

Chemical Analysis Report

NE-DIST-2017-04-21-01

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

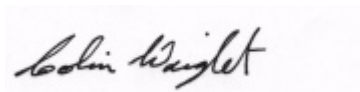
Event Description: **LSJR Coast**
Request ID: **RQ-2017-04-17-13**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
Attn: Jeremy Parrish

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

Certified by: Colin Wright, Program Administrator

Date Certified: 18-MAY-2017 11:24

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: St. Johns R @ Scanlon BR Mayport

Collection Date/Time: 04/20/2017 08:05

Field ID: G2NE1128 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891159	EPA 180.1 Rev. 2.0	Turbidity	6.2		NTU	P323841	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P324295	
	SM 2540 D-97	TSS	17		mg/L	P324371	
	SM 4500 F-C-97	Fluoride	1.2		mg F/L	P325242	
1891161	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P323824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P323985	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P324051	
	EPA 365.1 Rev. 2.0	Total-P	0.045		mg P/L	P323893	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P323858	
1891163	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.014		mg P/L	P323846	
1891201	EPA 200.7 Rev. 4.4	Iron	380	I	ug/L	P324521	
	EPA 200.8 Rev. 5.4	Arsenic	2.40		ug/L	P324521	
		Cadmium	0.080	U	ug/L	P324521	
		Chromium	1.6	U	ug/L	P324521	
		Copper	3.2	I	ug/L	P324521	
		Lead	0.34	I	ug/L	P324521	
		Nickel	0.80	U	ug/L	P324521	
		Silver	0.040	U	ug/L	P324521	
		Zinc	7.3	I	ug/L	P324521	

Sample Location: St. Johns R @ Scanlon BR Mayport

Collection Date/Time: 04/20/2017 08:05

Field ID: G2NE1128 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891197	EPA 8321B	Glyphosate**	10	UJ	ug/L	P323576	SUR
		Sucralose**	0.20		ug/L	P323816	
	USGS O-2060-01	2,4-D	0.0040	U	ug/L	P323708	
		Diuron	0.0042	I	ug/L	P323708	RPD
		Fenuron	0.010	U	ug/L	P323708	
		Imidacloprid	0.0020	U	ug/L	P323708	
		Bentazon	0.0010	U	ug/L	P323708	
		Linuron	0.010	U	ug/L	P323708	RPD
		Acetaminophen**	0.020	U	ug/L	P323708	
		MCP	0.0040	U	ug/L	P323708	
		Carbamazepine**	6.0E-04	I	ug/L	P323708	
		Triclopyr**	0.010	U	ug/L	P323708	
		Primidone**	0.020	U	ug/L	P323708	
		Fluridone**	5.0E-04	U	ug/L	P323708	
1891198	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P323719	
1891199	EPA 8270D	Aldrin	4.0	U	ng/L	P323931	
		Alpha-BHC	2.0	U	ng/L	P323931	
		Beta-BHC	4.0	U	ng/L	P323931	
		Delta-BHC	4.0	U	ng/L	P323931	
		Gamma-BHC	4.0	U	ng/L	P323931	

Field ID: G2NE1128 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891199	EPA 8270D	Carbophenothion	4.0	UJ	ng/L	P323931	MS
		Chlorothalonil	2.0	UJ	ng/L	P323931	MS, RPD
		Cypermethrin	20	U	ng/L	P323931	
		DDD-p,p'	2.0	U	ng/L	P323931	
		DDE-p,p'	3.0	U	ng/L	P323931	
		DDT-p,p'	3.0	U	ng/L	P323931	
		Dieldrin	4.0	U	ng/L	P323931	
		Endosulfan I	4.0	U	ng/L	P323931	
		Endosulfan II	4.0	U	ng/L	P323931	
		Endosulfan Sulfate	2.0	U	ng/L	P323931	
		Endrin	2.0	U	ng/L	P323931	
		Endrin Aldehyde	2.0	U	ng/L	P323931	
		Heptachlor	1.5	U	ng/L	P323931	
		Heptachlor Epoxide	2.0	U	ng/L	P323931	
		Methoxychlor	4.0	U	ng/L	P323931	
		Mirex	2.0	U	ng/L	P323931	
		Permethrin	10	U	ng/L	P323931	
		Trifluralin	1.0	UJ	ng/L	P323931	MS
		Alpha-Chlordane	1.0	U	ng/L	P323931	
		Gamma-Chlordane	1.0	U	ng/L	P323931	
		Endrin Ketone	2.0	U	ng/L	P323931	
		Dicofol	30	U	ng/L	P323931	
	EPA 8276	Chlordane**	2.5	UJ	ng/L	P323931	MS
		Toxaphene**	13	U	ng/L	P323931	
1891200	EPA 8270D	Ametryn	0.31	U	ng/L	P323856	
		Atrazine	7.2		ng/L	P323856	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P323856	
		Chlorpyrifos Methyl	0.097	U	ng/L	P323856	
		Disulfoton	0.31	U	ng/L	P323856	
		Ethion	0.14	U	ng/L	P323856	
		Ethoprop	0.097	U	ng/L	P323856	
		Hexazinone	0.48	U	ng/L	P323856	
		Malathion	0.34	U	ng/L	P323856	
		Metribuzin	0.25	I	ng/L	P323856	
		Mevinphos	0.48	U	ng/L	P323856	
		Norflurazon	0.48	U	ng/L	P323856	
		Phorate	0.24	U	ng/L	P323856	
		Prometryn	0.19	U	ng/L	P323856	
		Simazine	0.93	I	ng/L	P323856	
		Atrazine Desethyl	1.4	U	ng/L	P323856	
		Prometon	0.87	U	ng/L	P323856	
		Fipronil	0.24	U	ng/L	P323856	
		Molinate	0.29	U	ng/L	P323856	
		Pendimethalin	1.4	U	ng/L	P323856	
		Terbufos	0.097	U	ng/L	P323856	

Field ID: G2NE1128 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891200	EPA 8270D	EPTC	1.2	U	ng/L	P323856	
		Terbutylazine	0.41	U	ng/L	P323856	
		Bromacil	0.48	UJ	ng/L	P323856	RPD
		Fipronil Sulfide	0.14	U	ng/L	P323856	
		Fipronil Sulfone	0.14	U	ng/L	P323856	
		Alachlor	0.24	U	ng/L	P323856	
		Azinphos Methyl	2.2	U	ng/L	P323856	
		Butylate	0.39	U	ng/L	P323856	
		Demeton	1.9	U	ng/L	P323856	
		Diazinon	0.12	U	ng/L	P323856	
		Fenamiphos	0.24	U	ng/L	P323856	
		Fonofos	0.19	U	ng/L	P323856	
		Metalaxyl	0.19	U	ng/L	P323856	
		Metolachlor	1.5		ng/L	P323856	
		Acetochlor	0.24	U	ng/L	P323856	
		Cyanazine	0.48	U	ng/L	P323856	
		Parathion Ethyl	0.24	U	ng/L	P323856	
		Parathion Methyl	0.24	U	ng/L	P323856	

Ref. Method and Comment:

EPA 8321B: Refer to the narrative for an explanation of QC Codes. Results confirmed in re-extraction.

EPA 8270D: Insufficient sample available to perform duplicate matrix spikes. Refer to the narrative for an explanation of QC Codes.

EPA 8276: Insufficient sample available to perform duplicate matrix spike.. Refer to the narrative for an explanation of QC Codes.

EPA 8270D: MS accuracy for Atrazine not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: St. Johns R @ Little Jetties Pier

Collection Date/Time: 04/20/2017 08:35

Field ID: G2NE0745 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891160	EPA 180.1 Rev. 2.0	Turbidity	7.9		NTU	P323841	
	SM 2320 B-97	Total Alkalinity	119		mg CaCO3/L	P324295	
	SM 2540 D-97	TSS	18		mg/L	P324371	
	SM 4500 F-C-97	Fluoride	1.2		mg F/L	P325242	
1891162	EPA 350.1 Rev. 2.0	Ammonia-N	0.022		mg N/L	P323824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50		mg N/L	P323985	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P324051	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P323893	
	SM 5310 B-00	Organic Carbon	3.3		mg C/L	P323858	
1891164	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.020		mg P/L	P323846	
1891202	EPA 200.7 Rev. 4.4	Iron	500		ug/L	P324521	
	EPA 200.8 Rev. 5.4	Arsenic	2.47		ug/L	P324521	
		Cadmium	0.080	U	ug/L	P324521	
		Chromium	1.6	U	ug/L	P324521	
		Copper	0.98	I	ug/L	P324521	
		Lead	0.46	I	ug/L	P324521	
		Nickel	0.80	U	ug/L	P324521	
		Silver	0.040	U	ug/L	P324521	

Field ID: G2NE0745 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891202	EPA 200.8 Rev. 5.4	Zinc	7.9	I	ug/L	P324521	

Sample Location: Sherman Creek @ A1A Bridge

Collection Date/Time: 04/20/2017 08:55

Field ID: G5NE0020 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891150	EPA 180.1 Rev. 2.0	Turbidity	5.9		NTU	P323841	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P324295	
	SM 2540 D-97	TSS	11		mg/L	P324371	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P325242	
1891153	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P323824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.51		mg N/L	P323958	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P324050	
	EPA 365.1 Rev. 2.0	Total-P	0.074		mg P/L	P323893	
	SM 5310 B-00	Organic Carbon	5.7		mg C/L	P323858	
1891156	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.037		mg P/L	P323846	

Sample Location: Greenfield Creek @ Wonderwood

Collection Date/Time: 04/20/2017 09:15

Field ID: G2NE1137 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891151	EPA 180.1 Rev. 2.0	Turbidity	7.0		NTU	P323841	
	SM 2320 B-97	Total Alkalinity	114		mg CaCO3/L	P324295	
	SM 2540 D-97	TSS	13	A	mg/L	P324371	
	SM 4500 F-C-97	Fluoride	1.1		mg F/L	P325242	
1891154	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P323824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P323985	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P324050	
	EPA 365.1 Rev. 2.0	Total-P	0.054		mg P/L	P323893	
	SM 5310 B-00	Organic Carbon	6.1		mg C/L	P323858	
1891157	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.017		mg P/L	P323846	

Sample Location: ICW @ Isle of Palms Boat Ramp

Collection Date/Time: 04/20/2017 10:05

Field ID: G2NE1136 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891147	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P323841	
	EPA 300.0 Rev. 2.1	Sulfate	2.1E+03		mg SO4/L	P324310	
	SM 2320 B-97	Total Alkalinity	113		mg CaCO3/L	P324295	
	SM 2540 D-97	TSS	14		mg/L	P324371	
	SM 4500 F-C-97	Fluoride	1.0		mg F/L	P325242	
1891148	EPA 350.1 Rev. 2.0	Ammonia-N	0.043		mg N/L	P323824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P323958	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.021		mg N/L	P324050	
	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P323893	

Field ID: G2NE1136 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891148	SM 5310 B-00	Organic Carbon	7.3		mg C/L	P323858	
1891149	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.038		mg P/L	P323846	
1891196	EPA 8321B	Sucralose**	0.42		ug/L	P323816	
	USGS O-2060-01	2,4-D	0.0072	I	ug/L	P323708	
		Diuron	0.0062	I	ug/L	P323708	RPD
		Fenuron	0.010	U	ug/L	P323708	
		Imidacloprid	0.0064	I	ug/L	P323708	
		Bentazon	0.0064		ug/L	P323708	
		Linuron	0.010	U	ug/L	P323708	RPD
		Acetaminophen**	0.020	U	ug/L	P323708	
		MCP	0.0040	U	ug/L	P323708	
		Carbamazepine**	0.0012	I	ug/L	P323708	
		Triclopyr**	0.010	U	ug/L	P323708	
		Primidone**	0.020	U	ug/L	P323708	
		Fluridone**	0.0064		ug/L	P323708	

Sample Location: Open Creek @ San Pablo Rd

Collection Date/Time: 04/20/2017 10:30

Field ID: G2NE0703 04202017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1891152	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P323841	
	SM 2320 B-97	Total Alkalinity	84		mg CaCO3/L	P324295	
	SM 2540 D-97	TSS	5	I	mg/L	P324369	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P325275	
1891155	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P323824	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		mg N/L	P323985	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P324050	
	EPA 365.1 Rev. 2.0	Total-P	0.050		mg P/L	P323893	
	SM 5310 B-00	Organic Carbon	9.8		mg C/L	P323858	
1891158	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P323846	

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P323841

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P324521

Component	Result	Code	Units
Iron	30.0	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P324521

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
Zinc	1.0	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323824

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323958

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323985

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324050

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324051

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323893

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323846

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

Reference Method: EPA 8270D
Batch ID: P323856

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P323931

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P323931

Component	Result	Code	Units
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

Reference Method: EPA 8276

Batch ID: P323931

Component	Result	Code	Units
Chlordane	2.50	U	ng/L
Toxaphene	12.5	U	ng/L

Reference Method: EPA 8321B

Batch ID: P323576

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: EPA 8321B

Batch ID: P323719

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B

Batch ID: P323816

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P324295

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-97
Batch ID: P324369

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P324371

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P325242

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P325275

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P323858

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

Reference Method: USGS O-2060-01
Batch ID: P323708

Component	Result	Code	Units
2,4-D	0.0040	U	ug/L
Acetaminophen	0.020	U	ug/L
Bentazon	0.0010	U	ug/L
Carbamazepine	5.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.010	U	ug/L
Fluridone	5.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.010	U	ug/L
MCPP	0.0040	U	ug/L
Primidone	0.020	U	ug/L
Triclopyr	0.010	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P324521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P324521

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	100		P	85 - 115
Copper	99.0		P	85 - 115
Lead	102		P	85 - 115
Nickel	102		P	85 - 115
Silver	99.4		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323824

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323958

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323985

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324050

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	106		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	107		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P323893

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P323846

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

Reference Method: EPA 8270D

Batch ID: P323856

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	85.6	101	P/P	78 - 118
Alachlor	85.0	99.7	P/P	77 - 119
Ametryn	103	123	P/P	61 - 136
Atrazine	89.2	104	P/P	73 - 120
Atrazine Desethyl	75.6	88.2	P/P	16 - 122
Azinphos Methyl	104	124	P/P	69 - 186
Bromacil	64.7	103	P/P	40 - 125
Butylate	50.4	58.4	P/P	32 - 87.0
Chlorpyrifos Ethyl	89.9	103	P/P	53 - 110
Chlorpyrifos Methyl	90.9	105	P/P	31 - 119
Cyanazine	109	126	P/P	36 - 224
Demeton	88.1	102	P/P	39 - 122
Diazinon	87.0	102	P/P	75 - 119
Disulfoton	93.2	103	P/P	42 - 139
EPTC	49.3	56.9	P/P	33 - 96.0
Ethion	96.0	112	P/P	63 - 127
Ethoprop	76.9	92.6	P/P	65 - 107
Fenamiphos	106	125	P/P	64 - 137
Fipronil	95.4	113	P/P	60 - 126
Fipronil Sulfide	87.8	106	P/P	58 - 124
Fipronil Sulfone	84.6	96.2	P/P	57 - 126
Fonofos	81.1	95.5	P/P	65 - 111
Hexazinone	81.3	92.9	P/P	46 - 151
Malathion	105	121	P/P	68 - 132
Metaxyl	80.7	96.2	P/P	51 - 132
Metolachlor	88.1	104	P/P	78 - 119
Metribuzin	110	129	P/P	64 - 138
Mevinphos	75.6	92.9	P/P	34 - 128
Molinate	54.8	65.3	P/P	44 - 101
Norflurazon	89.0	101	P/P	63 - 129
Parathion Ethyl	84.6	98.1	P/P	80 - 109
Parathion Methyl	80.6	92.8	P/P	74 - 125
Pendimethalin	73.6	87.6	P/P	48 - 134
Phorate	79.1	96.7	P/P	52 - 119
Prometon	99.5	116	P/P	69 - 124
Prometryn	98.8	116	P/P	66 - 124
Simazine	95.5	110	P/P	61 - 134
Terbufos	83.5	98.4	P/P	58 - 115
Terbutylazine	84.2	97.6	P/P	77 - 113

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P323931

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.0	58.0	P/P	30 - 83.0
Alpha-BHC	85.8	86.4	P/P	62 - 119
Alpha-Chlordane	97.1	94.5	P/P	56 - 119
Beta-BHC	106	101	P/P	54 - 141
Carbophenothion	125	112	P/P	33 - 147
Chlorothalonil	40.9	96.1	P/P	25 - 175
Cypermethrin	116	125	P/P	50 - 155
DDD-p,p'	100	93.3	P/P	56 - 135
DDE-p,p'	94.1	94.0	P/P	48 - 120
DDT-p,p'	89.9	95.5	P/P	51 - 121
Delta-BHC	123	120	P/P	65 - 163
Dicofol	82.9	80.7	P/P	15 - 112
Dieldrin	96.7	93.9	P/P	59 - 134
Endosulfan I	105	97.9	P/P	65 - 142
Endosulfan II	123	110	P/P	65 - 154
Endosulfan Sulfate	92.9	86.9	P/P	65 - 136
Endrin	93.9	93.1	P/P	53 - 156
Endrin Aldehyde	103	91.1	P/P	47 - 156
Endrin Ketone	94.5	90.1	P/P	70 - 124
Gamma-BHC	95.0	97.9	P/P	64 - 142
Gamma-Chlordane	96.9	94.7	P/P	55 - 114
Heptachlor	76.8	79.9	P/P	42 - 105
Heptachlor Epoxide	97.8	92.7	P/P	67 - 120
Methoxychlor	110	109	P/P	63 - 134
Mirex	69.7	75.8	P/P	40 - 90.0
Permethrin	92.3	92.1	P/P	36 - 144
Trifluralin	118	90.7	P/P	40 - 170

Reference Method: EPA 8276

Batch ID: P323931

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	92.3	102	P/P	44 - 118
Toxaphene	101	106	P/P	36 - 136

Reference Method: EPA 8321B

Batch ID: P323576

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	97.2		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P323719

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	89.0		P	40 - 140

Reference Method: EPA 8321B

Batch ID: P323816

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	88.4		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
 Batch ID: P324295

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

Reference Method: SM 4500 F-C-97
 Batch ID: P325242

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	92 - 103

Reference Method: SM 4500 F-C-97
 Batch ID: P325275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.5		P	92 - 103

Reference Method: SM 5310 B-00
 Batch ID: P323858

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

Reference Method: USGS O-2060-01
 Batch ID: P323708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.0		P	40 - 140
Acetaminophen	101		P	40 - 140
Bentazon	61.3		P	40 - 140
Carbamazepine	97.0		P	40 - 140
Diuron	90.7		P	40 - 140
Fenuron	100		P	40 - 140
Fluridone	91.8		P	40 - 140
Imidacloprid	92.2		P	40 - 160
Linuron	94.7		P	40 - 140
MCPD	88.5		P	40 - 140
Primidone	97.7		P	40 - 140
Triclopyr	85.1		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P324521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895132	Iron	102	98.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P324521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895132	Arsenic	108	107	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P324521

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895132	Cadmium	102	104	P/P	80 - 120
1895132	Chromium	88.1	88.5	P/P	80 - 120
1895132	Copper	93.0	91.3	P/P	80 - 120
1895132	Lead	106	106	P/P	80 - 120
1895132	Nickel	98.0	97.6	P/P	80 - 120
1895132	Silver	91.3	91.7	P/P	80 - 120
1895132	Zinc	90.3	91.1	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890830	Sulfate	99.8		P	90 - 110
1890931	Sulfate	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323824

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891148	Ammonia-N	108	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323958

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891148	Kjeldahl Nitrogen	95.6	98.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323985

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891162	Kjeldahl Nitrogen	107	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324050

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890878	NO2NO3-N	105		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324051

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1892135	NO2NO3-N	106	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P323893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890879	Total-P	102	104	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P323846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891149	O-Phosphate-P	98.8	99.5	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P323856

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891200	Acetochlor	90.5	86.7	P/P	74 - 123
1891200	Alachlor	92.0	88.5	P/P	73 - 124
1891200	Ametryn	117	108	P/P	56 - 149
1891200	Atrazine Desethyl	70.2	75.9	P/P	12 - 103
1891200	Azinphos Methyl	119	98.8	P/P	60 - 202
1891200	Bromacil	57.0	53.8	P/P	42 - 133
1891200	Butylate	57.8	52.5	P/P	10 - 85.0
1891200	Chlorpyrifos Ethyl	93.1	89.7	P/P	53 - 113
1891200	Chlorpyrifos Methyl	94.9	88.2	P/P	40 - 115
1891200	Cyanazine	113	107	P/P	22 - 210
1891200	Demeton	101	97.1	P/P	17 - 149
1891200	Diazinon	93.5	90.9	P/P	72 - 124
1891200	Disulfoton	102	92.8	P/P	43 - 139
1891200	EPTC	56.3	50.2	P/P	10 - 86.0
1891200	Ethion	104	98.1	P/P	65 - 131
1891200	Ethoprop	91.7	84.7	P/P	59 - 110
1891200	Fenamiphos	112	97.9	P/P	57 - 138
1891200	Fipronil	102	97.3	P/P	40 - 130
1891200	Fipronil Sulfide	94.4	93.0	P/P	36 - 128
1891200	Fipronil Sulfone	89.6	83.2	P/P	16 - 145
1891200	Fonofos	94.2	87.4	P/P	60 - 112
1891200	Hexazinone	94.0	88.6	P/P	69 - 142
1891200	Malathion	115	108	P/P	68 - 132
1891200	Metalaxyl	87.7	83.3	P/P	66 - 118
1891200	Metolachlor	92.7	86.3	P/P	71 - 124
1891200	Metribuzin	126	118	P/P	61 - 140
1891200	Mevinphos	97.6	86.7	P/P	38 - 130
1891200	Molinate	63.2	58.1	P/P	23 - 99.0
1891200	Norflurazon	88.4	86.0	P/P	39 - 139
1891200	Parathion Ethyl	90.7	83.2	P/P	75 - 111
1891200	Parathion Methyl	85.1	80.4	P/P	64 - 130
1891200	Pendimethalin	87.6	81.2	P/P	26 - 173
1891200	Phorate	97.0	90.6	P/P	43 - 127
1891200	Prometon	109	102	P/P	50 - 144
1891200	Prometryn	107	100	P/P	69 - 126
1891200	Simazine	95.7	92.5	P/P	51 - 152
1891200	Terbufos	98.7	91.3	P/P	54 - 125
1891200	Terbuthylazine	90.2	85.4	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P323931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891199	Aldrin	75.5		P	30 - 83.0
1891199	Alpha-BHC	89.8		P	62 - 119
1891199	Alpha-Chlordane	104		P	56 - 119

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P323931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891199	Beta-BHC	121		P	54 - 141
1891199	Carbophenothion	157		F	33 - 147
1891199	Chlorothalonil	235		F	25 - 175
1891199	Cypermethrin	140		P	50 - 155
1891199	DDD-p,p'	105		P	56 - 135
1891199	DDE-p,p'	98.2		P	48 - 120
1891199	DDT-p,p'	90.2		P	51 - 121
1891199	Delta-BHC	148		P	65 - 163
1891199	Dicofol	39.4		P	15 - 112
1891199	Dieldrin	98.0		P	59 - 134
1891199	Endosulfan I	115		P	65 - 142
1891199	Endosulfan II	152		P	65 - 154
1891199	Endosulfan Sulfate	99.4		P	65 - 136
1891199	Endrin	110		P	53 - 156
1891199	Endrin Aldehyde	87.5		P	47 - 156
1891199	Endrin Ketone	112		P	70 - 124
1891199	Gamma-BHC	106		P	64 - 142
1891199	Gamma-Chlordane	101		P	55 - 114
1891199	Heptachlor	85.7		P	42 - 105
1891199	Heptachlor Epoxide	104		P	67 - 120
1891199	Methoxychlor	99.9		P	63 - 134
1891199	Mirex	74.3		P	40 - 90.0
1891199	Permethrin	105		P	36 - 144
1891199	Trifluralin	173		F	40 - 170

Reference Method: EPA 8276
Batch ID: P323931

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891199	Chlordane	119		F	44 - 118
1891199	Toxaphene	134		P	36 - 136

Reference Method: EPA 8321B
Batch ID: P323576

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889460	Glyphosate	72.6	73.0	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P323719

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1889722	Pyraclostrobin	91.0	94.6	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P323816

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891019	Sucralose	111	112	P/P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P325242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890749	Fluoride	93.5	92.7	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P325275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1895643	Fluoride	102	102	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P323858

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1891148	Organic Carbon	102	102	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P323708

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1890843	2,4-D	93.5	74.3	P/P	40 - 140
1890843	Acetaminophen	96.8	91.5	P/P	40 - 140
1890843	Bentazon	51.3	42.9	P/P	40 - 140
1890843	Carbamazepine	111	95.3	P/P	40 - 140
1890843	Diuron	91.7	64.7	P/P	40 - 140
1890843	Fenuron	56.2	46.9	P/P	40 - 140
1890843	Fluridone	92.1	70.9	P/P	40 - 140
1890843	Imidacloprid	149	112	P/P	40 - 160
1890843	Linuron	101	72.5	P/P	40 - 140
1890843	MCP	80.7	64.1	P/P	40 - 140
1890843	Primidone	106	83.5	P/P	40 - 140
1890843	Triclopyr	82.3	67.7	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P323841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891145	Turbidity	1.23	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P324521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895132	Iron	2.92	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P324521

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895132	Arsenic	0.533	Spike	P	0 - 20
1895132	Cadmium	1.46	Spike	P	0 - 20
1895132	Chromium	0.491	Spike	P	0 - 20
1895132	Copper	1.78	Spike	P	0 - 20
1895132	Lead	0.0408	Spike	P	0 - 20
1895132	Nickel	0.404	Spike	P	0 - 20
1895132	Silver	0.409	Spike	P	0 - 20
1895132	Zinc	0.847	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P324310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890830	Sulfate	2.10	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P323824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891148	Ammonia-N	0.0370	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891148	Kjeldahl Nitrogen	2.05	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P323985

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891162	Kjeldahl Nitrogen	5.33	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324050

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890878	NO2NO3-N	0.175	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P324051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892135	NO2NO3-N	0.445	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P323893

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890879	Total-P	2.25	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P323846

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891149	O-Phosphate-P	0.509	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P323856

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891200	Acetochlor	4.30	Spike	P	0 - 30
1891200	Alachlor	3.86	Spike	P	0 - 30
1891200	Ametryn	8.28	Spike	P	0 - 30
1891200	Atrazine	2.33	Spike	P	0 - 30
1891200	Atrazine Desethyl	7.84	Spike	P	0 - 30
1891200	Azinphos Methyl	18.5	Spike	P	0 - 30
1891200	Bromacil	5.74	Spike	P	0 - 30
1891200	Butylate	9.65	Spike	P	0 - 30
1891200	Chlorpyrifos Ethyl	3.67	Spike	P	0 - 30
1891200	Chlorpyrifos Methyl	7.36	Spike	P	0 - 30
1891200	Cyanazine	5.25	Spike	P	0 - 30
1891200	Demeton	3.96	Spike	P	0 - 30
1891200	Diazinon	2.80	Spike	P	0 - 30
1891200	Disulfoton	9.27	Spike	P	0 - 30
1891200	EPTC	11.4	Spike	P	0 - 30
1891200	Ethion	6.14	Spike	P	0 - 30
1891200	Ethoprop	7.98	Spike	P	0 - 30
1891200	Fenamiphos	13.8	Spike	P	0 - 30
1891200	Fipronil	4.60	Spike	P	0 - 30
1891200	Fipronil Sulfide	1.53	Spike	P	0 - 30
1891200	Fipronil Sulfone	7.47	Spike	P	0 - 30
1891200	Fonofos	7.52	Spike	P	0 - 30
1891200	Hexazinone	5.92	Spike	P	0 - 30
1891200	Malathion	6.59	Spike	P	0 - 30
1891200	Metalaxyl	5.07	Spike	P	0 - 30
1891200	Metolachlor	6.30	Spike	P	0 - 30
1891200	Metribuzin	5.80	Spike	P	0 - 30
1891200	Mevinphos	11.8	Spike	P	0 - 30
1891200	Molinate	8.48	Spike	P	0 - 30
1891200	Norflurazon	2.79	Spike	P	0 - 30
1891200	Parathion Ethyl	8.70	Spike	P	0 - 30
1891200	Parathion Methyl	5.66	Spike	P	0 - 30
1891200	Pendimethalin	7.62	Spike	P	0 - 30
1891200	Phorate	6.81	Spike	P	0 - 30
1891200	Prometon	7.12	Spike	P	0 - 30
1891200	Prometryn	6.39	Spike	P	0 - 30
1891200	Simazine	2.73	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P323856

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891200	Terbufos	7.72	Spike	P	0 - 30
1891200	Terbutylazine	5.43	Spike	P	0 - 30
LFB	Acetochlor	16.3	LCS	P	0 - 30
LFB	Alachlor	16.0	LCS	P	0 - 30
LFB	Ametryn	17.5	LCS	P	0 - 30
LFB	Atrazine	15.2	LCS	P	0 - 30
LFB	Atrazine Desethyl	15.4	LCS	P	0 - 30
LFB	Azinphos Methyl	17.0	LCS	P	0 - 30
LFB	Bromacil	45.5	LCS	F	0 - 30
LFB	Butylate	14.8	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	14.0	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	14.1	LCS	P	0 - 30
LFB	Cyanazine	14.6	LCS	P	0 - 30
LFB	Demeton	15.0	LCS	P	0 - 30
LFB	Diazinon	16.0	LCS	P	0 - 30
LFB	Disulfoton	10.2	LCS	P	0 - 30
LFB	EPTC	14.4	LCS	P	0 - 30
LFB	Ethion	15.8	LCS	P	0 - 30
LFB	Ethoprop	18.5	LCS	P	0 - 30
LFB	Fenamiphos	17.0	LCS	P	0 - 30
LFB	Fipronil	16.8	LCS	P	0 - 30
LFB	Fipronil Sulfide	18.6	LCS	P	0 - 30
LFB	Fipronil Sulfone	12.9	LCS	P	0 - 30
LFB	Fonofos	16.3	LCS	P	0 - 30
LFB	Hexazinone	13.3	LCS	P	0 - 30
LFB	Malathion	14.3	LCS	P	0 - 30
LFB	Metalaxyl	17.5	LCS	P	0 - 30
LFB	Metolachlor	16.8	LCS	P	0 - 30
LFB	Metribuzin	16.4	LCS	P	0 - 30
LFB	Mevinphos	20.5	LCS	P	0 - 30
LFB	Molinate	17.4	LCS	P	0 - 30
LFB	Norflurazon	12.6	LCS	P	0 - 30
LFB	Parathion Ethyl	14.8	LCS	P	0 - 30
LFB	Parathion Methyl	14.1	LCS	P	0 - 30
LFB	Pendimethalin	17.3	LCS	P	0 - 30
LFB	Phorate	20.0	LCS	P	0 - 30
LFB	Prometon	15.3	LCS	P	0 - 30
LFB	Prometryn	16.2	LCS	P	0 - 30
LFB	Simazine	14.2	LCS	P	0 - 30
LFB	Terbufos	16.3	LCS	P	0 - 30
LFB	Terbutylazine	14.7	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P323931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	6.62	LCS	P	0 - 30
LFB	Alpha-BHC	0.689	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.74	LCS	P	0 - 30
LFB	Beta-BHC	5.33	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P323931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	11.4	LCS	P	0 - 30
LFB	Chlorothalonil	80.5	LCS	F	0 - 30
LFB	Cypermethrin	7.94	LCS	P	0 - 30
LFB	DDD-p,p'	7.40	LCS	P	0 - 30
LFB	DDE-p,p'	0.0649	LCS	P	0 - 30
LFB	DDT-p,p'	6.06	LCS	P	0 - 30
LFB	Delta-BHC	2.23	LCS	P	0 - 30
LFB	Dicofol	2.68	LCS	P	0 - 30
LFB	Dieldrin	2.96	LCS	P	0 - 30
LFB	Endosulfan I	6.64	LCS	P	0 - 30
LFB	Endosulfan II	10.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.66	LCS	P	0 - 30
LFB	Endrin	0.785	LCS	P	0 - 30
LFB	Endrin Aldehyde	12.4	LCS	P	0 - 30
LFB	Endrin Ketone	4.76	LCS	P	0 - 30
LFB	Gamma-BHC	3.06	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.23	LCS	P	0 - 30
LFB	Heptachlor	3.95	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.30	LCS	P	0 - 30
LFB	Methoxychlor	1.04	LCS	P	0 - 30
LFB	Mirex	8.46	LCS	P	0 - 30
LFB	Permethrin	0.270	LCS	P	0 - 30
LFB	Trifluralin	26.0	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P323931

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	10.1	LCS	P	0 - 30
LFB	Toxaphene	5.16	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889460	Glyphosate	0.549	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323719

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1889722	Pyraclostrobin	3.88	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P323816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P323816

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891019	Sucralose	0.722	Spike	P	0 - 30

Reference Method: SM 2320 B-97
Batch ID: P324295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890749	Total Alkalinity	0.247	Sample	P	0 - 4.8

Reference Method: SM 2540 D-97
Batch ID: P324369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1892081	TSS	5.41	Sample	P	0 - 10

Reference Method: SM 2540 D-97
Batch ID: P324371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891151	TSS	6.25	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P325242

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890749	Fluoride	0.470	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P325275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1895643	Fluoride	0.480	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P323858

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1891148	Organic Carbon	0.374	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P323708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890843	2,4-D	22.2	Spike	P	0 - 30
1890843	Acetaminophen	5.63	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P323708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1890843	Bentazon	17.8	Spike	P	0 - 30
1890843	Carbamazepine	14.9	Spike	P	0 - 30
1890843	Diuron	32.8	Spike	F	0 - 30
1890843	Fenuron	18.0	Spike	P	0 - 30
1890843	Fluridone	26.0	Spike	P	0 - 30
1890843	Imidacloprid	25.3	Spike	P	0 - 30
1890843	Linuron	33.2	Spike	F	0 - 30
1890843	MCP	22.9	Spike	P	0 - 30
1890843	Primidone	23.9	Spike	P	0 - 30
1890843	Triclopyr	19.5	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: 1891196
Field Sample ID: G2NE1136 04202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	97.5	P	40 - 150
USGS O-2060-01	2,4-D-d3	89.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	101	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	123	P	30 - 160
USGS O-2060-01	Diuron-d6	101	P	30 - 150
USGS O-2060-01	Primidone-d5	94.0	P	30 - 150

Lab Sample ID: 1891197
Field Sample ID: G2NE1128 04202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	1.48	F	40 - 150
EPA 8321B	Sucralose-d6	101	P	40 - 150
USGS O-2060-01	2,4-D-d3	88.4	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	114	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	117	P	30 - 160
USGS O-2060-01	Diuron-d6	106	P	30 - 150
USGS O-2060-01	Primidone-d5	97.2	P	30 - 150

Lab Sample ID: 1891198
Field Sample ID: G2NE1128 04202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	92.7	P	30 - 150

Lab Sample ID: 1891199
Field Sample ID: G2NE1128 04202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
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Quality Assurance Report Surrogates

Lab Sample ID: 1891199
Field Sample ID: G2NE1128 04202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	78.1	P	51 - 123
EPA 8270D	Tetrachloro-m-xylene	56.3	P	31 - 111
EPA 8276	Decachlorobiphenyl	80.6	P	41 - 106

Lab Sample ID: 1891200
Field Sample ID: G2NE1128 04202017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	64.1	P	62 - 132
EPA 8270D	Simazine-d10	92.0	P	72 - 127

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A75930
Included Lab Sample IDs: 1891197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	90.2	96.4	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A75931
Included Lab Sample IDs: 1891148, 1891153, 1891154, 1891155, 1891161, 1891162

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

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A75940
Included Lab Sample IDs: 1891147, 1891150, 1891151, 1891152, 1891159, 1891160

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A75942
Included Lab Sample IDs: 1891149, 1891156, 1891157, 1891158, 1891163, 1891164

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.4	99.0	P/P	90 - 110
O-Phosphate-P	99.0	98.3	P/P	90 - 110

Reference Method: SM 5310 B-00
Run ID: A75946
Included Lab Sample IDs: 1891148, 1891153, 1891154, 1891155, 1891161, 1891162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	101	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A75984

Included Lab Sample IDs: 1891148, 1891153, 1891154, 1891155, 1891161, 1891162

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A75999

Included Lab Sample IDs: 1891147

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sulfate	93.6	97.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A76006

Included Lab Sample IDs: 1891148, 1891153, 1891154, 1891155, 1891161, 1891162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	104	P/P	90 - 110
NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76007

Included Lab Sample IDs: 1891148, 1891153

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.8	98.7	P/P	90 - 110
Kjeldahl Nitrogen	99.1	97.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A76022

Included Lab Sample IDs: 1891196, 1891197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	86.1	125	P/P	60 - 150

Reference Method: EPA 8321B

Run ID: A76024

Included Lab Sample IDs: 1891198

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	124	106	P/P	60 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A76034

Included Lab Sample IDs: 1891154, 1891155, 1891161, 1891162

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	98.8	P/P	90 - 110
Kjeldahl Nitrogen	96.6	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A76086

Included Lab Sample IDs: 1891147, 1891150, 1891151, 1891152, 1891159, 1891160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	104	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A76119

Included Lab Sample IDs: 1891199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	106		P	80 - 120
Toxaphene	112		P	80 - 120

Reference Method: EPA 8270D

Run ID: A76122

Included Lab Sample IDs: 1891200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	96.1		P	80 - 120
Alachlor	98.5		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	99.7		P	80 - 120
Atrazine Desethyl	97.8		P	80 - 120
Azinphos Methyl	84.5		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	92.3		P	80 - 120
Chlorpyrifos Methyl	91.5		P	80 - 120
Cyanazine	99.7		P	80 - 120
Demeton	93.9		P	80 - 120
Diazinon	96.6		P	80 - 120
Disulfoton	91.1		P	80 - 120
EPTC	103		P	80 - 120
Ethion	83.3		P	80 - 120
Ethoprop	94.8		P	80 - 120
Fenamiphos	94.8		P	80 - 120
Fipronil	91.5		P	80 - 120
Fipronil Sulfide	83.9		P	80 - 120
Fipronil Sulfone	97.3		P	80 - 120
Fonofos	93.0		P	80 - 120
Hexazinone	99.4		P	80 - 120
Malathion	87.4		P	80 - 120
Metalaxyl	99.4		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	98.0		P	80 - 120
Mevinphos	97.5		P	80 - 120
Molinate	102		P	80 - 120
Norflurazon	97.7		P	80 - 120
Parathion Ethyl	97.0		P	80 - 120
Parathion Methyl	97.2		P	80 - 120
Pendimethalin	92.7		P	80 - 120
Phorate	90.7		P	80 - 120
Prometon	99.4		P	80 - 120
Prometryn	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A76122
Included Lab Sample IDs: 1891200

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Simazine	107		P	80 - 120
Terbufos	84.4		P	80 - 120
Terbutylazine	99.6		P	80 - 120

Reference Method: EPA 8270D
Run ID: A76174
Included Lab Sample IDs: 1891199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.3		P	80 - 120
Alpha-BHC	96.2		P	80 - 120
Alpha-Chlordane	102		P	80 - 120
Beta-BHC	101		P	80 - 120
Carbophenothion	117		P	80 - 120
Chlorothalonil	111		P	80 - 120
Cypermethrin	99.0		P	80 - 120
DDD-p,p'	98.9		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	98.0		P	80 - 120
Dicofol	99.2		P	80 - 120
Dieldrin	97.1		P	80 - 120
Endosulfan I	97.9		P	80 - 120
Endosulfan II	95.7		P	80 - 120
Endosulfan Sulfate	97.3		P	80 - 120
Endrin	98.7		P	80 - 120
Endrin Ketone	96.9		P	80 - 120
Gamma-BHC	100		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Methoxychlor	115		P	80 - 120
Mirex	99.9		P	80 - 120
Permethrin	98.4		P	80 - 120
Trifluralin	96.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A76229
Included Lab Sample IDs: 1891201, 1891202

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	99.2	P/P	90 - 110
Cadmium	101	103	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Copper	101	94.6	P/P	90 - 110
Nickel	102	95.0	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Zinc	102	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A76252

Included Lab Sample IDs: 1891201, 1891202

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	98.3	98.9	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A76316

Included Lab Sample IDs: 1891199

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Aldehyde	95.3		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A76366

Included Lab Sample IDs: 1891201, 1891202

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

Reference Method: USGS O-2060-01

Run ID: A76387

Included Lab Sample IDs: 1891196, 1891197

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	103	P/P	50 - 150
Acetaminophen	108	101	P/P	60 - 150
Bentazon	57.2	58.1	P/P	50 - 150
Carbamazepine	86.5	84.0	P/P	60 - 150
Diuron	90.0	82.0	P/P	60 - 150
Fenuron	96.0	93.9	P/P	60 - 150
Fluridone	70.6	67.9	P/P	60 - 150
Imidacloprid	93.0	85.7	P/P	60 - 150
Linuron	90.7	87.0	P/P	60 - 150
MCPP	90.7	93.1	P/P	50 - 150
Primidone	89.8	85.3	P/P	60 - 150
Triclopyr	102	98.0	P/P	50 - 150

Reference Method: SM 4500 F-C-97

Run ID: A76396

Included Lab Sample IDs: 1891147, 1891150, 1891151, 1891159, 1891160

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	98.1	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A76418

Included Lab Sample IDs: 1891152

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

Quality Assurance Report Calibration Verification

* 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	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						1.23	
EPA 200.7 Rev. 4.4	Iron	103		102	98.8			2.92
EPA 200.8 Rev. 5.4	Arsenic	101		108	107			0.533
	Cadmium	103		102	104			1.46
	Chromium	100		88.1	88.5			0.491
	Copper	99.0		93.0	91.3			1.78
	Lead	102		106	106			0.0408
	Nickel	102		98.0	97.6			0.404
	Silver	99.4		91.3	91.7			0.409
	Zinc	100		90.3	91.1			0.847
EPA 300.0 Rev. 2.1	Sulfate	98.7		99.8	98.6		2.10	
EPA 350.1 Rev. 2.0	Ammonia-N	102		108	108			0.0370
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	94.9		95.6	98.1			2.05
	Kjeldahl Nitrogen	102		107	101			5.33
EPA 353.2 Rev. 2.0	NO2NO3-N	106		105				0.175
	NO2NO3-N	107		106	106			0.445
EPA 365.1 Rev. 2.0	Total-P	105		102	104			2.25
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7		98.8	99.5			0.509
EPA 8270D	Acetochlor	101	85.6	90.5	86.7	16.3		4.30
	Alachlor	99.7	85.0	92.0	88.5	16.0		3.86
	Aldrin	62.0	58.0	75.5		6.62		
	Alpha-BHC	85.8	86.4	89.8		0.689		
	Alpha-Chlordane	97.1	94.5	104		2.74		
	Ametryn	123	103	117	108	17.5		8.28
	Atrazine	104	89.2			15.2		2.33
	Atrazine Desethyl	88.2	75.6	70.2	75.9	15.4		7.84
	Azinphos Methyl	124	104	119	98.8	17.0		18.5
	Beta-BHC	106	101	121		5.33		
	Bromacil	103	64.7	57.0	53.8	45.5		5.74
	Butylate	58.4	50.4	57.8	52.5	14.8		9.65
	Carbophenothion	125	112	157		11.4		
	Chlorothalonil	40.9	96.1	235		80.5		
	Chlorpyrifos Ethyl	103	89.9	93.1	89.7	14.0		3.67
	Chlorpyrifos Methyl	105	90.9	94.9	88.2	14.1		7.36
	Cyanazine	109	126	113	107	14.6		5.25
	Cypermethrin	116	125	140		7.94		
	DDD-p,p'	100	93.3	105		7.40		
	DDE-p,p'	94.1	94.0	98.2		0.0649		
	DDT-p,p'	89.9	95.5	90.2		6.06		
	Delta-BHC	123	120	148		2.23		
	Demeton	102	88.1	101	97.1	15.0		3.96
	Diazinon	102	87.0	93.5	90.9	16.0		2.80
	Dicofol	82.9	80.7	39.4		2.68		
	Dieldrin	96.7	93.9	98.0		2.96		
	Disulfoton	103	93.2	102	92.8	10.2		9.27
	Endosulfan I	105	97.9	115		6.64		

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	SMP MS
EPA 8270D	Endosulfan II	123	110	152		10.4	
	Endosulfan Sulfate	92.9	86.9	99.4		6.66	
	Endrin	93.9	93.1	110		0.785	
	Endrin Aldehyde	103	91.1	87.5		12.4	
	Endrin Ketone	94.5	90.1	112		4.76	
	EPTC	56.9	49.3	56.3	50.2	14.4	11.4
	Ethion	96.0	112	104	98.1	15.8	6.14
	Ethoprop	76.9	92.6	91.7	84.7	18.5	7.98
	Fenamiphos	106	125	112	97.9	17.0	13.8
	Fipronil	95.4	113	102	97.3	16.8	4.60
	Fipronil Sulfide	87.8	106	94.4	93.0	18.6	1.53
	Fipronil Sulfone	84.6	96.2	89.6	83.2	12.9	7.47
	Fonofos	81.1	95.5	94.2	87.4	16.3	7.52
	Gamma-BHC	95.0	97.9	106		3.06	
	Gamma-Chlordane	96.9	94.7	101		2.23	
	Heptachlor	76.8	79.9	85.7		3.95	
	Heptachlor Epoxide	97.8	92.7	104		5.30	
	Hexazinone	81.3	92.9	94.0	88.6	13.3	5.92
	Malathion	105	121	115	108	14.3	6.59
	Metalaxyl	80.7	96.2	87.7	83.3	17.5	5.07
	Methoxychlor	110	109	99.9		1.04	
	Metolachlor	88.1	104	92.7	86.3	16.8	6.30
	Metribuzin	110	129	126	118	16.4	5.80
	Mevinphos	75.6	92.9	97.6	86.7	20.5	11.8
	Mirex	69.7	75.8	74.3		8.46	
	Molinate	54.8	65.3	63.2	58.1	17.4	8.48
	Norflurazon	89.0	101	88.4	86.0	12.6	2.79
	Parathion Ethyl	84.6	98.1	90.7	83.2	14.8	8.70
	Parathion Methyl	80.6	92.8	85.1	80.4	14.1	5.66
	Pendimethalin	73.6	87.6	87.6	81.2	17.3	7.62
	Permethrin	92.3	92.1	105		0.270	
	Phorate	79.1	96.7	97.0	90.6	20.0	6.81
	Prometon	99.5	116	109	102	15.3	7.12
	Prometryn	98.8	116	107	100	16.2	6.39
	Simazine	95.5	110	95.7	92.5	14.2	2.73
	Terbufos	83.5	98.4	98.7	91.3	16.3	7.72
	Terbutylazine	84.2	97.6	90.2	85.4	14.7	5.43
	Trifluralin	118	90.7	173		26.0	
EPA 8276	Chlordane	92.3	102	119		10.1	
	Toxaphene	101	106	134		5.16	
EPA 8321B	Glyphosate	97.2		72.6	73.0		0.549
	Pyraclostrobin	89.0		91.0	94.6		3.88
	Sucralose	88.4		111	112		0.722
SM 2320 B-97	Total Alkalinity	104					0.247
SM 2540 D-97	TSS						5.41
	TSS						6.25
SM 4500 F-C-97	Fluoride	99.8		93.5	92.7		0.470
	Fluoride	98.5		102	102		0.480
SM 5310 B-00	Organic Carbon	103		102	102		0.374
USGS O-2060-01	2,4-D	89.0		93.5	74.3		22.2
	Acetaminophen	101		96.8	91.5		5.63
	Bentazon	61.3		51.3	42.9		17.8
	Carbamazepine	97.0		111	95.3		14.9
	Diuron	90.7		91.7	64.7		32.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Fenuron	100	56.2	46.9		18.0
	Fluridone	91.8	92.1	70.9		26.0
	Imidacloprid	92.2	149	112		25.3
	Linuron	94.7	101	72.5		33.2
	MCPP	88.5	80.7	64.1		22.9
	Primidone	97.7	106	83.5		23.9
	Triclopyr	85.1	82.3	67.7		19.5

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1891201, 1891202
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1891201, 1891202
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1891147
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1891149, 1891156, 1891157, 1891158, 1891163, 1891164
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1891199
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1891200
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1891199
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1891197
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1891198
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1891196, 1891197
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1891196, 1891197
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1891196, 1891197

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	04/21/2017			04/21/2017 16:07	Sima Feizi	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
EPA 200.7 Rev. 4.4	04/21/2017	05/03/2017	Elliott D. Healy	05/11/2017	Martin Acosta	1891201, 1891202
EPA 200.8 Rev. 5.4	04/21/2017	05/03/2017	Elliott D. Healy	05/05/2017	Betina Topolski	1891201, 1891202
	04/21/2017	05/03/2017	Elliott D. Healy	05/08/2017	Betina Topolski	1891201, 1891202
EPA 300.0 Rev. 2.1	04/21/2017			04/29/2017	Ping Hua	1891147
EPA 350.1 Rev. 2.0	04/21/2017			04/21/2017	Julie Michelle Frank	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 351.2 Rev. 2.0	04/21/2017	04/25/2017	Adrian Shelby	04/26/2017	Joseph Suarez	1891148, 1891153
	04/21/2017	04/26/2017	Adrian Shelby	04/27/2017	Joseph Suarez	1891154, 1891155, 1891161, 1891162
EPA 353.2 Rev. 2.0	04/21/2017			04/26/2017	Beverly Y. Sanders	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 365.1 Rev. 2.0	04/21/2017	04/24/2017	Vijayalakshmi Reddy	04/25/2017	Lipi Saha	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
EPA 365.1 Rev. 2.0 dissolved	04/21/2017			04/21/2017 15:43	Anthony C. Onicha	1891149
	04/21/2017			04/21/2017 15:55	Anthony C. Onicha	1891156
	04/21/2017			04/21/2017 15:56	Anthony C. Onicha	1891157
	04/21/2017			04/21/2017 15:57	Anthony C. Onicha	1891158
	04/21/2017			04/21/2017 15:58	Anthony C. Onicha	1891163, 1891164
EPA 8270D	04/21/2017	04/24/2017	John Kaba	04/26/2017	Marek Topolski	1891199
	04/21/2017	04/24/2017	John Kaba	05/10/2017	Marek Topolski	1891199
	04/21/2017	04/24/2017	Rasheda Ghaffari	04/27/2017	Irina Carbone	1891200
EPA 8276	04/21/2017	04/24/2017	John Kaba	04/27/2017	Vandana T. Nagar	1891199
EPA 8321B	04/21/2017	04/21/2017	Juyoung Kim	04/21/2017	Juyoung Kim	1891197
	04/21/2017	04/22/2017	Fe-Val Siddell	04/26/2017	Juyoung Kim	1891198
	04/21/2017	04/26/2017	Mohammad Ghaffari	04/26/2017	Mohammad Ghaffari	1891196, 1891197
SM 2320 B-97	04/21/2017			04/29/2017	Dale L. Simmons	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
SM 2540 D-97	04/21/2017			04/26/2017	Yijie Li	1891147, 1891150, 1891151, 1891152, 1891159, 1891160
SM 4500 F-C-97	04/21/2017			05/13/2017	Dale L. Simmons	1891147, 1891150, 1891151, 1891159, 1891160
	04/21/2017			05/15/2017	Dale L. Simmons	1891152
SM 5310 B-00	04/21/2017			04/21/2017	Julie Michelle Frank	1891148, 1891153, 1891154, 1891155, 1891161, 1891162
USGS O-2060-01	04/21/2017	04/22/2017	Hoor Shaik	05/09/2017	Juyoung Kim	1891196, 1891197