

Chemical Analysis Report

SE-DIST-2017-08-04-01

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

Event Description: **SMP-G3 WPB Run**
Request ID: **RQ-2017-06-19-20**
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
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 28-AUG-2017 10:43



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: Okeeheelee Park @ Eshleman Trail

Collection Date/Time: 08/03/2017 10:30

Field ID: G3SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919052	EPA 180.1 Rev. 2.0	Turbidity	0.75		NTU	P329742	
	EPA 300.0 Rev. 2.1	Chloride	15		mg Cl/L	P329754	
		Sulfate	0.31	I	mg SO4/L	P329756	
	SM 2120 B	Color (true)	8.2		PCU	P329736	
	SM 2320 B-97	Total Alkalinity	84	A	mg CaCO3/L	P329975	
	SM 2540 C-97	TDS	120		mg/L	P330223	
	SM 2540 D-97	TSS	3	I	mg/L	P330231	
	SM 4500 F-C-97	Fluoride	0.10	J	mg F/L	P330093	MS, RPD
1919053	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P329979	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P329872	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P330003	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P329789	
	SM 5310 B-00	Organic Carbon	7.2		mg C/L	P330166	
1919054	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329734	
1919078	EPA 8321B	Glyphosate**	1.5	I	ug/L	P329700	
		Pyraclostrobin**	0.0020	U	ug/L	P329718	
		Sucralose**	0.010	U	ug/L	P329553	
	USGS O-2060-01	2,4-D	0.0036	I	ug/L	P329841	
		Diuron	8.0E-04	U	ug/L	P329841	
		Fenuron	0.0080	U	ug/L	P329841	
		Imidacloprid	8.0E-04	U	ug/L	P329841	
		Bentazon	0.0015	I	ug/L	P329841	MS
		Linuron	0.0040	U	ug/L	P329841	
		Acetaminophen**	0.0080	U	ug/L	P329841	
		MCP	0.0020	U	ug/L	P329841	
		Carbamazepine**	4.0E-04	U	ug/L	P329841	
		Triclopyr**	0.0040	U	ug/L	P329841	
		Primidone**	0.0040	U	ug/L	P329841	
		Fluridone**	4.0E-04	U	ug/L	P329841	
1919085	EPA 8270D	Aldrin	4.5	U	ng/L	P329890	
		Alpha-BHC	2.2	U	ng/L	P329890	
		Beta-BHC	4.5	U	ng/L	P329890	
		Delta-BHC	4.5	U	ng/L	P329890	
		Gamma-BHC	4.5	U	ng/L	P329890	
		Carbophenothion	4.5	U	ng/L	P329890	
		Chlorothalonil	2.2	UJ	ng/L	P329890	MS, RPD
		Cypermethrin	22	U	ng/L	P329890	
		DDD-p,p'	3.4	U	ng/L	P329890	
		DDE-p,p'	3.4	U	ng/L	P329890	
		DDT-p,p'	3.4	U	ng/L	P329890	
		Dieldrin	4.5	U	ng/L	P329890	
		Endosulfan I	4.5	U	ng/L	P329890	
		Endosulfan II	4.5	U	ng/L	P329890	

Field ID: G3SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919085	EPA 8270D	Endosulfan Sulfate	2.2	U	ng/L	P329890	
		Endrin	2.2	U	ng/L	P329890	
		Endrin Aldehyde	2.2	U	ng/L	P329890	
		Heptachlor	1.7	U	ng/L	P329890	
		Heptachlor Epoxide	2.2	U	ng/L	P329890	
		Methoxychlor	4.5	U	ng/L	P329890	
		Mirex	2.2	U	ng/L	P329890	
		Permethrin	11	U	ng/L	P329890	
		Trifluralin	1.1	U	ng/L	P329890	
		Alpha-Chlordane	1.1	U	ng/L	P329890	
		Gamma-Chlordane	1.1	U	ng/L	P329890	
		Endrin Ketone	2.2	U	ng/L	P329890	
		Dicofol	34	U	ng/L	P329890	
		Chlordane**	2.8	U	ng/L	P329890	
		Toxaphene**	14	U	ng/L	P329890	
1919086	EPA 8270D	Alachlor	0.25	U	ng/L	P329749	
		Ametryn	0.32	U	ng/L	P329749	
		Atrazine	44		ng/L	P329749	
		Atrazine Desethyl	37		ng/L	P329749	
		Azinphos Methyl	2.2	U	ng/L	P329749	
		Bromacil	0.50	U	ng/L	P329749	
		Butylate	0.40	U	ng/L	P329749	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P329749	
		Chlorpyrifos Methyl	0.10	U	ng/L	P329749	
		Demeton	2.0	U	ng/L	P329749	
		Diazinon	0.12	U	ng/L	P329749	
		Disulfoton	0.50	U	ng/L	P329749	
		EPTC	1.2	U	ng/L	P329749	
		Ethion	0.15	U	ng/L	P329749	
		Ethoprop	0.10	U	ng/L	P329749	
		Fenamiphos	0.25	U	ng/L	P329749	
		Fipronil	0.25	U	ng/L	P329749	
		Fipronil Sulfide	0.15	U	ng/L	P329749	
		Fipronil Sulfone	0.15	U	ng/L	P329749	
		Hexazinone	0.50	U	ng/L	P329749	
		Malathion	0.35	U	ng/L	P329749	
		Metribuzin	0.20	UJ	ng/L	P329749	LCS, MS
		Mevinphos	0.50	U	ng/L	P329749	
		Molinate	0.30	U	ng/L	P329749	
		Norflurazon	0.50	U	ng/L	P329749	
		Pendimethalin	1.0	U	ng/L	P329749	
		Phorate	0.25	U	ng/L	P329749	
		Prometon	0.90	U	ng/L	P329749	
		Prometryn	0.20	U	ng/L	P329749	
		Simazine	1.4	I	ng/L	P329749	

Field ID: G3SE0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919086	EPA 8270D	Terbufos	0.10	U	ng/L	P329749	
		Terbuthylazine	0.42	U	ng/L	P329749	
		Fonofos	0.20	U	ng/L	P329749	
		Metalaxyl	0.20	U	ng/L	P329749	
		Metolachlor	0.25	U	ng/L	P329749	
		Acetochlor	0.25	U	ng/L	P329749	
		Cyanazine	0.50	U	ng/L	P329749	
		Parathion Ethyl	0.25	U	ng/L	P329749	
		Parathion Methyl	0.25	U	ng/L	P329749	
1919091	EPA 200.7 Rev. 4.4	Calcium	33.0		mg/L	P329860	
		Iron	61	I	ug/L	P329860	
		Magnesium	2.05		mg/L	P329860	
		Potassium	1.8		mg/L	P329860	
		Sodium	10.2		mg/L	P329860	
		Zinc	5.0	U	ug/L	P329860	
	EPA 200.8 Rev. 5.4	Arsenic	1.01		ug/L	P329860	
		Cadmium	0.020	U	ug/L	P329860	
		Chromium	0.40	U	ug/L	P329860	
		Copper	0.20	U	ug/L	P329860	
		Lead	0.050	U	ug/L	P329860	
		Nickel	0.20	U	ug/L	P329860	
		Silver	0.010	U	ug/L	P329860	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

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

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy for 2,4-D 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.

Sample Location: Lake Clarke @ Pine Tree Lane

Collection Date/Time: 08/03/2017 11:00

Field ID: 28010809

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919049	EPA 180.1 Rev. 2.0	Turbidity	1.9		NTU	P329742	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P329754	
		Sulfate	19		mg SO4/L	P329756	
		Color (true)	62		PCU	P329736	
	SM 2320 B-97	Total Alkalinity	144		mg CaCO3/L	P329975	
	SM 2540 C-97	TDS	262		mg/L	P330223	
	SM 2540 D-97	TSS	3	I	mg/L	P330231	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P330093	MS, RPD
	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P329979	
		Kjeldahl Nitrogen	0.83		mg N/L	P329872	
1919050	EPA 353.2 Rev. 2.0	NO2NO3-N	0.016		mg N/L	P330003	
	EPA 365.1 Rev. 2.0	Total-P	0.059		mg P/L	P329789	

Field ID: 28010809

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919050	SM 5310 B-00	Organic Carbon	13		mg C/L	P330166	
1919051	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.022		mg P/L	P329734	
1919077	EPA 8321B	Glyphosate**	14		ug/L	P329700	
		Pyraclostrobin**	0.0020	U	ug/L	P329718	
		Sucralose**	0.59		ug/L	P329553	
	USGS O-2060-01	2,4-D	0.28		ug/L	P329841	
		Diuron	0.049		ug/L	P329841	
		Fenuron	0.0080	U	ug/L	P329841	
		Imidacloprid	0.056		ug/L	P329841	
		Bentazon	0.032		ug/L	P329841	MS
		Linuron	0.0040	U	ug/L	P329841	
		Acetaminophen**	0.0080	U	ug/L	P329841	
		MCP	0.0020	U	ug/L	P329841	
		Carbamazepine**	0.0050		ug/L	P329841	
		Triclopyr**	0.0040	U	ug/L	P329841	
		Primidone**	0.0040	U	ug/L	P329841	
		Fluridone**	0.038		ug/L	P329841	
1919083	EPA 8270D	Aldrin	4.4	U	ng/L	P329890	
		Alpha-BHC	2.2	U	ng/L	P329890	
		Beta-BHC	4.4	U	ng/L	P329890	
		Delta-BHC	4.4	U	ng/L	P329890	
		Gamma-BHC	4.4	U	ng/L	P329890	
		Carbophenothion	4.4	U	ng/L	P329890	
		Chlorothalonil	2.2	UJ	ng/L	P329890	MS, RPD
		Cypermethrin	22	U	ng/L	P329890	
		DDD-p,p'	3.3	U	ng/L	P329890	
		DDE-p,p'	3.3	U	ng/L	P329890	
		DDT-p,p'	3.3	U	ng/L	P329890	
		Dieldrin	4.4	U	ng/L	P329890	
		Endosulfan I	4.4	U	ng/L	P329890	
		Endosulfan II	4.4	U	ng/L	P329890	
		Endosulfan Sulfate	2.2	U	ng/L	P329890	
		Endrin	2.2	U	ng/L	P329890	
		Endrin Aldehyde	2.2	U	ng/L	P329890	
		Heptachlor	1.6	U	ng/L	P329890	
		Heptachlor Epoxide	2.2	U	ng/L	P329890	
		Methoxychlor	4.4	U	ng/L	P329890	
		Mirex	2.2	U	ng/L	P329890	
		Permethrin	11	U	ng/L	P329890	
		Trifluralin	1.1	U	ng/L	P329890	
		Alpha-Chlordane	1.1	U	ng/L	P329890	
		Gamma-Chlordane	1.1	U	ng/L	P329890	
		Endrin Ketone	2.2	U	ng/L	P329890	
		Dicofol	33	U	ng/L	P329890	

Field ID: 28010809

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919083	EPA 8276	Chlordane**	2.7	U	ng/L	P329890	
		Toxaphene**	14	U	ng/L	P329890	
1919084	EPA 8270D	Alachlor	0.26	U	ng/L	P329749	
		Ametryn	4.9		ng/L	P329749	
		Atrazine	42		ng/L	P329749	
		Atrazine Desethyl	9.8		ng/L	P329749	
		Azinphos Methyl	2.3	U	ng/L	P329749	
		Bromacil	0.52	U	ng/L	P329749	
		Butylate	0.42	U	ng/L	P329749	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P329749	
		Chlorpyrifos Methyl	0.10	U	ng/L	P329749	
		Demeton	2.1	U	ng/L	P329749	
		Diazinon	0.13	U	ng/L	P329749	
		Disulfoton	0.52	U	ng/L	P329749	
		EPTC	1.3	U	ng/L	P329749	
		Ethion	0.16	U	ng/L	P329749	
		Ethoprop	0.10	U	ng/L	P329749	
		Fenamiphos	0.26	U	ng/L	P329749	
		Fipronil	0.39	I	ng/L	P329749	
		Fipronil Sulfide	0.56	I	ng/L	P329749	
		Fipronil Sulfone	1.2		ng/L	P329749	
		Hexazinone	4.1		ng/L	P329749	
		Malathion	0.36	U	ng/L	P329749	
		Metribuzin	5.1	J	ng/L	P329749	LCS, MS
		Mevinphos	0.52	U	ng/L	P329749	
		Molinate	0.31	U	ng/L	P329749	
		Norflurazon	2.7		ng/L	P329749	
		Pendimethalin	1.0	U	ng/L	P329749	
		Phorate	0.26	U	ng/L	P329749	
		Prometon	0.94	U	ng/L	P329749	
		Prometryn	0.21	U	ng/L	P329749	
		Simazine	7.3		ng/L	P329749	
		Terbufos	0.10	U	ng/L	P329749	
		Terbuthylazine	0.44	U	ng/L	P329749	
		Fonofos	0.21	U	ng/L	P329749	
		Metalaxyl	16		ng/L	P329749	
		Metolachlor	5.7		ng/L	P329749	
		Acetochlor	0.26	U	ng/L	P329749	
		Cyanazine	0.52	U	ng/L	P329749	
		Parathion Ethyl	0.26	U	ng/L	P329749	
		Parathion Methyl	0.26	U	ng/L	P329749	
1919090	EPA 200.7 Rev. 4.4	Calcium	62.0		mg/L	P329860	
		Iron	67	I	ug/L	P329860	
		Magnesium	4.97		mg/L	P329860	
		Potassium	3.0		mg/L	P329860	

Field ID: 28010809

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919090	EPA 200.7 Rev. 4.4	Sodium	30.0		mg/L	P329860	
		Zinc	5.0	U	ug/L	P329860	
	EPA 200.8 Rev. 5.4	Arsenic	1.86		ug/L	P329860	
		Cadmium	0.020	U	ug/L	P329860	
		Chromium	0.48	I	ug/L	P329860	
		Copper	1.0		ug/L	P329860	
		Lead	0.14	I	ug/L	P329860	
		Nickel	0.42	I	ug/L	P329860	
		Silver	0.010	U	ug/L	P329860	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: Results confirmed in re-extraction.

USGS O-2060-01: MS accuracy for 2,4-D 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.

Sample Location: Pine Lake

Collection Date/Time: 08/03/2017 11:20

Field ID: 32008010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919046	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P329742	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P329754	
		Sulfate	10		mg SO4/L	P329756	
	SM 2120 B	Color (true)	29		PCU	P329736	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P329975	
	SM 2540 C-97	TDS	206		mg/L	P330223	
	SM 2540 D-97	TSS	8	I	mg/L	P330231	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P330093	MS, RPD
1919047	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P329979	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P329872	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P330003	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P329789	
	SM 5310 B-00	Organic Carbon	8.3		mg C/L	P330166	
1919048	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P329734	
1919076	EPA 8321B	Sucralose**	0.21		ug/L	P329553	
	USGS O-2060-01	2,4-D	0.16		ug/L	P329841	
		Diuron	0.0063		ug/L	P329841	
		Fenuron	0.0080	U	ug/L	P329841	
		Imidacloprid	0.017		ug/L	P329841	
		Bentazon	0.011	J	ug/L	P329841	MS
		Linuron	0.0040	U	ug/L	P329841	
		Acetaminophen**	0.0080	U	ug/L	P329841	
		MCP	0.0020	U	ug/L	P329841	
		Carbamazepine**	0.0011	I	ug/L	P329841	
		Triclopyr**	0.0040	U	ug/L	P329841	

Field ID: 32008010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919076	USGS O-2060-01	Primidone**	0.0040	U	ug/L	P329841	
		Fluridone**	0.016		ug/L	P329841	
1919089	EPA 200.7 Rev. 4.4	Calcium	53.8		mg/L	P329860	
		Iron	370		ug/L	P329860	
		Magnesium	2.77		mg/L	P329860	
		Potassium	1.6		mg/L	P329860	
		Sodium	21.3		mg/L	P329860	
		Zinc	5.2	I	ug/L	P329860	
	EPA 200.8 Rev. 5.4	Arsenic	0.75		ug/L	P329860	
		Cadmium	0.020	U	ug/L	P329860	
		Chromium	0.40	I	ug/L	P329860	
		Copper	1.24		ug/L	P329860	
		Lead	0.45		ug/L	P329860	
		Nickel	0.35	I	ug/L	P329860	
		Silver	0.010	U	ug/L	P329860	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

Sample Location: Clear Lake @ Okeechobee Rd.

Collection Date/Time: 08/03/2017 11:55

Field ID: 28010896

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919040	EPA 180.1 Rev. 2.0	Turbidity	1.3	A	NTU	P329742	
	EPA 300.0 Rev. 2.1	Chloride	130		mg Cl/L	P329754	
		Sulfate	59		mg SO4/L	P329756	
	SM 2120 B	Color (true)	24		PCU	P329736	
	SM 2320 B-97	Total Alkalinity	106		mg CaCO3/L	P329843	
	SM 2540 C-97	TDS	428	A	mg/L	P330223	
	SM 2540 D-97	TSS	3	IA	mg/L	P330231	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P329844	
1919041	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P329940	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P329872	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P330099	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P329788	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P329960	
1919042	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P329734	
	dissolved						

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

Sample Location: C-17 @ SR-702 (45th Street)

Collection Date/Time: 08/03/2017 12:10

Field ID: 32008003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1919043	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P329742	
	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P329754	
		Sulfate	13		mg SO4/L	P329756	
	SM 2120 B	Color (true)	45		PCU	P329736	
	SM 2320 B-97	Total Alkalinity	144		mg CaCO3/L	P329843	
	SM 2540 C-97	TDS	266		mg/L	P330223	
	SM 2540 D-97	TSS	4	I	mg/L	P330231	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P329844	
1919044	EPA 350.1 Rev. 2.0	Ammonia-N	0.079		mg N/L	P329979	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P329872	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P330003	
	EPA 365.1 Rev. 2.0	Total-P	0.060		mg P/L	P329789	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P330166	
1919045	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.009	I	mg P/L	P329734	
1919088	EPA 200.7 Rev. 4.4	Calcium	59.9		mg/L	P329860	
		Iron	180		ug/L	P329860	
		Magnesium	4.34		mg/L	P329860	
		Potassium	3.8		mg/L	P329860	
		Sodium	28.9		mg/L	P329860	
		Zinc	5.0	U	ug/L	P329860	
	EPA 200.8 Rev. 5.4	Arsenic	3.03		ug/L	P329860	
		Cadmium	0.020	U	ug/L	P329860	
		Chromium	0.45	I	ug/L	P329860	
		Copper	1.88		ug/L	P329860	
		Lead	0.22		ug/L	P329860	
		Nickel	0.30	I	ug/L	P329860	
		Silver	0.010	U	ug/L	P329860	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high 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.

EPA 350.1 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P329742

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P329860

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329860

Component	Result	Code	Units
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: P329860

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: P329754

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329756

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329940

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329979

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329872

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330003

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330099

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329788

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329789

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329734

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

Reference Method: EPA 8270D
Batch ID: P329749

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	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P329749

Component	Result	Code	Units
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P329890

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

Reference Method: EPA 8276
Batch ID: P329890

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P329553

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P329700

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: EPA 8321B
Batch ID: P329718

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P329736

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P329843

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

Reference Method: SM 2320 B-97
Batch ID: P329975

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

Reference Method: SM 2540 C-97
Batch ID: P330223

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330231

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P329844

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P330093

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P329960

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

Reference Method: SM 5310 B-00
Batch ID: P330166

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

Reference Method: USGS O-2060-01
Batch ID: P329841

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Diuron	8.0E-04	U	ug/L
Fenuron	0.0080	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Imidacloprid	8.0E-04	U	ug/L
Linuron	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	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: P329860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	105		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	109		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	97.6		P	85 - 115
Sodium	97.8		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329860

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	99.9		P	85 - 115
Chromium	97.3		P	85 - 115
Copper	95.4		P	85 - 115
Lead	95.4		P	85 - 115
Nickel	98.9		P	85 - 115
Silver	97.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329754

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	93.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329756

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329940

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329979

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: P329872

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: P330003

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P330003

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: P330099

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P329788

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P329789

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.1		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329734

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

Reference Method: EPA 8270D
 Batch ID: P329749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	92.7	85.2	P/P	78 - 118
Alachlor	96.8	86.6	P/P	77 - 119
Ametryn	85.8	88.5	P/P	61 - 136
Atrazine	110	97.3	P/P	73 - 120
Atrazine Desethyl	106	104	P/P	16 - 122
Azinphos Methyl	127	111	P/P	69 - 186
Bromacil	62.6	59.4	P/P	40 - 125
Butylate	53.9	44.4	P/P	32 - 87.0
Chlorpyrifos Ethyl	80.9	79.3	P/P	53 - 110
Chlorpyrifos Methyl	86.9	87.4	P/P	31 - 119
Cyanazine	197	167	P/P	36 - 224
Demeton	79.2	71.0	P/P	39 - 122
Diazinon	93.2	86.8	P/P	75 - 119
Disulfoton	83.7	84.2	P/P	42 - 139
EPTC	54.3	44.0	P/P	33 - 96.0
Ethion	83.0	77.1	P/P	63 - 127
Ethoprop	84.6	79.6	P/P	65 - 107
Fenamiphos	97.7	94.7	P/P	64 - 137
Fipronil	104	90.5	P/P	60 - 126
Fipronil Sulfide	88.1	87.8	P/P	58 - 124
Fipronil Sulfone	74.8	75.1	P/P	57 - 126
Fonofos	84.0	85.4	P/P	65 - 111

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
 Batch ID: P329749

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hexazinone	96.6	87.7	P/P	46 - 151
Malathion	81.7	79.7	P/P	68 - 132
Metalaxyl	87.8	81.4	P/P	51 - 132
Metolachlor	89.0	81.8	P/P	78 - 119
Metribuzin	137	151	P/F	64 - 138
Mevinphos	78.6	73.9	P/P	34 - 128
Molinate	47.6	44.8	P/P	44 - 101
Norflurazon	93.8	90.4	P/P	63 - 129
Parathion Ethyl	88.9	82.5	P/P	80 - 109
Parathion Methyl	112	104	P/P	74 - 125
Pendimethalin	81.0	79.0	P/P	48 - 134
Phorate	92.1	78.4	P/P	52 - 119
Prometon	83.0	84.7	P/P	69 - 124
Prometryn	95.9	88.2	P/P	66 - 124
Simazine	108	99.0	P/P	61 - 134
Terbufos	82.7	80.4	P/P	58 - 115
Terbutylazine	87.5	81.9	P/P	77 - 113

Reference Method: EPA 8270D
 Batch ID: P329890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	44.9	48.3	P/P	26 - 88.0
Alpha-BHC	79.7	77.3	P/P	63 - 114
Alpha-Chlordane	77.0	72.9	P/P	56 - 117
Beta-BHC	75.5	88.4	P/P	57 - 138
Carbophenothion	97.7	76.4	P/P	36 - 148
Chlorothalonil	31.0	76.7	P/P	26 - 173
Cypermethrin	99.0	97.4	P/P	42 - 159
DDD-p,p'	80.7	79.1	P/P	62 - 126
DDE-p,p'	73.8	69.8	P/P	53 - 115
DDT-p,p'	81.7	77.2	P/P	54 - 117
Delta-BHC	97.0	105	P/P	68 - 158
Dicofol	42.8	36.1	P/P	25 - 114
Dieldrin	76.3	75.1	P/P	59 - 126
Endosulfan I	88.2	85.6	P/P	62 - 138
Endosulfan II	90.2	103	P/P	61 - 150
Endosulfan Sulfate	89.3	89.1	P/P	63 - 132
Endrin	81.7	80.2	P/P	49 - 148
Endrin Aldehyde	84.6	82.3	P/P	50 - 144
Endrin Ketone	82.8	81.4	P/P	66 - 122
Gamma-BHC	83.8	84.3	P/P	60 - 137
Gamma-Chlordane	72.2	70.4	P/P	54 - 113
Heptachlor	65.4	62.5	P/P	43 - 104
Heptachlor Epoxide	76.9	74.6	P/P	64 - 118
Methoxychlor	88.2	87.4	P/P	63 - 129
Mirex	72.0	62.5	P/P	39 - 93.0
Permethrin	83.1	82.7	P/P	51 - 123
Trifluralin	107	98.8	P/P	35 - 187

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P329890

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.0	99.4	P/P	44 - 134
Toxaphene	85.6	109	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P329553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	70.0		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329700

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	97.1		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	71.2		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P329843

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

Reference Method: SM 2320 B-97
Batch ID: P329975

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

Reference Method: SM 4500 F-C-97
Batch ID: P329844

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	94.4		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P330093

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P329960

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
Batch ID: P330166

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P329841

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	103		P	40 - 150
Acetaminophen	76.0		P	30 - 150
Bentazon	101		P	40 - 150
Carbamazepine	88.2		P	40 - 150
Diuron	81.5		P	40 - 150
Fenuron	82.1		P	40 - 150
Fluridone	111		P	40 - 150
Imidacloprid	81.2		P	40 - 160
Linuron	83.1		P	40 - 150
MCP	91.6		P	40 - 150
Primidone	84.5		P	40 - 150
Triclopyr	90.3		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919088	Calcium	107		P	80 - 120
1919088	Iron	109		P	80 - 120
1919088	Magnesium	105		P	80 - 120
1919088	Potassium	98.8		P	80 - 120
1919088	Sodium	98.9		P	80 - 120
1919088	Zinc	107		P	80 - 120
1919168	Calcium	105		P	80 - 120
1919168	Iron	106	106	P/P	80 - 120
1919168	Magnesium	105		P	80 - 120
1919168	Potassium	99.9		P	80 - 120
1919168	Sodium	100		P	80 - 120
1919168	Zinc	100	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919088	Arsenic	107		P	80 - 120
1919088	Cadmium	102		P	80 - 120
1919088	Chromium	94.8		P	80 - 120
1919088	Copper	96.5		P	80 - 120
1919088	Lead	99.1		P	80 - 120
1919088	Nickel	98.2		P	80 - 120
1919088	Silver	98.3		P	80 - 120
1919168	Arsenic	104	107	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329860

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919168	Cadmium	101	102	P/P	80 - 120
1919168	Chromium	95.2	97.7	P/P	80 - 120
1919168	Copper	95.5	98.0	P/P	80 - 120
1919168	Lead	96.6	99.6	P/P	80 - 120
1919168	Nickel	97.0	101	P/P	80 - 120
1919168	Silver	97.0	98.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329754

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919061	Chloride	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919061	Sulfate	96.3		P	90 - 110
1919064	Sulfate	98.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329940

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918970	Ammonia-N	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329872

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919041	Kjeldahl Nitrogen	96.0	94.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330003

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919044	NO2NO3-N	106	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919016	NO2NO3-N	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918970	Total-P	95.4	94.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P329789

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919044	Total-P	93.3	98.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P329734

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919042	O-Phosphate-P	94.8	96.1	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P329749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918093	Acetochlor	83.9	88.3	P/P	74 - 123
1918093	Alachlor	89.1	97.9	P/P	73 - 124
1918093	Ametryn	85.7	85.8	P/P	56 - 149
1918093	Atrazine	110	111	P/P	73 - 124
1918093	Atrazine Desethyl	97.2	91.7	P/P	12 - 103
1918093	Azinphos Methyl	116	115	P/P	60 - 202
1918093	Bromacil	93.7	90.9	P/P	42 - 133
1918093	Butylate	51.6	49.6	P/P	10 - 85.0
1918093	Chlorpyrifos Ethyl	81.3	87.6	P/P	53 - 113
1918093	Chlorpyrifos Methyl	86.4	81.8	P/P	40 - 115
1918093	Cyanazine	173	186	P/P	22 - 210
1918093	Demeton	84.3	81.3	P/P	17 - 149
1918093	Diazinon	84.6	91.1	P/P	72 - 124
1918093	Disulfoton	92.9	94.2	P/P	43 - 139
1918093	EPTC	46.7	48.9	P/P	10 - 86.0
1918093	Ethion	78.3	81.2	P/P	65 - 131
1918093	Ethoprop	82.7	81.0	P/P	59 - 110
1918093	Fenamiphos	89.0	91.0	P/P	57 - 138
1918093	Fipronil	89.4	96.1	P/P	40 - 130
1918093	Fipronil Sulfide	86.9	85.6	P/P	36 - 128
1918093	Fipronil Sulfone	77.1	69.7	P/P	16 - 145
1918093	Fonofos	82.3	81.8	P/P	60 - 112
1918093	Hexazinone	90.7	92.5	P/P	69 - 142
1918093	Malathion	82.5	84.4	P/P	68 - 132
1918093	Metalaxyl	83.4	83.2	P/P	66 - 118
1918093	Metolachlor	84.6	97.2	P/P	71 - 124
1918093	Metribuzin	153	149	F/F	61 - 140
1918093	Mevinphos	81.6	74.9	P/P	38 - 130
1918093	Molinate	39.1	48.5	P/P	23 - 99.0
1918093	Norflurazon	92.3	87.3	P/P	39 - 139
1918093	Parathion Ethyl	86.1	88.1	P/P	75 - 111
1918093	Parathion Methyl	104	89.1	P/P	64 - 130
1918093	Pendimethalin	73.8	71.2	P/P	26 - 173
1918093	Phorate	102	79.6	P/P	43 - 127
1918093	Prometon	90.2	88.0	P/P	50 - 144
1918093	Prometryn	91.9	94.7	P/P	69 - 126
1918093	Simazine	107	103	P/P	51 - 152
1918093	Terbufos	84.0	83.6	P/P	54 - 125
1918093	Terbutylazine	82.7	83.1	P/P	76 - 113

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P329890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919252	Aldrin	56.8	46.4	P/P	22 - 97.0
1919252	Alpha-BHC	81.2	72.8	P/P	43 - 132
1919252	Alpha-Chlordane	69.2	58.6	P/P	36 - 126
1919252	Beta-BHC	81.2	66.9	P/P	41 - 150
1919252	Carbophenothion	81.4	94.8	P/P	13 - 196
1919252	Chlorothalonil	10.2	2.51	P/F	10 - 266
1919252	Cypermethrin	113	96.8	P/P	37 - 161
1919252	DDD-p,p'	73.4	65.5	P/P	44 - 131
1919252	DDE-p,p'	64.3	55.7	P/P	32 - 127
1919252	DDT-p,p'	76.2	70.4	P/P	45 - 116
1919252	Delta-BHC	122	99.4	P/P	50 - 201
1919252	Dicofol	14.8	19.8	P/P	10 - 100
1919252	Dieldrin	68.5	59.1	P/P	39 - 142
1919252	Endosulfan I	86.9	69.0	P/P	51 - 139
1919252	Endosulfan II	100	79.5	P/P	49 - 155
1919252	Endosulfan Sulfate	82.7	70.7	P/P	54 - 136
1919252	Endrin	73.5	67.2	P/P	38 - 141
1919252	Endrin Aldehyde	63.3	52.3	P/P	14 - 152
1919252	Endrin Ketone	85.1	70.0	P/P	60 - 128
1919252	Gamma-BHC	103	89.6	P/P	48 - 157
1919252	Gamma-Chlordane	66.6	56.8	P/P	35 - 123
1919252	Heptachlor	64.1	58.1	P/P	25 - 112
1919252	Heptachlor Epoxide	73.3	59.7	P/P	48 - 125
1919252	Methoxychlor	89.8	75.9	P/P	52 - 127
1919252	Mirex	64.9	59.2	P/P	25 - 108
1919252	Permethrin	89.1	76.4	P/P	46 - 133
1919252	Trifluralin	138	135	P/P	29 - 254

Reference Method: EPA 8276
Batch ID: P329890

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919083	Chlordane	87.0	88.7	P/P	44 - 134
1919083	Toxaphene	103	104	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P329553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918333	Sucralose	117	116	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329700

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918088	Glyphosate	111	111	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P329718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919077	Pyraclostrobin	68.3	66.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
 Batch ID: P329844

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918929	Fluoride	94.5	92.8	P/P	91 - 105

Reference Method: SM 4500 F-C-97
 Batch ID: P330093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919052	Fluoride	99.4	107	P/F	91 - 105

Reference Method: SM 5310 B-00
 Batch ID: P329960

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1918875	Organic Carbon	95.4	94.8	P/P	85 - 115

Reference Method: SM 5310 B-00
 Batch ID: P330166

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919047	Organic Carbon	98.6	101	P/P	85 - 115

Reference Method: USGS O-2060-01
 Batch ID: P329841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1919076	Acetaminophen	98.2	96.7	P/P	30 - 150
1919076	Bentazon	38.2	38.8	F/F	40 - 150
1919076	Carbamazepine	83.9	72.7	P/P	40 - 150
1919076	Diuron	48.5	53.8	P/P	40 - 150
1919076	Fenuron	73.4	64.3	P/P	40 - 150
1919076	Fluridone	67.7	55.6	P/P	40 - 150
1919076	Imidacloprid	139	123	P/P	40 - 160
1919076	Linuron	62.3	65.5	P/P	40 - 150
1919076	MCP	121	111	P/P	40 - 150
1919076	Primidone	102	80.3	P/P	40 - 150
1919076	Triclopyr	112	123	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
 Batch ID: P329742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919040	Turbidity	6.15	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P329860

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P329860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919168	Calcium	0.0634	Spike	P	0 - 20
1919168	Iron	0.457	Spike	P	0 - 20
1919168	Magnesium	0.175	Spike	P	0 - 20
1919168	Potassium	0.203	Spike	P	0 - 20
1919168	Sodium	0.0434	Spike	P	0 - 20
1919168	Zinc	2.09	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P329860

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919168	Arsenic	2.95	Spike	P	0 - 20
1919168	Cadmium	0.727	Spike	P	0 - 20
1919168	Chromium	2.58	Spike	P	0 - 20
1919168	Copper	2.51	Spike	P	0 - 20
1919168	Lead	3.05	Spike	P	0 - 20
1919168	Nickel	3.60	Spike	P	0 - 20
1919168	Silver	1.67	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329754

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919064	Chloride	0.0162	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P329756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919064	Sulfate	0.781	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918970	Ammonia-N	0.972	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P329979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919044	Ammonia-N	0.306	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P329872

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919041	Kjeldahl Nitrogen	0.697	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330003

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919044	NO2NO3-N	0.927	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919016	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918970	Total-P	0.730	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P329789

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919044	Total-P	4.25	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P329734

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919042	O-Phosphate-P	1.36	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P329749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918093	Acetochlor	5.07	Spike	P	0 - 30
1918093	Alachlor	9.44	Spike	P	0 - 30
1918093	Ametryn	0.187	Spike	P	0 - 30
1918093	Atrazine	1.32	Spike	P	0 - 30
1918093	Atrazine Desethyl	5.82	Spike	P	0 - 30
1918093	Azinphos Methyl	0.903	Spike	P	0 - 30
1918093	Bromacil	3.03	Spike	P	0 - 30
1918093	Butylate	3.97	Spike	P	0 - 30
1918093	Chlorpyrifos Ethyl	7.46	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P329749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918093	Chlorpyrifos Methyl	5.44	Spike	P	0 - 30
1918093	Cyanazine	7.22	Spike	P	0 - 30
1918093	Demeton	3.60	Spike	P	0 - 30
1918093	Diazinon	7.37	Spike	P	0 - 30
1918093	Disulfoton	1.44	Spike	P	0 - 30
1918093	EPTC	4.54	Spike	P	0 - 30
1918093	Ethion	3.55	Spike	P	0 - 30
1918093	Ethoprop	2.15	Spike	P	0 - 30
1918093	Fenamiphos	2.21	Spike	P	0 - 30
1918093	Fipronil	7.27	Spike	P	0 - 30
1918093	Fipronil Sulfide	1.51	Spike	P	0 - 30
1918093	Fipronil Sulfone	10.1	Spike	P	0 - 30
1918093	Fonofos	0.637	Spike	P	0 - 30
1918093	Hexazinone	1.97	Spike	P	0 - 30
1918093	Malathion	2.23	Spike	P	0 - 30
1918093	Metalaxyl	0.315	Spike	P	0 - 30
1918093	Metolachlor	13.9	Spike	P	0 - 30
1918093	Metribuzin	2.83	Spike	P	0 - 30
1918093	Mevinphos	8.56	Spike	P	0 - 30
1918093	Molinate	21.3	Spike	P	0 - 30
1918093	Norflurazon	5.53	Spike	P	0 - 30
1918093	Parathion Ethyl	2.31	Spike	P	0 - 30
1918093	Parathion Methyl	15.7	Spike	P	0 - 30
1918093	Pendimethalin	3.70	Spike	P	0 - 30
1918093	Phorate	24.4	Spike	P	0 - 30
1918093	Prometon	2.44	Spike	P	0 - 30
1918093	Prometryn	3.03	Spike	P	0 - 30
1918093	Simazine	2.89	Spike	P	0 - 30
1918093	Terbufos	0.494	Spike	P	0 - 30
1918093	Terbutylazine	0.482	Spike	P	0 - 30
LFB	Acetochlor	8.43	LCS	P	0 - 30
LFB	Alachlor	11.2	LCS	P	0 - 30
LFB	Ametryn	3.03	LCS	P	0 - 30
LFB	Atrazine	12.5	LCS	P	0 - 30
LFB	Atrazine Desethyl	2.52	LCS	P	0 - 30
LFB	Azinphos Methyl	13.4	LCS	P	0 - 30
LFB	Bromacil	5.13	LCS	P	0 - 30
LFB	Butylate	19.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.04	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	0.516	LCS	P	0 - 30
LFB	Cyanazine	16.4	LCS	P	0 - 30
LFB	Demeton	10.8	LCS	P	0 - 30
LFB	Diazinon	7.17	LCS	P	0 - 30
LFB	Disulfoton	0.626	LCS	P	0 - 30
LFB	EPTC	21.0	LCS	P	0 - 30
LFB	Ethion	7.32	LCS	P	0 - 30
LFB	Ethoprop	6.03	LCS	P	0 - 30
LFB	Fenamiphos	3.14	LCS	P	0 - 30
LFB	Fipronil	14.0	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.293	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.423	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P329749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Fonofos	1.66	LCS	P	0 - 30
LFB	Hexazinone	9.60	LCS	P	0 - 30
LFB	Malathion	2.48	LCS	P	0 - 30
LFB	Metalaxyl	7.52	LCS	P	0 - 30
LFB	Metolachlor	8.40	LCS	P	0 - 30
LFB	Metribuzin	9.83	LCS	P	0 - 30
LFB	Mevinphos	6.11	LCS	P	0 - 30
LFB	Molinate	6.15	LCS	P	0 - 30
LFB	Norflurazon	3.73	LCS	P	0 - 30
LFB	Parathion Ethyl	7.43	LCS	P	0 - 30
LFB	Parathion Methyl	7.38	LCS	P	0 - 30
LFB	Pendimethalin	2.47	LCS	P	0 - 30
LFB	Phorate	16.1	LCS	P	0 - 30
LFB	Prometon	2.07	LCS	P	0 - 30
LFB	Prometryn	8.43	LCS	P	0 - 30
LFB	Simazine	9.20	LCS	P	0 - 30
LFB	Terbufos	2.86	LCS	P	0 - 30
LFB	Terbutylazine	6.62	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P329890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919252	Aldrin	20.0	Spike	P	0 - 30
1919252	Alpha-BHC	10.9	Spike	P	0 - 30
1919252	Alpha-Chlordane	16.6	Spike	P	0 - 30
1919252	Beta-BHC	19.4	Spike	P	0 - 30
1919252	Carbophenothion	15.3	Spike	P	0 - 30
1919252	Chlorothalonil	121	Spike	F	0 - 30
1919252	Cypermethrin	15.2	Spike	P	0 - 30
1919252	DDD-p,p'	11.4	Spike	P	0 - 30
1919252	DDE-p,p'	14.3	Spike	P	0 - 30
1919252	DDT-p,p'	7.95	Spike	P	0 - 30
1919252	Delta-BHC	20.1	Spike	P	0 - 30
1919252	Dicofol	28.5	Spike	P	0 - 30
1919252	Dieldrin	14.7	Spike	P	0 - 30
1919252	Endosulfan I	22.9	Spike	P	0 - 30
1919252	Endosulfan II	23.0	Spike	P	0 - 30
1919252	Endosulfan Sulfate	15.7	Spike	P	0 - 30
1919252	Endrin	8.87	Spike	P	0 - 30
1919252	Endrin Aldehyde	19.1	Spike	P	0 - 30
1919252	Endrin Ketone	19.4	Spike	P	0 - 30
1919252	Gamma-BHC	13.7	Spike	P	0 - 30
1919252	Gamma-Chlordane	16.0	Spike	P	0 - 30
1919252	Heptachlor	9.91	Spike	P	0 - 30
1919252	Heptachlor Epoxide	20.5	Spike	P	0 - 30
1919252	Methoxychlor	16.8	Spike	P	0 - 30
1919252	Mirex	9.16	Spike	P	0 - 30
1919252	Permethrin	15.4	Spike	P	0 - 30
1919252	Trifluralin	2.41	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P329890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Aldrin	7.24	LCS	P	0 - 30
LFB	Alpha-BHC	3.10	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.44	LCS	P	0 - 30
LFB	Beta-BHC	15.8	LCS	P	0 - 30
LFB	Carbophenothion	24.5	LCS	P	0 - 30
LFB	Chlorothalonil	84.8	LCS	F	0 - 30
LFB	Cypermethrin	1.69	LCS	P	0 - 30
LFB	DDD-p,p'	2.06	LCS	P	0 - 30
LFB	DDE-p,p'	5.51	LCS	P	0 - 30
LFB	DDT-p,p'	5.72	LCS	P	0 - 30
LFB	Delta-BHC	8.08	LCS	P	0 - 30
LFB	Dicofol	16.9	LCS	P	0 - 30
LFB	Dieldrin	1.63	LCS	P	0 - 30
LFB	Endosulfan I	2.90	LCS	P	0 - 30
LFB	Endosulfan II	13.3	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.211	LCS	P	0 - 30
LFB	Endrin	1.79	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.76	LCS	P	0 - 30
LFB	Endrin Ketone	1.73	LCS	P	0 - 30
LFB	Gamma-BHC	0.664	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.55	LCS	P	0 - 30
LFB	Heptachlor	4.69	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.09	LCS	P	0 - 30
LFB	Methoxychlor	0.899	LCS	P	0 - 30
LFB	Mirex	14.2	LCS	P	0 - 30
LFB	Permethrin	0.416	LCS	P	0 - 30
LFB	Trifluralin	8.07	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P329890

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919083	Chlordane	1.87	Spike	P	0 - 30
1919083	Toxaphene	1.21	Spike	P	0 - 30
LFB	Chlordane	26.7	LCS	P	0 - 30
LFB	Toxaphene	24.0	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P329553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918333	Sucralose	1.08	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P329700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918088	Glyphosate	0.451	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P329718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919077	Pyraclostrobin	2.88	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P329736

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919015	Color (true)	0.534	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P329843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918929	Total Alkalinity	1.27	Sample	P	0 - 4.8

Reference Method: SM 2320 B-97
Batch ID: P329975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919052	Total Alkalinity	0.0310	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P330223

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919040	TDS	2.34	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P329844

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918929	Fluoride	1.49	Spike	P	0 - 3.0

Reference Method: SM 4500 F-C-97
Batch ID: P330093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919052	Fluoride	5.78	Spike	F	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P329960

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1918875	Organic Carbon	0.371	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P330166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919047	Organic Carbon	1.74	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P329841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1919076	2,4-D	0.984	Spike	P	0 - 30
1919076	Acetaminophen	1.46	Spike	P	0 - 30
1919076	Bentazon	0.907	Spike	P	0 - 30
1919076	Carbamazepine	13.8	Spike	P	0 - 30
1919076	Diuron	7.89	Spike	P	0 - 30
1919076	Fenuron	13.2	Spike	P	0 - 30
1919076	Fluridone	11.9	Spike	P	0 - 30
1919076	Imidacloprid	9.50	Spike	P	0 - 30
1919076	Linuron	4.98	Spike	P	0 - 30
1919076	MCP	9.09	Spike	P	0 - 30
1919076	Primidone	24.0	Spike	P	0 - 30
1919076	Triclopyr	8.97	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: 1919076
Field Sample ID: 32008010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	114	P	40 - 160
USGS O-2060-01	2,4-D-d3	117	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	90.2	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	80.2	P	30 - 160
USGS O-2060-01	Diuron-d6	81.5	P	30 - 160
USGS O-2060-01	Primidone-d5	75.4	P	30 - 160

Lab Sample ID: 1919077
Field Sample ID: 28010809

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	97.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.6	P	30 - 160
EPA 8321B	Diuron-d6	70.1	P	30 - 160
EPA 8321B	Diuron-d6	73.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	114	P	40 - 150
EPA 8321B	Primidone-d5	71.6	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	40 - 160
USGS O-2060-01	2,4-D-d3	135	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	97.8	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1919077
Field Sample ID: 28010809

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Carbamazepine-d10	81.6	P	30 - 160
USGS O-2060-01	Diuron-d6	70.1	P	30 - 160
USGS O-2060-01	Diuron-d6	73.6	P	30 - 160
USGS O-2060-01	Primidone-d5	71.6	P	30 - 160

Lab Sample ID: 1919078
Field Sample ID: G3SE0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	88.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.9	P	30 - 160
EPA 8321B	Diuron-d6	76.8	P	30 - 160
EPA 8321B	Diuron-d6	90.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	62.7	P	40 - 150
EPA 8321B	Primidone-d5	76.6	P	30 - 160
EPA 8321B	Sucralose-d6	121	P	40 - 160
USGS O-2060-01	2,4-D-d3	108	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	88.7	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	99.9	P	30 - 160
USGS O-2060-01	Diuron-d6	76.8	P	30 - 160
USGS O-2060-01	Diuron-d6	90.2	P	30 - 160
USGS O-2060-01	Primidone-d5	76.6	P	30 - 160

Lab Sample ID: 1919083
Field Sample ID: 28010809

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	67.8	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	49.4	P	32 - 103
EPA 8276	Decachlorobiphenyl	67.2	P	31 - 100

Lab Sample ID: 1919084
Field Sample ID: 28010809

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	81.2	P	53 - 135
EPA 8270D	Simazine-d10	95.0	P	71 - 126

Lab Sample ID: 1919085
Field Sample ID: G3SE0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	49.9	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	39.2	P	32 - 103
EPA 8276	Decachlorobiphenyl	52.6	P	31 - 100

Lab Sample ID: 1919086
Field Sample ID: G3SE0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	79.3	P	53 - 135
EPA 8270D	Simazine-d10	93.4	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78163

Included Lab Sample IDs: 1919040, 1919043, 1919046, 1919049, 1919052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	94.7	96.8	P/P	90 - 110
Chloride	96.8	91.7	P/P	90 - 110
Sulfate	101	95.0	P/P	90 - 110
Sulfate	96.4	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A78204

Included Lab Sample IDs: 1919042, 1919045, 1919048, 1919051, 1919054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.3	P/P	90 - 110
O-Phosphate-P	98.4	100	P/P	90 - 110
O-Phosphate-P	99.3	98.3	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A78208

Included Lab Sample IDs: 1919040, 1919043, 1919046, 1919049, 1919052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.0	99.1	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78212

Included Lab Sample IDs: 1919040, 1919043, 1919046, 1919049, 1919052

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

Reference Method: EPA 8321B

Run ID: A78238

Included Lab Sample IDs: 1919077, 1919078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	100	105	P/P	70 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78242

Included Lab Sample IDs: 1919044, 1919047, 1919050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78248

Included Lab Sample IDs: 1919041, 1919053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	98.0	P/P	90 - 110
Total-P	98.2	97.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A78258

Included Lab Sample IDs: 1919040, 1919043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78258

Included Lab Sample IDs: 1919040, 1919043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	94.7	98.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78269

Included Lab Sample IDs: 1919077, 1919078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	97.0	97.0	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78297

Included Lab Sample IDs: 1919041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A78301

Included Lab Sample IDs: 1919041

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	99.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78304

Included Lab Sample IDs: 1919088, 1919089, 1919090, 1919091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	103	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	95.2	95.8	P/P	90 - 110
Sodium	95.0	97.2	P/P	90 - 110
Zinc	103	99.7	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78308

Included Lab Sample IDs: 1919046, 1919049, 1919052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	102	P/P	90 - 110
Total Alkalinity	102	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78309

Included Lab Sample IDs: 1919044, 1919047, 1919050, 1919053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	100	P/P	90 - 110
Ammonia-N	99.0	98.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78310

Included Lab Sample IDs: 1919088, 1919089, 1919090, 1919091

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	101	101	P/P	90 - 110
Cadmium	100	102	P/P	90 - 110
Chromium	96.7	97.9	P/P	90 - 110
Copper	98.8	99.2	P/P	90 - 110
Lead	96.0	96.9	P/P	90 - 110
Nickel	99.4	100	P/P	90 - 110
Silver	96.5	97.4	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78315

Included Lab Sample IDs: 1919076, 1919077

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	77.9	92.8	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78317

Included Lab Sample IDs: 1919044, 1919047, 1919050, 1919053

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

Reference Method: SM 4500 F-C-97

Run ID: A78343

Included Lab Sample IDs: 1919046, 1919049, 1919052

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

Reference Method: EPA 8321B

Run ID: A78344

Included Lab Sample IDs: 1919078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	77.0	137	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78349

Included Lab Sample IDs: 1919041

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78351

Included Lab Sample IDs: 1919041, 1919044, 1919047, 1919050, 1919053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.8	104	P/P	90 - 110
Kjeldahl Nitrogen	99.7	98.8	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A78375

Included Lab Sample IDs: 1919044, 1919047, 1919050, 1919053

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	99.4	P/P	90 - 110

Reference Method: USGS O-2060-01

Run ID: A78403

Included Lab Sample IDs: 1919076, 1919077, 1919078

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	131	P/P	50 - 150
2,4-D	131	112	P/P	50 - 150
2,4-D	132	146	P/P	50 - 150
Acetaminophen	76.7	83.6	P/P	60 - 150
Acetaminophen	83.6	79.4	P/P	60 - 150
Bentazon	111	102	P/P	50 - 150
Bentazon	113	111	P/P	50 - 150
Carbamazepine	82.0	86.8	P/P	60 - 150
Carbamazepine	84.1	82.0	P/P	60 - 150
Diuron	68.3	80.7	P/P	60 - 150
Diuron	80.7	79.9	P/P	60 - 150
Fenuron	80.1	82.5	P/P	60 - 150
Fenuron	82.5	79.9	P/P	60 - 150
Fluridone	109	114	P/P	60 - 160
Fluridone	114	110	P/P	60 - 160
Imidacloprid	81.1	90.9	P/P	60 - 150
Imidacloprid	87.0	81.1	P/P	60 - 150
Linuron	78.2	93.8	P/P	60 - 150
Linuron	93.8	84.1	P/P	60 - 150
MCPP	101	99.9	P/P	50 - 150
MCPP	93.5	101	P/P	50 - 150
Primidone	71.7	91.7	P/P	60 - 150
Primidone	91.7	92.6	P/P	60 - 150
Triclopyr	110	130	P/P	50 - 150
Triclopyr	130	96.4	P/P	50 - 150

Reference Method: EPA 8276

Run ID: A78420

Included Lab Sample IDs: 1919083, 1919085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	104		P	80 - 120
Toxaphene	109		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A78472

Included Lab Sample IDs: 1919083, 1919085

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.5		P	80 - 120
Alpha-BHC	97.8		P	80 - 120
Alpha-Chlordane	99.8		P	80 - 120
Beta-BHC	101		P	80 - 120
Carbophenothion	84.1		P	80 - 120
Chlorothalonil	99.8		P	80 - 120
Cypermethrin	107		P	80 - 120
DDD-p,p'	97.9		P	80 - 120
DDE-p,p'	99.0		P	80 - 120
DDT-p,p'	108		P	80 - 120
Delta-BHC	90.6		P	80 - 120
Dicofol	106		P	80 - 120
Dieldrin	96.0		P	80 - 120
Endosulfan I	99.1		P	80 - 120
Endosulfan II	94.3		P	80 - 120
Endosulfan Sulfate	96.3		P	80 - 120
Endrin	99.4		P	80 - 120
Endrin Aldehyde	96.4		P	80 - 120
Endrin Ketone	97.7		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	99.0		P	80 - 120
Heptachlor	93.3		P	80 - 120
Heptachlor Epoxide	98.0		P	80 - 120
Methoxychlor	110		P	80 - 120
Mirex	99.3		P	80 - 120
Permethrin	98.4		P	80 - 120
Trifluralin	105		P	80 - 120

Reference Method: EPA 8270D

Run ID: A78478

Included Lab Sample IDs: 1919084, 1919086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	92.7		P	80 - 120
Alachlor	93.6		P	80 - 120
Ametryn	90.6		P	80 - 120
Atrazine	93.8		P	80 - 120
Atrazine Desethyl	94.9		P	80 - 120
Azinphos Methyl	84.0		P	80 - 120
Bromacil	87.6		P	80 - 120
Butylate	102		P	80 - 120
Chlorpyrifos Ethyl	95.0		P	80 - 120
Chlorpyrifos Methyl	96.1		P	80 - 120
Cyanazine	99.3		P	80 - 120
Demeton	93.3		P	80 - 120
Diazinon	94.3		P	80 - 120
Disulfoton	94.9		P	80 - 120
EPTC	95.7		P	80 - 120
Ethion	93.8		P	80 - 120
Ethoprop	104		P	80 - 120
Fenamiphos	92.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A78478

Included Lab Sample IDs: 1919084, 1919086

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil	87.2		P	80 - 120
Fipronil Sulfide	91.5		P	80 - 120
Fipronil Sulfone	92.6		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	97.8		P	80 - 120
Malathion	90.7		P	80 - 120
Metalaxyl	95.3		P	80 - 120
Metolachlor	95.9		P	80 - 120
Metribuzin	85.3		P	80 - 120
Mevinphos	99.8		P	80 - 120
Molinate	117		P	80 - 120
Norflurazon	90.5		P	80 - 120
Parathion Ethyl	97.2		P	80 - 120
Parathion Methyl	94.0		P	80 - 120
Pendimethalin	89.5		P	80 - 120
Phorate	95.6		P	80 - 120
Prometon	94.5		P	80 - 120
Prometryn	89.7		P	80 - 120
Simazine	91.7		P	80 - 120
Terbufos	96.2		P	80 - 120
Terbuthylazine	93.6		P	80 - 120

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						6.15	
EPA 200.7 Rev. 4.4	Calcium	105	107	105				0.0634
	Iron	109	109	106	106			0.457
	Magnesium	104	105	105				0.175
	Potassium	97.6	98.8	99.9				0.203
	Sodium	97.8	98.9	100				0.0434
	Zinc	104	107	100	102			2.09
EPA 200.8 Rev. 5.4	Arsenic	101	107	104	107			2.95
	Cadmium	99.9	102	101	102			0.727
	Chromium	97.3	94.8	95.2	97.7			2.58
	Copper	95.4	96.5	95.5	98.0			2.51
	Lead	95.4	99.1	96.6	99.6			3.05
	Nickel	98.9	98.2	97.0	101			3.60
	Silver	97.0	98.3	97.0	98.7			1.67
EPA 300.0 Rev. 2.1	Chloride	93.7	99.3				0.0162	
	Sulfate	97.1	98.2	96.3			0.781	
EPA 350.1 Rev. 2.0	Ammonia-N	100	102	101				0.972
	Ammonia-N	101						0.306
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	96.0	94.8				0.697

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 353.2 Rev. 2.0	NO2NO3-N	104		106	104			0.927
	NO2NO3-N	104		105	105			0.0
EPA 365.1 Rev. 2.0	Total-P	96.3		95.4	94.6			0.730
	Total-P	94.1		93.3	98.0			4.25
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	105		94.8	96.1			1.36
EPA 8270D	Acetochlor	85.2	92.7	83.9	88.3	8.43		5.07
	Alachlor	96.8	86.6	89.1	97.9	11.2		9.44
	Aldrin	44.9	48.3	56.8	46.4	7.24		20.0
	Alpha-BHC	79.7	77.3	81.2	72.8	3.10		10.9
	Alpha-Chlordane	77.0	72.9	69.2	58.6	5.44		16.6
	Ametryn	85.8	88.5	85.7	85.8	3.03		0.187
	Atrazine	97.3	110	110	111	12.5		1.32
	Atrazine Desethyl	104	106	97.2	91.7	2.52		5.82
	Azinphos Methyl	111	127	116	115	13.4		0.903
	Beta-BHC	75.5	88.4	81.2	66.9	15.8		19.4
	Bromacil	59.4	62.6	93.7	90.9	5.13		3.03
	Butylate	44.4	53.9	51.6	49.6	19.4		3.97
	Carbophenothion	97.7	76.4	81.4	94.8	24.5		15.3
	Chlorothalonil	31.0	76.7	10.2	2.51	84.8		121
	Chlorpyrifos Ethyl	79.3	80.9	81.3	87.6	2.04		7.46
	Chlorpyrifos Methyl	87.4	86.9	86.4	81.8	0.516		5.44
	Cyanazine	167	197	173	186	16.4		7.22
	Cypermethrin	99.0	97.4	113	96.8	1.69		15.2
	DDD-p,p'	80.7	79.1	73.4	65.5	2.06		11.4
	DDE-p,p'	73.8	69.8	64.3	55.7	5.51		14.3
	DDT-p,p'	81.7	77.2	76.2	70.4	5.72		7.95
	Delta-BHC	97.0	105	122	99.4	8.08		20.1
	Demeton	79.2	71.0	84.3	81.3	10.8		3.60
	Diazinon	93.2	86.8	84.6	91.1	7.17		7.37
	Dicofol	42.8	36.1	14.8	19.8	16.9		28.5
	Dieldrin	76.3	75.1	68.5	59.1	1.63		14.7
	Disulfoton	83.7	84.2	92.9	94.2	0.626		1.44
	Endosulfan I	88.2	85.6	86.9	69.0	2.90		22.9
	Endosulfan II	90.2	103	100	79.5	13.3		23.0
	Endosulfan Sulfate	89.3	89.1	82.7	70.7	0.211		15.7
	Endrin	81.7	80.2	73.5	67.2	1.79		8.87
	Endrin Aldehyde	84.6	82.3	63.3	52.3	2.76		19.1
	Endrin Ketone	82.8	81.4	85.1	70.0	1.73		19.4
	EPTC	54.3	44.0	46.7	48.9	21.0		4.54
	Ethion	83.0	77.1	78.3	81.2	7.32		3.55
	Ethoprop	84.6	79.6	82.7	81.0	6.03		2.15
	Fenamiphos	97.7	94.7	89.0	91.0	3.14		2.21
	Fipronil	104	90.5	89.4	96.1	14.0		7.27
	Fipronil Sulfide	88.1	87.8	86.9	85.6	0.293		1.51
	Fipronil Sulfone	74.8	75.1	77.1	69.7	0.423		10.1
	Fonofos	85.4	84.0	82.3	81.8	1.66		0.637
	Gamma-BHC	83.8	84.3	103	89.6	0.664		13.7
	Gamma-Chlordane	72.2	70.4	66.6	56.8	2.55		16.0
	Heptachlor	65.4	62.5	64.1	58.1	4.69		9.91
	Heptachlor Epoxide	76.9	74.6	73.3	59.7	3.09		20.5
	Hexazinone	87.7	96.6	90.7	92.5	9.60		1.97
	Malathion	79.7	81.7	82.5	84.4	2.48		2.23
	Metalaxyl	81.4	87.8	83.4	83.2	7.52		0.315
	Methoxychlor	88.2	87.4	89.8	75.9	0.899		16.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Metolachlor	81.8	89.0	84.6	97.2	8.40	13.9
	Metribuzin	151	137	153	149	9.83	2.83
	Mevinphos	73.9	78.6	81.6	74.9	6.11	8.56
	Mirex	72.0	62.5	64.9	59.2	14.2	9.16
	Molinate	44.8	47.6	39.1	48.5	6.15	21.3
	Norflurazon	90.4	93.8	92.3	87.3	3.73	5.53
	Parathion Ethyl	82.5	88.9	86.1	88.1	7.43	2.31
	Parathion Methyl	104	112	104	89.1	7.38	15.7
	Pendimethalin	79.0	81.0	73.8	71.2	2.47	3.70
	Permethrin	83.1	82.7	89.1	76.4	0.416	15.4
	Phorate	78.4	92.1	102	79.6	16.1	24.4
	Prometon	84.7	83.0	90.2	88.0	2.07	2.44
	Prometryn	88.2	95.9	91.9	94.7	8.43	3.03
	Simazine	99.0	108	107	103	9.20	2.89
	Terbufos	80.4	82.7	84.0	83.6	2.86	0.494
	Terbuthylazine	81.9	87.5	82.7	83.1	6.62	0.482
	Trifluralin	107	98.8	138	135	8.07	2.41
	Chlordane	76.0	99.4	87.0	88.7	26.7	1.87
	Toxaphene	85.6	109	103	104	24.0	1.21
EPA 8276							
EPA 8321B	Glyphosate	97.1		111	111		0.451
	Pyraclostrobin	71.2		68.3	66.4		2.88
	Sucralose	70.0		117	116		1.08
SM 2120 B	Color (true)					0.534	
SM 2320 B-97	Total Alkalinity	102				1.27	
	Total Alkalinity	102				0.0310	
SM 2540 C-97	TDS					2.34	
SM 4500 F-C-97	Fluoride	94.4		94.5	92.8		1.49
	Fluoride	99.9		99.4	107		5.78
SM 5310 B-00	Organic Carbon	97.1		95.4	94.8		0.371
	Organic Carbon	101		98.6	101		1.74
USGS O-2060-01	2,4-D	103					0.984
	Acetaminophen	76.0		96.7	98.2		1.46
	Bentazon	101		38.2	38.8		0.907
	Carbamazepine	88.2		83.9	72.7		13.8
	Diuron	81.5		48.5	53.8		7.89
	Fenuron	82.1		64.3	73.4		13.2
	Fluridone	111		67.7	55.6		11.9
	Imidacloprid	81.2		123	139		9.50
	Linuron	83.1		62.3	65.5		4.98
	MCP	91.6		121	111		9.09
	Primidone	84.5		80.3	102		24.0
	Triclopyr	90.3		112	123		8.97

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1919040, 1919043, 1919046, 1919049, 1919052
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1919088, 1919089, 1919090, 1919091
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1919088, 1919089, 1919090, 1919091
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1919040, 1919043, 1919046, 1919049, 1919052

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1919040, 1919043, 1919046, 1919049, 1919052
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1919041, 1919044, 1919047, 1919050, 1919053
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1919041, 1919044, 1919047, 1919050, 1919053
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1919041, 1919044, 1919047, 1919050, 1919053
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1919041, 1919044, 1919047, 1919050, 1919053
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1919042, 1919045, 1919048, 1919051, 1919054
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1919083, 1919085
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1919084, 1919086
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1919083, 1919085
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1919077, 1919078
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1919077, 1919078
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	1919076, 1919077, 1919078
SM 2120 B / E31780	True Color measured at 450 nm	1919040, 1919043, 1919046, 1919049, 1919052
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1919040, 1919043, 1919046, 1919049, 1919052
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1919040, 1919043, 1919046, 1919049, 1919052
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1919040, 1919043, 1919046, 1919049, 1919052
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1919040, 1919043, 1919046, 1919049, 1919052
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1919041, 1919044, 1919047, 1919050, 1919053
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1919076, 1919077, 1919078
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1919076, 1919077, 1919078

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	08/04/2017			08/04/2017 16:09	DeAsia Armster	1919040, 1919043, 1919046, 1919049, 1919052
EPA 200.7 Rev. 4.4	08/04/2017	08/08/2017	Elliott D. Healy	08/09/2017	Betina Topolski	1919088, 1919089, 1919090, 1919091
EPA 200.8 Rev. 5.4	08/04/2017	08/08/2017	Elliott D. Healy	08/09/2017	Nadine Brooks	1919088, 1919089, 1919090, 1919091
EPA 300.0 Rev. 2.1	08/04/2017			08/05/2017	Julia Storbeck	1919040, 1919043, 1919046, 1919049, 1919052
EPA 350.1 Rev. 2.0	08/04/2017			08/09/2017	Sofia Elnemr	1919041, 1919044, 1919047, 1919050, 1919053
EPA 351.2 Rev. 2.0	08/04/2017	08/09/2017	Adrian Shelby	08/11/2017	Joseph Suarez	1919041, 1919044, 1919047, 1919050, 1919053
EPA 353.2 Rev. 2.0	08/04/2017			08/10/2017	Beverly Y. Sanders	1919044, 1919047, 1919050, 1919053
	08/04/2017			08/11/2017	Beverly Y. Sanders	1919041
EPA 365.1 Rev. 2.0	08/04/2017	08/07/2017	Sima Feizi	08/08/2017	Lipi Saha	1919041, 1919044, 1919047, 1919050, 1919053
EPA 365.1 Rev. 2.0 dissolved	08/04/2017			08/04/2017 14:14	Ping Hua	1919042
	08/04/2017			08/04/2017 14:29	Ping Hua	1919045
	08/04/2017			08/04/2017 14:34	Ping Hua	1919048
	08/04/2017			08/04/2017 14:35	Ping Hua	1919051
	08/04/2017			08/04/2017 14:36	Ping Hua	1919054
EPA 8270D	08/04/2017	08/04/2017	Rasheda Ghaffari	08/09/2017	Irina Carbone	1919084, 1919086
	08/04/2017	08/10/2017	Fe-Val Siddell	08/14/2017	Marek Topolski	1919083, 1919085
EPA 8276	08/04/2017	08/10/2017	Fe-Val Siddell	08/14/2017	John P. Burgos	1919083, 1919085
EPA 8321B	08/04/2017	08/07/2017	Julie Michelle Frank	08/07/2017	Juyoung Kim	1919077, 1919078
	08/04/2017	08/08/2017	Hoor Shaik	08/08/2017	Juyoung Kim	1919077, 1919078
	08/04/2017	08/08/2017	Julie Michelle Frank	08/08/2017	Mohammad Ghaffari	1919076, 1919077
	08/04/2017	08/08/2017	Julie Michelle Frank	08/10/2017	Mohammad Ghaffari	1919078
SM 2120 B	08/04/2017			08/04/2017 15:01	Tanya Welborn	1919040
	08/04/2017			08/04/2017 15:02	Tanya Welborn	1919043
	08/04/2017			08/04/2017 15:03	Tanya Welborn	1919046
	08/04/2017			08/04/2017 15:04	Tanya Welborn	1919049, 1919052
SM 2320 B-97	08/04/2017			08/07/2017	Dale L. Simmons	1919040, 1919043
	08/04/2017			08/08/2017	Dale L. Simmons	1919046, 1919049, 1919052
SM 2540 C-97	08/04/2017			08/09/2017	Yijie Li	1919040, 1919043, 1919046, 1919049, 1919052
SM 2540 D-97	08/04/2017			08/09/2017	Yijie Li	1919040, 1919043, 1919046, 1919049, 1919052
SM 4500 F-C-97	08/04/2017			08/07/2017	Dale L. Simmons	1919040, 1919043
	08/04/2017			08/11/2017	Dale L. Simmons	1919046, 1919049, 1919052
SM 5310 B-00	08/04/2017			08/09/2017	Ping Hua	1919041
	08/04/2017			08/12/2017	Sofia Elnemr	1919044, 1919047, 1919050, 1919053
USGS O-2060-01	08/04/2017	08/10/2017	Hoor Shaik	08/10/2017	Juyoung Kim	1919076
	08/04/2017	08/10/2017	Hoor Shaik	08/11/2017	Juyoung Kim	1919077, 1919078