70.4	P/P	40 - 125
Butylate	55.6	38.6	P/P	32 - 87.0
Chlorpyrifos Ethyl	96.3	95.4	P/P	53 - 110
Chlorpyrifos Methyl	89.8	95.1	P/P	31 - 119
Cyanazine	183	148	P/P	36 - 224
Demeton	90.3	79.3	P/P	39 - 122
Diazinon	80.8	86.0	P/P	75 - 119
Disulfoton	106	105	P/P	42 - 139
EPTC	53.3	50.1	P/P	33 - 96.0
Ethion	133	123	F/P	63 - 127

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P326082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	72.3	78.3	P/P	65 - 107
Fenamiphos	115	131	P/P	64 - 137
Fipronil	97.5	87.6	P/P	60 - 126
Fipronil Sulfide	101	93.8	P/P	58 - 124
Fipronil Sulfone	113	123	P/P	57 - 126
Fonofos	75.0	89.3	P/P	65 - 111
Hexazinone	86.8	86.7	P/P	46 - 151
Malathion	120	123	P/P	68 - 132
Metalaxyl	85.2	72.9	P/P	51 - 132
Metolachlor	85.5	80.9	P/P	78 - 119
Metribuzin	103	97.5	P/P	64 - 138
Mevinphos	71.7	82.6	P/P	34 - 128
Molinate	52.1	48.6	P/P	44 - 101
Norflurazon	119	101	P/P	63 - 129
Parathion Ethyl	91.0	87.2	P/P	80 - 109
Parathion Methyl	94.8	84.5	P/P	74 - 125
Pendimethalin	85.8	82.4	P/P	48 - 134
Phorate	112	97.9	P/P	52 - 119
Prometon	110	98.3	P/P	69 - 124
Prometryn	103	93.6	P/P	66 - 124
Simazine	90.5	91.2	P/P	61 - 134
Terbufos	99.2	106	P/P	58 - 115
Terbuthylazine	79.7	84.9	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P326100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	55.4	59.3	P/P	30 - 83.0
Alpha-BHC	86.3	85.8	P/P	62 - 119
Alpha-Chlordane	92.5	91.2	P/P	56 - 119
Beta-BHC	99.2	93.0	P/P	54 - 141
Carbophenothion	94.6	88.5	P/P	33 - 147
Chlorothalonil	68.5	67.8	P/P	25 - 175
Cypermethrin	77.3	80.8	P/P	50 - 155
DDD-p,p'	107	100	P/P	56 - 135
DDE-p,p'	96.6	96.3	P/P	48 - 120
DDT-p,p'	87.5	88.1	P/P	51 - 121
Delta-BHC	103	98.3	P/P	65 - 163
Dicofol	105	83.7	P/P	15 - 112
Dieldrin	102	98.9	P/P	59 - 134
Endosulfan I	94.6	94.1	P/P	65 - 142
Endosulfan II	107	105	P/P	65 - 154
Endosulfan Sulfate	80.3	71.9	P/P	65 - 136
Endrin	100	123	P/P	53 - 156
Endrin Aldehyde	117	107	P/P	47 - 156
Endrin Ketone	83.6	76.7	P/P	70 - 124
Gamma-BHC	91.7	88.4	P/P	64 - 142
Gamma-Chlordane	88.6	87.3	P/P	55 - 114
Heptachlor	79.9	80.4	P/P	42 - 105
Heptachlor Epoxide	89.7	87.6	P/P	67 - 120
Methoxychlor	92.6	94.9	P/P	63 - 134

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P326100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	67.8	68.1	P/P	40 - 90.0
Permethrin	75.8	79.2	P/P	36 - 144
Trifluralin	135	133	P/P	40 - 170

Reference Method: EPA 8276
Batch ID: P326100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103	101	P/P	44 - 118
Toxaphene	89.7	88.4	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P326155

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	49.0		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P326198

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	102		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P326203

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	98.0		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P326354

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

Reference Method: SM 2320 B-97
Batch ID: P326356

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P326357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.6		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P326359

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	92 - 103

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P326192

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P326317

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.3		P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P326112

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	101		P	40 - 140
Acetaminophen	97.0		P	40 - 140
Bentazon	76.8		P	40 - 140
Carbamazepine	121		P	40 - 140
Diuron	116		P	40 - 140
Fenuron	112		P	40 - 140
Fluridone	127		P	40 - 140
Imidacloprid	108		P	40 - 160
Linuron	107		P	40 - 140
MCPP	100		P	40 - 140
Primidone	115		P	40 - 140
Triclopyr	101		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P326217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902426	Calcium	107		P	80 - 120
1902426	Iron	104		P	80 - 120
1902426	Magnesium	104		P	80 - 120
1902426	Potassium	96.7		P	80 - 120
1902426	Sodium	102		P	80 - 120
1902426	Zinc	96.3		P	80 - 120
1903011	Calcium	107		P	80 - 120
1903011	Iron	106	105	P/P	80 - 120
1903011	Magnesium	105		P	80 - 120
1903011	Potassium	99.0	99.1	P/P	80 - 120
1903011	Sodium	103		P	80 - 120
1903011	Zinc	98.5	98.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P326217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902426	Arsenic	95.1		P	80 - 120
1902426	Cadmium	99.0		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902426	Chromium	95.1		P	80 - 120
1902426	Copper	91.9		P	80 - 120
1902426	Lead	94.3		P	80 - 120
1902426	Nickel	93.3		P	80 - 120
1902426	Silver	95.0		P	80 - 120
1903011	Arsenic	97.4	98.4	P/P	80 - 120
1903011	Cadmium	101	103	P/P	80 - 120
1903011	Chromium	94.0	94.8	P/P	80 - 120
1903011	Copper	93.2	94.5	P/P	80 - 120
1903011	Lead	98.8	100	P/P	80 - 120
1903011	Nickel	95.0	95.9	P/P	80 - 120
1903011	Silver	94.7	95.6	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326786

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902601	Chloride	97.9		P	90 - 110
1902602	Chloride	99.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326787

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902675	Chloride	101		P	90 - 110
1902867	Chloride	96.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902601	Sulfate	94.5		P	90 - 110
1902602	Sulfate	97.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902675	Sulfate	98.2		P	90 - 110
1902867	Sulfate	96.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902918	Ammonia-N	103	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902974	Ammonia-N	103	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902847	Kjeldahl Nitrogen	101	98.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326197

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1903152	Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1903211	Kjeldahl Nitrogen	92.0	94.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902911	NO2NO3-N	105	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902869	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1903400	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326199

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902964	Total-P	97.2	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1903149	Total-P	94.7	95.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902974	Total-P	99.5	96.7	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P326149

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902970	O-Phosphate-P	95.0	96.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P326150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902976	O-Phosphate-P	95.6	96.5	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P326082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1899466	Acetochlor	66.2	82.3	F/P	74 - 123
1899466	Alachlor	74.8	88.2	P/P	73 - 124
1899466	Ametryn	96.8	85.8	P/P	56 - 149
1899466	Atrazine Desethyl	48.2	54.4	P/P	12 - 103
1899466	Azinphos Methyl	131	123	P/P	60 - 202
1899466	Bromacil	91.9	90.7	P/P	42 - 133
1899466	Butylate	14.3	24.9	P/P	10 - 85.0
1899466	Chlorpyrifos Ethyl	83.8	87.4	P/P	53 - 113
1899466	Chlorpyrifos Methyl	68.9	77.5	P/P	40 - 115
1899466	Cyanazine	99.4	125	P/P	22 - 210
1899466	Demeton	71.4	60.3	P/P	17 - 149
1899466	Diazinon	78.6	79.3	P/P	72 - 124
1899466	Disulfoton	81.2	77.9	P/P	43 - 139
1899466	EPTC	19.1	28.6	P/P	10 - 86.0
1899466	Ethion	126	116	P/P	65 - 131
1899466	Ethoprop	62.2	66.8	P/P	59 - 110
1899466	Fenamiphos	110	98.2	P/P	57 - 138
1899466	Fipronil	79.4	99.3	P/P	40 - 130
1899466	Fipronil Sulfide	70.2	94.0	P/P	36 - 128
1899466	Fonofos	59.1	57.7	F/F	60 - 112
1899466	Hexazinone	85.5	88.2	P/P	69 - 142
1899466	Malathion	99.6	106	P/P	68 - 132
1899466	Metolachlor	75.0	89.4	P/P	71 - 124
1899466	Metribuzin	88.4	98.9	P/P	61 - 140
1899466	Mevinphos	43.8	60.4	P/P	38 - 130
1899466	Molinate	22.8	31.8	F/P	23 - 99.0
1899466	Norflurazon	102	111	P/P	39 - 139
1899466	Parathion Ethyl	84.8	91.2	P/P	75 - 111
1899466	Parathion Methyl	83.4	82.4	P/P	64 - 130
1899466	Pendimethalin	85.5	87.5	P/P	26 - 173
1899466	Phorate	60.9	71.7	P/P	43 - 127
1899466	Prometon	93.6	99.7	P/P	50 - 144
1899466	Prometryn	90.2	91.8	P/P	69 - 126
1899466	Simazine	86.6	94.0	P/P	51 - 152
1899466	Terbufos	80.8	81.5	P/P	54 - 125
1899466	Terbutylazine	83.9	83.7	P/P	76 - 113

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P326100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1903000	Aldrin	78.3	71.6	P/P	30 - 83.0
1903000	Alpha-BHC	89.5	93.8	P/P	62 - 119
1903000	Alpha-Chlordane	96.6	92.8	P/P	56 - 119
1903000	Beta-BHC	114	122	P/P	54 - 141
1903000	Carbophenothion	131	118	P/P	33 - 147
1903000	Chlorothalonil	78.4	96.0	P/P	25 - 175
1903000	Cypermethrin	104	103	P/P	50 - 155
1903000	DDD-p,p'	106	102	P/P	56 - 135
1903000	DDE-p,p'	101	89.4	P/P	48 - 120
1903000	DDT-p,p'	89.2	84.0	P/P	51 - 121
1903000	Delta-BHC	135	149	P/P	65 - 163
1903000	Dicofol	49.0	51.4	P/P	15 - 112
1903000	Dieldrin	98.1	86.1	P/P	59 - 134
1903000	Endosulfan I	108	103	P/P	65 - 142
1903000	Endosulfan II	105	104	P/P	65 - 154
1903000	Endosulfan Sulfate	84.0	93.0	P/P	65 - 136
1903000	Endrin	109	97.2	P/P	53 - 156
1903000	Endrin Aldehyde	47.1	77.8	P/P	47 - 156
1903000	Endrin Ketone	83.9	93.3	P/P	70 - 124
1903000	Gamma-BHC	111	110	P/P	64 - 142
1903000	Gamma-Chlordane	95.4	91.8	P/P	55 - 114
1903000	Heptachlor	79.1	72.3	P/P	42 - 105
1903000	Heptachlor Epoxide	92.4	90.0	P/P	67 - 120
1903000	Methoxychlor	100	101	P/P	63 - 134
1903000	Mirex	85.2	81.6	P/P	40 - 90.0
1903000	Permethrin	99.1	91.6	P/P	36 - 144
1903000	Trifluralin	239	236	F/F	40 - 170

Reference Method: EPA 8276
Batch ID: P326100

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902705	Chlordane	136	127	F/F	44 - 118
1902705	Toxaphene	127	116	P/P	36 - 136

Reference Method: EPA 8321B
Batch ID: P326155

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902433	Sucralose	108	93.0	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P326198

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902995	Glyphosate	116	118	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P326203

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902995	Pyraclostrobin	104	104	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
 Batch ID: P326357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902394	Fluoride	97.3	98.8	P/P	91 - 105

Reference Method: SM 4500 F-C-97
 Batch ID: P326359

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1903066	Fluoride	101	100	P/P	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P326192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902870	Organic Carbon	98.1	98.0	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P326317

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902483	Organic Carbon	93.0	93.1	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P326112

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1902999	2,4-D	101	100	P/P	40 - 140
1902999	Acetaminophen	117	124	P/P	40 - 140
1902999	Bentazon	37.6	39.4	F/F	40 - 140
1902999	Carbamazepine	100	105	P/P	40 - 140
1902999	Diuron	85.6	96.2	P/P	40 - 140
1902999	Fenuron	182	78.2	F/P	40 - 140
1902999	Imidacloprid	179	205	F/F	40 - 160
1902999	Linuron	104	109	P/P	40 - 140
1902999	MCP	75.4	86.0	P/P	40 - 140
1902999	Primidone	97.2	104	P/P	40 - 140
1902999	Triclopyr	86.2	88.0	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P326120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902902	Turbidity	5.32	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P326121

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

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P326121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902972	Turbidity	0.742	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P326217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903011	Calcium	1.20	Spike	P	0 - 20
1903011	Iron	0.847	Spike	P	0 - 20
1903011	Magnesium	0.378	Spike	P	0 - 20
1903011	Potassium	0.0319	Spike	P	0 - 20
1903011	Sodium	0.806	Spike	P	0 - 20
1903011	Zinc	0.202	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P326217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903011	Arsenic	0.968	Spike	P	0 - 20
1903011	Cadmium	1.70	Spike	P	0 - 20
1903011	Chromium	0.895	Spike	P	0 - 20
1903011	Copper	1.24	Spike	P	0 - 20
1903011	Lead	1.20	Spike	P	0 - 20
1903011	Nickel	0.929	Spike	P	0 - 20
1903011	Silver	1.03	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326786

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902601	Chloride	0.796	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326787

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902675	Chloride	0.908	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P326789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902601	Sulfate	0.830	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902918	Ammonia-N	1.13	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P326186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902974	Ammonia-N	0.288	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902847	Kjeldahl Nitrogen	1.48	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326197

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903152	Kjeldahl Nitrogen	0.382	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P326256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903211	Kjeldahl Nitrogen	1.22	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902911	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902869	NO2NO3-N	0.491	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P326446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903400	NO2NO3-N	0.0	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326199

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902964	Total-P	0.424	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903149	Total-P	0.648	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P326215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902974	Total-P	2.68	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326149

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902970	O-Phosphate-P	0.683	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P326150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902976	O-Phosphate-P	0.937	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P326082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899466	Acetochlor	21.7	Spike	P	0 - 30
1899466	Alachlor	16.4	Spike	P	0 - 30
1899466	Ametryn	12.1	Spike	P	0 - 30
1899466	Atrazine	0.180	Spike	P	0 - 30
1899466	Atrazine Desethyl	9.51	Spike	P	0 - 30
1899466	Azinphos Methyl	6.04	Spike	P	0 - 30
1899466	Bromacil	1.29	Spike	P	0 - 30
1899466	Butylate	54.3	Spike	F	0 - 30
1899466	Chlorpyrifos Ethyl	4.26	Spike	P	0 - 30
1899466	Chlorpyrifos Methyl	11.7	Spike	P	0 - 30
1899466	Cyanazine	22.7	Spike	P	0 - 30
1899466	Demeton	16.9	Spike	P	0 - 30
1899466	Diazinon	0.833	Spike	P	0 - 30
1899466	Disulfoton	4.13	Spike	P	0 - 30
1899466	EPTC	39.5	Spike	F	0 - 30
1899466	Ethion	8.31	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P326082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1899466	Ethoprop	7.11	Spike	P	0 - 30
1899466	Fenamiphos	11.7	Spike	P	0 - 30
1899466	Fipronil	19.8	Spike	P	0 - 30
1899466	Fipronil Sulfide	20.4	Spike	P	0 - 30
1899466	Fipronil Sulfone	14.0	Spike	P	0 - 30
1899466	Fonofos	2.47	Spike	P	0 - 30
1899466	Hexazinone	2.20	Spike	P	0 - 30
1899466	Malathion	5.81	Spike	P	0 - 30
1899466	Metalaxyl	9.78	Spike	P	0 - 30
1899466	Metolachlor	15.6	Spike	P	0 - 30
1899466	Metribuzin	10.6	Spike	P	0 - 30
1899466	Mevinphos	31.7	Spike	F	0 - 30
1899466	Molinate	33.1	Spike	F	0 - 30
1899466	Norflurazon	8.66	Spike	P	0 - 30
1899466	Parathion Ethyl	7.27	Spike	P	0 - 30
1899466	Parathion Methyl	1.26	Spike	P	0 - 30
1899466	Pendimethalin	2.39	Spike	P	0 - 30
1899466	Phorate	16.3	Spike	P	0 - 30
1899466	Prometon	6.30	Spike	P	0 - 30
1899466	Prometryn	1.74	Spike	P	0 - 30
1899466	Simazine	8.17	Spike	P	0 - 30
1899466	Terbufos	0.821	Spike	P	0 - 30
1899466	Terbuthylazine	0.256	Spike	P	0 - 30
LFB	Acetochlor	6.41	LCS	P	0 - 30
LFB	Alachlor	2.90	LCS	P	0 - 30
LFB	Ametryn	5.73	LCS	P	0 - 30
LFB	Atrazine	3.01	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.78	LCS	P	0 - 30
LFB	Azinphos Methyl	7.85	LCS	P	0 - 30
LFB	Bromacil	3.83	LCS	P	0 - 30
LFB	Butylate	36.1	LCS	F	0 - 30
LFB	Chlorpyrifos Ethyl	0.869	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.71	LCS	P	0 - 30
LFB	Cyanazine	21.2	LCS	P	0 - 30
LFB	Demeton	13.0	LCS	P	0 - 30
LFB	Diazinon	6.23	LCS	P	0 - 30
LFB	Disulfoton	1.23	LCS	P	0 - 30
LFB	EPTC	6.19	LCS	P	0 - 30
LFB	Ethion	7.79	LCS	P	0 - 30
LFB	Ethoprop	7.99	LCS	P	0 - 30
LFB	Fenamiphos	13.2	LCS	P	0 - 30
LFB	Fipronil	10.7	LCS	P	0 - 30
LFB	Fipronil Sulfide	7.82	LCS	P	0 - 30
LFB	Fipronil Sulfone	8.16	LCS	P	0 - 30
LFB	Fonofos	17.4	LCS	P	0 - 30
LFB	Hexazinone	0.0730	LCS	P	0 - 30
LFB	Malathion	2.64	LCS	P	0 - 30
LFB	Metalaxyl	15.7	LCS	P	0 - 30
LFB	Metolachlor	5.54	LCS	P	0 - 30
LFB	Metribuzin	5.73	LCS	P	0 - 30
LFB	Mevinphos	14.1	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P326082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Molinate	7.07	LCS	P	0 - 30
LFB	Norflurazon	15.9	LCS	P	0 - 30
LFB	Parathion Ethyl	4.25	LCS	P	0 - 30
LFB	Parathion Methyl	11.5	LCS	P	0 - 30
LFB	Pendimethalin	4.03	LCS	P	0 - 30
LFB	Phorate	13.0	LCS	P	0 - 30
LFB	Prometon	11.1	LCS	P	0 - 30
LFB	Prometryn	9.71	LCS	P	0 - 30
LFB	Simazine	0.783	LCS	P	0 - 30
LFB	Terbufos	6.26	LCS	P	0 - 30
LFB	Terbuthylazine	6.30	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P326100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903000	Aldrin	8.88	Spike	P	0 - 30
1903000	Alpha-BHC	4.63	Spike	P	0 - 30
1903000	Alpha-Chlordane	3.96	Spike	P	0 - 30
1903000	Beta-BHC	6.36	Spike	P	0 - 30
1903000	Carbophenothion	10.7	Spike	P	0 - 30
1903000	Chlorothalonil	20.1	Spike	P	0 - 30
1903000	Cypermethrin	0.191	Spike	P	0 - 30
1903000	DDD-p,p'	4.00	Spike	P	0 - 30
1903000	DDE-p,p'	12.5	Spike	P	0 - 30
1903000	DDT-p,p'	5.96	Spike	P	0 - 30
1903000	Delta-BHC	10.2	Spike	P	0 - 30
1903000	Dicofol	4.72	Spike	P	0 - 30
1903000	Dieldrin	13.0	Spike	P	0 - 30
1903000	Endosulfan I	4.89	Spike	P	0 - 30
1903000	Endosulfan II	1.32	Spike	P	0 - 30
1903000	Endosulfan Sulfate	10.1	Spike	P	0 - 30
1903000	Endrin	11.1	Spike	P	0 - 30
1903000	Endrin Aldehyde	49.1	Spike	F	0 - 30
1903000	Endrin Ketone	10.6	Spike	P	0 - 30
1903000	Gamma-BHC	0.703	Spike	P	0 - 30
1903000	Gamma-Chlordane	3.82	Spike	P	0 - 30
1903000	Heptachlor	9.03	Spike	P	0 - 30
1903000	Heptachlor Epoxide	2.65	Spike	P	0 - 30
1903000	Methoxychlor	0.435	Spike	P	0 - 30
1903000	Mirex	4.33	Spike	P	0 - 30
1903000	Permethrin	7.83	Spike	P	0 - 30
1903000	Trifluralin	1.31	Spike	P	0 - 30
LFB	Aldrin	6.90	LCS	P	0 - 30
LFB	Alpha-BHC	0.512	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.35	LCS	P	0 - 30
LFB	Beta-BHC	6.45	LCS	P	0 - 30
LFB	Carbophenothion	6.71	LCS	P	0 - 30
LFB	Chlorothalonil	1.04	LCS	P	0 - 30
LFB	Cypermethrin	4.42	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P326100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	DDD-p,p'	6.52	LCS	P	0 - 30
LFB	DDE-p,p'	0.333	LCS	P	0 - 30
LFB	DDT-p,p'	0.630	LCS	P	0 - 30
LFB	Delta-BHC	4.82	LCS	P	0 - 30
LFB	Dicofol	22.9	LCS	P	0 - 30
LFB	Dieldrin	3.40	LCS	P	0 - 30
LFB	Endosulfan I	0.585	LCS	P	0 - 30
LFB	Endosulfan II	1.92	LCS	P	0 - 30
LFB	Endosulfan Sulfate	11.1	LCS	P	0 - 30
LFB	Endrin	20.5	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.67	LCS	P	0 - 30
LFB	Endrin Ketone	8.60	LCS	P	0 - 30
LFB	Gamma-BHC	3.58	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.50	LCS	P	0 - 30
LFB	Heptachlor	0.662	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.39	LCS	P	0 - 30
LFB	Methoxychlor	2.45	LCS	P	0 - 30
LFB	Mirex	0.520	LCS	P	0 - 30
LFB	Permethrin	4.28	LCS	P	0 - 30
LFB	Trifluralin	1.53	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P326100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902705	Chlordane	6.55	Spike	P	0 - 30
1902705	Toxaphene	9.42	Spike	P	0 - 30
LFB	Chlordane	2.30	LCS	P	0 - 30
LFB	Toxaphene	1.51	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326155

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902433	Sucralose	14.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902995	Glyphosate	2.46	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P326203

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902995	Pyraclostrobin	0.577	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B
Batch ID: P326233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902811	Color (true)	0.196	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P326354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902751	Total Alkalinity	0.0219	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P326356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903066	Total Alkalinity	0.0657	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P326995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902972	TDS	1.47	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P326996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902963	TDS	0.491	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P326744

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902808	TSS	1.27	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P326357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902394	Fluoride	0.986	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P326359

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1903066	Fluoride	0.498	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P326192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902870	Organic Carbon	0.0270	Spike	P	0 - 20

Reference Method: SM 5310 B-00
Batch ID: P326317

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902483	Organic Carbon	0.0942	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P326112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1902999	2,4-D	0.220	Spike	P	0 - 30
1902999	Acetaminophen	5.80	Spike	P	0 - 30
1902999	Bentazon	2.51	Spike	P	0 - 30
1902999	Carbamazepine	5.26	Spike	P	0 - 30
1902999	Diuron	10.7	Spike	P	0 - 30
1902999	Fenuron	72.9	Spike	F	0 - 30
1902999	Fluridone	4.73	Spike	P	0 - 30
1902999	Imidacloprid	11.0	Spike	P	0 - 30
1902999	Linuron	4.90	Spike	P	0 - 30
1902999	MCPP	13.1	Spike	P	0 - 30
1902999	Primidone	6.37	Spike	P	0 - 30
1902999	Triclopyr	2.07	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: 1902995
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	129	P	30 - 150
EPA 8321B	Carbamazepine-d10	95.2	P	30 - 160
EPA 8321B	Diuron-d6	119	P	30 - 160
EPA 8321B	Diuron-d6	85.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	40 - 150
EPA 8321B	Primidone-d5	93.2	P	30 - 150
EPA 8321B	Sucralose-d6	132	P	40 - 150
USGS O-2060-01	2,4-D-d3	101	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	129	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	95.2	P	30 - 160
USGS O-2060-01	Diuron-d6	119	P	30 - 160
USGS O-2060-01	Diuron-d6	85.6	P	30 - 160
USGS O-2060-01	Primidone-d5	93.2	P	30 - 150

Quality Assurance Report Surrogates

Lab Sample ID: 1902996
Field Sample ID: G4SEB064

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	112	P	40 - 150
USGS O-2060-01	2,4-D-d3	105	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	110	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	107	P	30 - 160
USGS O-2060-01	Diuron-d6	87.8	P	30 - 160
USGS O-2060-01	Primidone-d5	121	P	30 - 150

Lab Sample ID: 1902997
Field Sample ID: 28030521

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	74.0	P	40 - 150
USGS O-2060-01	2,4-D-d3	111	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	121	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	121	P	30 - 160
USGS O-2060-01	Diuron-d6	106	P	30 - 160
USGS O-2060-01	Primidone-d5	128	P	30 - 150

Lab Sample ID: 1902998
Field Sample ID: G4SEB128

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	124	P	40 - 150
USGS O-2060-01	2,4-D-d3	107	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	133	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	107	P	30 - 160
USGS O-2060-01	Diuron-d6	95.4	P	30 - 160
USGS O-2060-01	Primidone-d5	120	P	30 - 150

Lab Sample ID: 1902999
Field Sample ID: 28030548

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	2,4-D-d3	120	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	131	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	109	P	30 - 160
USGS O-2060-01	Diuron-d6	101	P	30 - 160
USGS O-2060-01	Primidone-d5	112	P	30 - 150

Lab Sample ID: 1903007
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	58.2	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	35.8	P	31 - 111
EPA 8276	Decachlorobiphenyl	42.6	P	41 - 106

Lab Sample ID: 1903008
Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	101	P	62 - 132

Quality Assurance Report Surrogates

Lab Sample ID: 1903008
 Field Sample ID: G4SENNR3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	83.2	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
 Run ID: A76814
 Included Lab Sample IDs: 1902963, 1902966, 1902967, 1902972, 1902973

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Run ID: A76820
 Included Lab Sample IDs: 1902965, 1902970, 1902971, 1902976, 1902977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.6	P/P	90 - 110
O-Phosphate-P	101	101	P/P	90 - 110
O-Phosphate-P	101	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Run ID: A76841
 Included Lab Sample IDs: 1902964, 1902968, 1902969, 1902974, 1902975

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: SM 5310 B-00
 Run ID: A76846
 Included Lab Sample IDs: 1902964, 1902968, 1902974, 1902975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Run ID: A76855
 Included Lab Sample IDs: 1902969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: SM 2120 B
 Run ID: A76865
 Included Lab Sample IDs: 1902963, 1902972, 1902973

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A76875
Included Lab Sample IDs: 1902995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	102	105	P/P	70 - 160

Reference Method: EPA 8321B
Run ID: A76878
Included Lab Sample IDs: 1902996, 1902997, 1902999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	78.8	121	P/P	60 - 150
Sucralose	87.5	78.8	P/P	60 - 150

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A76880
Included Lab Sample IDs: 1902964, 1902968, 1902974

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A76898
Included Lab Sample IDs: 1902964, 1902968, 1902974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.4	91.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A76899
Included Lab Sample IDs: 1903009, 1903010, 1903011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	92.9	91.2	P/P	90 - 110
Cadmium	96.2	97.1	P/P	90 - 110
Silver	95.0	94.9	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A76900
Included Lab Sample IDs: 1903009, 1903010, 1903011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	104	104	P/P	90 - 110
Iron	103	103	P/P	90 - 110
Magnesium	103	103	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Sodium	101	103	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A76902
Included Lab Sample IDs: 1902969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.5	96.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A76913

Included Lab Sample IDs: 1903007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.1		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	99.4		P	80 - 120
Carbophenothion	91.7		P	80 - 120
Chlorothalonil	81.9		P	80 - 120
Cypermethrin	83.2		P	80 - 120
DDD-p,p'	108		P	80 - 120
DDE-p,p'	105		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	94.7		P	80 - 120
Dicofol	163*		F	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	95.1		P	80 - 120
Endosulfan II	92.9		P	80 - 120
Endosulfan Sulfate	85.6		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	109		P	80 - 120
Endrin Ketone	89.5		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	99.2		P	80 - 120
Heptachlor	99.6		P	80 - 120
Heptachlor Epoxide	97.2		P	80 - 120
Methoxychlor	103		P	80 - 120
Mirex	90.1		P	80 - 120
Permethrin	83.7		P	80 - 120
Trifluralin	93.5		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76914

Included Lab Sample IDs: 1902969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.3	97.8	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A76915

Included Lab Sample IDs: 1902963, 1902966, 1902967, 1902972, 1902973

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76915

Included Lab Sample IDs: 1902963, 1902966, 1902967, 1902972, 1902973

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	102	P/P	90 - 110
Fluoride	98.5	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A76936

Included Lab Sample IDs: 1903009, 1903010, 1903011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.4	94.8	P/P	90 - 110
Copper	95.0	94.6	P/P	90 - 110
Lead	94.2	94.0	P/P	90 - 110
Nickel	94.6	93.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76937

Included Lab Sample IDs: 1902968

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76940

Included Lab Sample IDs: 1902975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.0	96.4	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A76946

Included Lab Sample IDs: 1903008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.9		P	80 - 120
Alachlor	115		P	80 - 120
Ametryn	118		P	80 - 120
Atrazine Desethyl	91.5		P	80 - 120
Azinphos Methyl	116		P	80 - 120
Bromacil	105		P	80 - 120
Butylate	105		P	80 - 120
Chlorpyrifos Ethyl	95.1		P	80 - 120
Chlorpyrifos Methyl	91.3		P	80 - 120
Cyanazine	84.4		P	80 - 120
Demeton	80.0		P	80 - 120
Diazinon	98.0		P	80 - 120
Disulfoton	80.2		P	80 - 120
EPTC	129*		F	80 - 120
Ethion	103		P	80 - 120
Ethoprop	97.4		P	80 - 120
Fenamiphos	100		P	80 - 120
Fipronil	115		P	80 - 120
Fipronil Sulfide	103		P	80 - 120
Fipronil Sulfone	96.8		P	80 - 120
Fonofos	81.9		P	80 - 120
Hexazinone	97.9		P	80 - 120
Malathion	97.2		P	80 - 120
Metaxyl	111		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	80.9		P	80 - 120
Mevinphos	93.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A76946

Included Lab Sample IDs: 1903008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Molinate	106		P	80 - 120
Norflurazon	118		P	80 - 120
Parathion Ethyl	99.2		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	99.3		P	80 - 120
Phorate	92.6		P	80 - 120
Prometon	104		P	80 - 120
Prometryn	115		P	80 - 120
Simazine	92.4		P	80 - 120
Terbufos	95.0		P	80 - 120
Terbuthylazine	98.9		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A76950

Included Lab Sample IDs: 1902964, 1902969, 1902974, 1902975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	98.2	P/P	90 - 110
Total-P	98.5	97.8	P/P	90 - 110
Total-P	98.5	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A76951

Included Lab Sample IDs: 1902995

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	105	103	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A76951

Included Lab Sample IDs: 1902995, 1902996, 1902997, 1902998, 1902999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	113	114	P/P	50 - 150
2,4-D	114	114	P/P	50 - 150
Acetaminophen	102	105	P/P	60 - 150
Acetaminophen	105	104	P/P	60 - 150
Bentazon	115	116	P/P	50 - 150
Bentazon	116	121	P/P	50 - 150
Carbamazepine	116	115	P/P	60 - 150
Carbamazepine	116	116	P/P	60 - 150
Diuron	113	114	P/P	60 - 150
Diuron	114	111	P/P	60 - 150
Fenuron	106	100	P/P	60 - 150
Fenuron	106	106	P/P	60 - 150
Fluridone	123	124	P/P	60 - 160
Fluridone	126	123	P/P	60 - 160
Imidacloprid	104	106	P/P	60 - 150
Imidacloprid	106	104	P/P	60 - 150
Linuron	113	114	P/P	60 - 150
Linuron	114	113	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A76951

Included Lab Sample IDs: 1902995, 1902996, 1902997, 1902998, 1902999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
MCP	102	104	P/P	50 - 150
MCP	104	102	P/P	50 - 150
Primidone	110	112	P/P	60 - 150
Primidone	112	110	P/P	60 - 150
Triclopyr	106	109	P/P	50 - 150
Triclopyr	109	105	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76953

Included Lab Sample IDs: 1902975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO ₂ NO ₃ -N	100	101	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A76971

Included Lab Sample IDs: 1903007

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	105		P	80 - 120
Toxaphene	96.5		P	80 - 120

Reference Method: EPA 8270D

Run ID: A77017

Included Lab Sample IDs: 1903008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A77076

Included Lab Sample IDs: 1902963, 1902972, 1902973

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	98.6	P/P	90 - 110
Chloride	98.1	99.7	P/P	90 - 110
Chloride	99.7	102	P/P	90 - 110
Sulfate	104	105	P/P	90 - 110
Sulfate	105	103	P/P	90 - 110
Sulfate	108	99.9	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision	MS
				LCS SMP	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						5.32	
	Turbidity						0.742	
EPA 200.7 Rev. 4.4	Calcium	105		107	107			1.20
	Iron	106		104	106	105		0.847
	Magnesium	103		104	105			0.378
	Potassium	99.6		96.7	99.0	99.1		0.0319
	Sodium	101		102	103			0.806
	Zinc	99.8		96.3	98.5	98.7		0.202
EPA 200.8 Rev. 5.4	Arsenic	91.0		95.1	97.4	98.4		0.968
	Cadmium	98.7		99.0	101	103		1.70
	Chromium	90.5		95.1	94.0	94.8		0.895
	Copper	96.5		91.9	93.2	94.5		1.24
	Lead	91.6		94.3	98.8	100		1.20
	Nickel	97.9		93.3	95.0	95.9		0.929
	Silver	94.8		95.0	94.7	95.6		1.03
EPA 300.0 Rev. 2.1	Chloride	101		97.9	99.8		0.796	
	Chloride	99.5		101	96.3		0.908	
	Sulfate	99.5		94.5	97.6		0.830	
	Sulfate	98.9		98.2	96.6			
EPA 350.1 Rev. 2.0	Ammonia-N	101		103	101			1.13
	Ammonia-N	101		103	103			0.288
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.7		101	98.7			1.48
	Kjeldahl Nitrogen	103		101	101			0.382
	Kjeldahl Nitrogen	103		92.0	94.3			1.22
EPA 353.2 Rev. 2.0	NO2NO3-N	104		105	105			0.0
	NO2NO3-N	102		102	102			0.491
	NO2NO3-N	103		101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	101		97.2	97.6			0.424
	Total-P	97.4		94.7	95.3			0.648
	Total-P	95.0		99.5	96.7			2.68
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		95.0	96.0			0.683
	O-Phosphate-P	97.8		95.6	96.5			0.937
EPA 8270D	Acetochlor	79.1	84.4	66.2	82.3	6.41		21.7
	Alachlor	82.3	84.7	74.8	88.2	2.90		16.4
	Aldrin	55.4	59.3	78.3	71.6	6.90		8.88
	Alpha-BHC	86.3	85.8	89.5	93.8	0.512		4.63
	Alpha-Chlordane	92.5	91.2	96.6	92.8	1.35		3.96
	Ametryn	95.9	102	96.8	85.8	5.73		12.1
	Atrazine	90.4	93.2			3.01		0.180
	Atrazine Desethyl	65.3	66.5	48.2	54.4	1.78		9.51
	Azinphos Methyl	129	139	131	123	7.85		6.04
	Beta-BHC	99.2	93.0	114	122	6.45		6.36
	Bromacil	73.1	70.4	91.9	90.7	3.83		1.29
	Butylate	38.6	55.6	14.3	24.9	36.1		54.3
	Carbophenothion	94.6	88.5	131	118	6.71		10.7
	Chlorothalonil	68.5	67.8	78.4	96.0	1.04		20.1
	Chlorpyrifos Ethyl	95.4	96.3	83.8	87.4	0.869		4.26
	Chlorpyrifos Methyl	95.1	89.8	68.9	77.5	5.71		11.7
	Cyanazine	183	148	99.4	125	21.2		22.7
	Cypermethrin	77.3	80.8	104	103	4.42		0.191
	DDD-p,p'	107	100	106	102	6.52		4.00
	DDE-p,p'	96.6	96.3	101	89.4	0.333		12.5
	DDT-p,p'	87.5	88.1	89.2	84.0	0.630		5.96
	Delta-BHC	103	98.3	135	149	4.82		10.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Demeton	79.3	90.3	71.4	60.3	13.0	16.9
	Diazinon	86.0	80.8	78.6	79.3	6.23	0.833
	Dicofol	105	83.7	49.0	51.4	22.9	4.72
	Dieldrin	102	98.9	98.1	86.1	3.40	13.0
	Disulfoton	105	106	81.2	77.9	1.23	4.13
	Endosulfan I	94.6	94.1	108	103	0.585	4.89
	Endosulfan II	107	105	105	104	1.92	1.32
	Endosulfan Sulfate	80.3	71.9	84.0	93.0	11.1	10.1
	Endrin	100	123	109	97.2	20.5	11.1
	Endrin Aldehyde	117	107	47.1	77.8	8.67	49.1
	Endrin Ketone	83.6	76.7	83.9	93.3	8.60	10.6
	EPTC	50.1	53.3	19.1	28.6	6.19	39.5
	Ethion	123	133	126	116	7.79	8.31
	Ethoprop	78.3	72.3	62.2	66.8	7.99	7.11
	Fenamiphos	131	115	110	98.2	13.2	11.7
	Fipronil	87.6	97.5	79.4	99.3	10.7	19.8
	Fipronil Sulfide	101	93.8	70.2	94.0	7.82	20.4
	Fipronil Sulfone	113	123			8.16	14.0
	Fonofos	89.3	75.0	59.1	57.7	17.4	2.47
	Gamma-BHC	91.7	88.4	111	110	3.58	0.703
	Gamma-Chlordane	88.6	87.3	95.4	91.8	1.50	3.82
	Heptachlor	79.9	80.4	79.1	72.3	0.662	9.03
	Heptachlor Epoxide	89.7	87.6	92.4	90.0	2.39	2.65
	Hexazinone	86.8	86.7	85.5	88.2	0.0730	2.20
	Malathion	120	123	99.6	106	2.64	5.81
	Metalaxyl	85.2	72.9			15.7	9.78
	Methoxychlor	92.6	94.9	100	101	2.45	0.435
	Metolachlor	85.5	80.9	75.0	89.4	5.54	15.6
	Metribuzin	103	97.5	88.4	98.9	5.73	10.6
	Mevinphos	71.7	82.6	43.8	60.4	14.1	31.7
	Mirex	67.8	68.1	85.2	81.6	0.520	4.33
	Molinate	52.1	48.6	22.8	31.8	7.07	33.1
	Norflurazon	119	101	102	111	15.9	8.66
	Parathion Ethyl	91.0	87.2	84.8	91.2	4.25	7.27
	Parathion Methyl	94.8	84.5	83.4	82.4	11.5	1.26
	Pendimethalin	85.8	82.4	85.5	87.5	4.03	2.39
	Permethrin	75.8	79.2	99.1	91.6	4.28	7.83
	Phorate	112	97.9	60.9	71.7	13.0	16.3
	Prometon	110	98.3	93.6	99.7	11.1	6.30
	Prometryn	103	93.6	90.2	91.8	9.71	1.74
	Simazine	90.5	91.2	86.6	94.0	0.783	8.17
	Terbufos	99.2	106	80.8	81.5	6.26	0.821
	Terbuthylazine	79.7	84.9	83.9	83.7	6.30	0.256
	Trifluralin	135	133	239	236	1.53	1.31
EPA 8276	Chlordane	103	101	136	127	2.30	6.55
	Toxaphene	89.7	88.4	127	116	1.51	9.42
EPA 8321B	Glyphosate	102		116	118		2.46
	Pyraclostrobin	98.0		104	104		0.577
	Sucralose	49.0		108	93.0		14.9
SM 2120 B	Color (true)					0.196	
SM 2320 B-97	Total Alkalinity	103				0.0219	
	Total Alkalinity	104				0.0657	
SM 2540 C-97	TDS					1.47	
	TDS					0.491	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 2540 D-97	TSS				1.27	
SM 4500 F-C-97	Fluoride	96.6	97.3	98.8		0.986
	Fluoride	99.0	101	100		0.498
SM 5310 B-00	Organic Carbon	96.2	98.1	98.0		0.0270
	Organic Carbon	95.3	93.0	93.1		0.0942
USGS O-2060-01	2,4-D	101	101	100		0.220
	Acetaminophen	97.0	117	124		5.80
	Bentazon	76.8	37.6	39.4		2.51
	Carbamazepine	121	100	105		5.26
	Diuron	116	85.6	96.2		10.7
	Fenuron	112	182	78.2		72.9
	Fluridone	127				4.73
	Imidacloprid	108	179	205		11.0
	Linuron	107	104	109		4.90
	MCPPP	100	75.4	86.0		13.1
	Primidone	115	97.2	104		6.37
	Triclopyr	101	86.2	88.0		2.07

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1902963, 1902966, 1902967, 1902972, 1902973
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1903009, 1903010, 1903011
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1903009, 1903010, 1903011
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1902963, 1902972, 1902973
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1902963, 1902972, 1902973
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1902964, 1902968, 1902969, 1902974, 1902975
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1902964, 1902968, 1902969, 1902974, 1902975
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1902964, 1902968, 1902969, 1902974, 1902975
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1902964, 1902968, 1902969, 1902974, 1902975
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1902965, 1902970, 1902971, 1902976, 1902977
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1903007
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1903008
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1903007
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1902995
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1902995
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1902995, 1902996, 1902997, 1902998, 1902999
SM 2120 B / E31780	True Color measured at 450 nm	1902963, 1902972, 1902973
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1902963, 1902966, 1902967, 1902972, 1902973
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1902963, 1902972, 1902973
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1902963, 1902966, 1902967, 1902972, 1902973

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1902963, 1902966, 1902967, 1902972, 1902973
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1902964, 1902968, 1902969, 1902974, 1902975
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1902995, 1902996, 1902997, 1902998, 1902999
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1902995, 1902996, 1902997, 1902998, 1902999

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	06/01/2017			06/01/2017 16:02	Sima Feizi	1902963, 1902966, 1902967, 1902972, 1902973
EPA 200.7 Rev. 4.4	06/01/2017	06/05/2017	Elliott D. Healy	06/06/2017	Betina Topolski	1903009, 1903010, 1903011
EPA 200.8 Rev. 5.4	06/01/2017	06/05/2017	Elliott D. Healy	06/07/2017	Robert K Palmer	1903009, 1903010, 1903011
EPA 300.0 Rev. 2.1	06/01/2017			06/13/2017	Julia Storbeck	1902963, 1902972, 1902973
EPA 350.1 Rev. 2.0	06/01/2017			06/02/2017	Julie Michelle Frank	1902964, 1902968, 1902969, 1902974, 1902975
EPA 351.2 Rev. 2.0	06/01/2017	06/05/2017	Adrian Shelby	06/06/2017	Joseph Suarez	1902964, 1902968, 1902974
	06/01/2017	06/05/2017	Adrian Shelby	06/07/2017	Joseph Suarez	1902969
	06/01/2017	06/06/2017	Adrian Shelby	06/08/2017	Joseph Suarez	1902975
EPA 353.2 Rev. 2.0	06/01/2017			06/05/2017	Beverly Y. Sanders	1902969
	06/01/2017			06/06/2017	Beverly Y. Sanders	1902964, 1902968, 1902974
	06/01/2017			06/08/2017	Beverly Y. Sanders	1902975
EPA 365.1 Rev. 2.0	06/01/2017	06/05/2017	Vijayalakshmi Reddy	06/06/2017	Lipi Saha	1902968
	06/01/2017	06/05/2017	Vijayalakshmi Reddy	06/08/2017	Lipi Saha	1902964, 1902969, 1902974, 1902975
EPA 365.1 Rev. 2.0 dissolved	06/01/2017			06/01/2017 15:54	Anthony C. Onicha	1902970
	06/01/2017			06/01/2017 16:02	Anthony C. Onicha	1902976
	06/01/2017			06/01/2017 16:43	Anthony C. Onicha	1902965
	06/01/2017			06/01/2017 16:44	Anthony C. Onicha	1902971
	06/01/2017			06/01/2017 16:45	Anthony C. Onicha	1902977
EPA 8270D	06/01/2017	06/01/2017	John Kaba	06/05/2017	Irina Carbone	1903008
	06/01/2017	06/01/2017	John Kaba	06/08/2017	Irina Carbone	1903008
	06/01/2017	06/02/2017	Fe-Val Siddell	06/07/2017	Vandana T. Nagar	1903007
EPA 8276	06/01/2017	06/02/2017	Fe-Val Siddell	06/06/2017	Marek Topolski	1903007
EPA 8321B	06/01/2017	06/05/2017	Hoor Shaik	06/08/2017	Mohammad Ghaffari	1902995
	06/01/2017	06/05/2017	Mohammad Ghaffari	06/05/2017	Mohammad Ghaffari	1902995
	06/01/2017	06/05/2017	Mohammad Ghaffari	06/06/2017	Mohammad Ghaffari	1902995, 1902998, 1902999
SM 2120 B	06/01/2017			06/01/2017 16:19	Tanya Welborn	1902963
	06/01/2017			06/01/2017 16:20	Tanya Welborn	1902972
	06/01/2017			06/01/2017 16:21	Tanya Welborn	1902973
SM 2320 B-97	06/01/2017			06/06/2017	Dale L. Simmons	1902967
	06/01/2017			06/07/2017	Dale L. Simmons	1902963, 1902966, 1902972, 1902973
SM 2540 C-97	06/01/2017			06/05/2017	Sima Feizi	1902963, 1902972, 1902973
SM 2540 D-97	06/01/2017			06/05/2017	Sima Feizi	1902963, 1902966, 1902967, 1902972, 1902973
SM 4500 F-C-97	06/01/2017			06/06/2017	Dale L. Simmons	1902967
	06/01/2017			06/07/2017	Dale L. Simmons	1902963, 1902966, 1902972, 1902973
SM 5310 B-00	06/01/2017			06/03/2017	Julie Michelle Frank	1902964, 1902968, 1902974, 1902975
	06/01/2017			06/06/2017	Christopher Armour	1902969
USGS O-2060-01	06/01/2017	06/06/2017	Hoor Shaik	06/08/2017	Mohammad Ghaffari	1902995, 1902996, 1902997, 1902998, 1902999