

Chemical Analysis Report

NE-DIST-2017-08-18-03

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

Event Description: **Gainesville 1-6/6/17**

Request ID: **RQ-2017-08-14-18**

Customer: **NE-DIST**

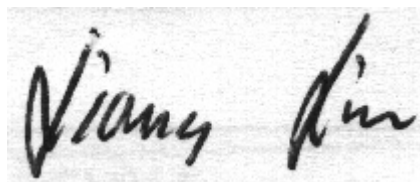
Project ID: **SMP**

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8800 Baymeadows Way W
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Jacksonville, FL 32256-7577
Attn: Nicole Frederick

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 15-SEP-2017 11:02

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored 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: Lake Alice - Center from Bridge

Collection Date/Time: 08/17/2017 12:10

Field ID: G1NE0038 0817017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922714	EPA 180.1 Rev. 2.0	Turbidity	1.9	A	NTU	P330526	
	EPA 300.0 Rev. 2.1	Chloride	14		mg Cl/L	P330715	
		Sulfate	21		mg SO4/L	P330717	
	SM 2120 B	Color (true)	44	A	PCU	P330531	
	SM 2320 B-97	Total Alkalinity	73		mg CaCO3/L	P330798	
	SM 2540 C-97	TDS	144	A	mg/L	P330966	
	SM 2540 D-97	TSS	4	IA	mg/L	P330984	
	SM 4500 F-C-97	Fluoride	0.30		mg F/L	P330800	
1922715	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P330757	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P330647	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P330617	
	EPA 365.1 Rev. 2.0	Total-P	0.51		mg P/L	P330622	
	SM 5310 B-00	Organic Carbon	7.3		mg C/L	P330770	
1922716	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.40		mg P/L	P330508	
1922739	EPA 200.7 Rev. 4.4	Calcium	32.7		mg/L	P330587	
		Iron	64	I	ug/L	P330587	
		Magnesium	5.74		mg/L	P330587	
		Potassium	1.6		mg/L	P330587	
		Sodium	8.5		mg/L	P330587	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P330587	
		Arsenic	0.62		ug/L	P330587	
		Cadmium	0.020	U	ug/L	P330587	
		Chromium	0.40	U	ug/L	P330587	
		Copper	1.05		ug/L	P330587	
		Lead	0.20		ug/L	P331017	
		Nickel	0.28	I	ug/L	P330587	
		Silver	0.010	U	ug/L	P330587	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for potassium and sodium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Lake Alice - Center from Bridge

Collection Date/Time: 08/17/2017 12:10

Field ID: G1NE0038 0817017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922732	EPA 8321B	Glyphosate**	0.50	U	ug/L	P330489	
		Pyraclostrobin**	0.0020	U	ug/L	P330487	RPD
		Sucralose**	0.40		ug/L	P330492	
	USGS O-2060-01	2,4-D	0.18		ug/L	P330455	
		Diuron	0.015		ug/L	P330455	
		Fenuron	0.021	I	ug/L	P330455	
		Imidacloprid	0.010		ug/L	P330455	
		Bentazon	8.0E-04	U	ug/L	P330455	

Field ID: G1NE0038 0817017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922732	USGS O-2060-01	Linuron	0.0040	U	ug/L	P330455	
		Acetaminophen**	0.0080	U	ug/L	P330455	
		MCPP	0.0020	U	ug/L	P330455	
		Carbamazepine**	0.0012	I	ug/L	P330455	
		Triclopyr**	0.0040	U	ug/L	P330455	
		Primidone**	0.0040	U	ug/L	P330455	
		Fluridone**	0.0042		ug/L	P330455	MS
1922737	EPA 8270D	Aldrin	4.1	U	ng/L	P330746	
		Alpha-BHC	2.1	U	ng/L	P330746	
		Beta-BHC	4.1	U	ng/L	P330746	
		Delta-BHC	4.1	U	ng/L	P330746	
		Gamma-BHC	4.1	U	ng/L	P330746	
		Carbophenothion	4.1	U	ng/L	P330746	
		Chlorothalonil	2.1	U	ng/L	P330746	
		Cypermethrin	21	U	ng/L	P330746	
		DDD-p,p'	3.1	U	ng/L	P330746	
		DDE-p,p'	11	I	ng/L	P330746	
		DDT-p,p'	3.1	U	ng/L	P330746	
		Dieldrin	4.1	U	ng/L	P330746	
		Endosulfan I	4.1	U	ng/L	P330746	
		Endosulfan II	4.1	U	ng/L	P330746	
		Endosulfan Sulfate	2.1	U	ng/L	P330746	
		Endrin	2.1	UJ	ng/L	P330746	RPD
		Endrin Aldehyde	2.1	U	ng/L	P330746	RPD
		Heptachlor	1.5	U	ng/L	P330746	
		Heptachlor Epoxide	2.1	U	ng/L	P330746	
		Methoxychlor	4.1	U	ng/L	P330746	
		Mirex	2.1	U	ng/L	P330746	
		Permethrin	10	U	ng/L	P330746	
		Trifluralin	1.0	U	ng/L	P330746	
		Alpha-Chlordane	1.0	U	ng/L	P330746	
		Gamma-Chlordane	1.0	U	ng/L	P330746	
		Endrin Ketone	2.1	U	ng/L	P330746	
		Dicofol	31	U	ng/L	P330746	RPD
	EPA 8276	Chlordane**	3.5	I	ng/L	P330746	
		Toxaphene**	21	I	ng/L	P330746	
1922738	EPA 8270D	Alachlor	0.24	U	ng/L	P330463	
		Ametryn	0.31	U	ng/L	P330463	
		Atrazine	0.47	I	ng/L	P330463	
		Atrazine Desethyl	1.4	U	ng/L	P330463	RPD
		Azinphos Methyl	2.1	U	ng/L	P330463	
		Bromacil	78		ng/L	P330463	RPD
		Butylate	0.38	U	ng/L	P330463	RPD
		Chlorpyrifos Ethyl	0.24	U	ng/L	P330463	
		Chlorpyrifos Methyl	0.095	U	ng/L	P330463	

Field ID: G1NE0038 0817017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922738	EPA 8270D	Demeton	1.9	U	ng/L	P330463	
		Diazinon	0.12	U	ng/L	P330463	
		Disulfoton	0.47	U	ng/L	P330463	
		EPTC	1.2	U	ng/L	P330463	RPD
		Ethion	0.14	U	ng/L	P330463	
		Ethoprop	0.095	U	ng/L	P330463	
		Fenamiphos	0.24	U	ng/L	P330463	
		Fipronil	0.23	T	ng/L	P330463	MS, RPD
		Fipronil Sulfide	2.1		ng/L	P330463	MS, RPD
		Fipronil Sulfone	2.6		ng/L	P330463	RPD
		Hexazinone	0.60	I	ng/L	P330463	MS, RPD
		Malathion	0.33	U	ng/L	P330463	
		Metribuzin	0.19	UJ	ng/L	P330463	LCS, MS
		Mevinphos	0.47	U	ng/L	P330463	
		Molinate	0.28	U	ng/L	P330463	MS, RPD
		Norflurazon	0.47	U	ng/L	P330463	RPD
		Pendimethalin	0.95	U	ng/L	P330463	
		Phorate	0.24	U	ng/L	P330463	
		Prometon	0.85	U	ng/L	P330463	
		Prometryn	0.19	U	ng/L	P330463	
		Simazine	0.47	U	ng/L	P330463	
		Terbufos	0.095	U	ng/L	P330463	
		Terbuthylazine	0.40	U	ng/L	P330463	
		Fonofos	0.19	U	ng/L	P330463	
		Metalaxyl	0.31	I	ng/L	P330463	
		Metolachlor	1.4		ng/L	P330463	
		Acetochlor	0.24	U	ng/L	P330463	
		Cyanazine	0.47	U	ng/L	P330463	RPD
		Parathion Ethyl	0.24	U	ng/L	P330463	
		Parathion Methyl	0.24	U	ng/L	P330463	

Ref. Method and Comment:

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

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

EPA 8270D: MS accuracy for Atrazine, Metalaxyl and Fipronil Sulfone not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Sample Location: Blue Creek @ NW 71st St. Gainesville

Collection Date/Time: 08/17/2017 11:00

Field ID: G1NE0568 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922705	EPA 180.1 Rev. 2.0	Turbidity	3.0		NTU	P330525	
	EPA 300.0 Rev. 2.1	Chloride	17		mg Cl/L	P330715	
		Sulfate	4.0		mg SO4/L	P330717	
	SM 2120 B	Color (true)	770		PCU	P330530	
	SM 2320 B-97	Total Alkalinity	9.3		mg CaCO3/L	P330798	
	SM 2540 C-97	TDS	156		mg/L	P330965	

Field ID: G1NE0568 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922705	SM 2540 D-97	TSS	4	I	mg/L	P330983	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P330800	
1922708	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P330757	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P330777	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P330616	
	EPA 365.1 Rev. 2.0	Total-P	0.54		mg P/L	P330621	
	SM 5310 B-00	Organic Carbon	53		mg C/L	P330770	
1922711	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.37		mg P/L	P330508	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Blue Creek @ NW 71st St. Gainesville

Collection Date/Time: 08/17/2017 11:00

Field ID: G1NE0568 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922733	EPA 8321B	Sucralose**	0.046		ug/L	P330492	
	USGS O-2060-01	2,4-D	0.0050	I	ug/L	P330602	
		Diuron	0.0088		ug/L	P330602	
		Fenuron	0.0080	U	ug/L	P330602	
		Imidacloprid	0.037		ug/L	P330602	
		Bentazon	8.0E-04	U	ug/L	P330602	
		Linuron	0.0040	U	ug/L	P330602	
		Acetaminophen**	0.0080	U	ug/L	P330602	MS
		MCP	0.0020	U	ug/L	P330602	
		Carbamazepine**	0.011		ug/L	P330602	
		Triclopyr**	0.0040	U	ug/L	P330602	
		Primidone**	0.0040	U	ug/L	P330602	
		Fluridone**	4.0E-04	U	ug/L	P330602	

Ref. Method and Comment:

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

Sample Location: Little Hatchett Creek @ SR 24

Collection Date/Time: 08/17/2017 10:30

Field ID: G1NE0083 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922706	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P330525	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P330715	
		Sulfate	14		mg SO4/L	P330717	
	SM 2120 B	Color (true)	350		PCU	P330530	
	SM 2320 B-97	Total Alkalinity	54		mg CaCO3/L	P330798	
	SM 2540 C-97	TDS	171		mg/L	P330966	
	SM 2540 D-97	TSS	8	I	mg/L	P330984	
	SM 4500 F-C-97	Fluoride	0.13		mg F/L	P330800	
1922709	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P330757	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P330647	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P330617	

Field ID: G1NE0083 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922709	EPA 365.1 Rev. 2.0	Total-P	0.071		mg P/L	P330622	
	SM 5310 B-00	Organic Carbon	30		mg C/L	P330770	
1922712	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P330508	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Little Hatchett Creek @ SR 24

Collection Date/Time: 08/17/2017 10:30

Field ID: G1NE0083 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922734	EPA 8321B	Sucralose**	0.062		ug/L	P330492	
	USGS O-2060-01	2,4-D	2.6		ug/L	P330602	
		Diuron	0.0035		ug/L	P330602	
		Fenuron	0.0080	U	ug/L	P330602	
		Imidacloprid	0.019		ug/L	P330602	
		Bentazon	0.015		ug/L	P330602	
		Linuron	0.0040	U	ug/L	P330602	
		Acetaminophen**	0.0097	I	ug/L	P330602	MS
		MCP	0.0025	I	ug/L	P330602	
		Carbamazepine**	4.0E-04	U	ug/L	P330602	
		Triclopyr**	0.0040	U	ug/L	P330602	
		Primidone**	0.0040	U	ug/L	P330602	
		Fluridone**	4.0E-04	U	ug/L	P330602	

Ref. Method and Comment:

USGS O-2060-01: Refer to the narrative for an explanation of QC Codes. 2,4-D-d3 surrogate recovery is not available due to on elevated level of the target analyte 2,4-D.

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

Sample Location: Tumblin Creek @ SW 14th

Collection Date/Time: 08/17/2017 12:45

Field ID: G1NE0856 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922707	EPA 180.1 Rev. 2.0	Turbidity	1.3		NTU	P330525	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P330715	
		Sulfate	42		mg SO4/L	P330717	
	SM 2120 B	Color (true)	16		PCU	P330530	
	SM 2320 B-97	Total Alkalinity	128	A	mg CaCO3/L	P330798	
	SM 2540 C-97	TDS	244		mg/L	P330966	
	SM 2540 D-97	TSS	2	I	mg/L	P330984	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P330800	
1922710	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P330757	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28		mg N/L	P330647	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.45		mg N/L	P330617	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P330622	
	SM 5310 B-00	Organic Carbon	5.0		mg C/L	P330770	
1922713	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P330508	

Field ID: G1NE0856 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Tumblin Creek @ SW 14th

Collection Date/Time: 08/17/2017 12:45

Field ID: G1NE0856 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922735	EPA 8321B	Sucralose**	0.19		ug/L	P330492	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P330602	
		Diuron	0.11	J	ug/L	P330602	
		Fenuron	0.0080	U	ug/L	P330602	
		Imidacloprid	0.090	J	ug/L	P330602	
		Bentazon	0.0015	I	ug/L	P330602	
		Linuron	0.0040	U	ug/L	P330602	
		Acetaminophen**	0.0080	UJ	ug/L	P330602	MS
		MCP	0.0020	U	ug/L	P330602	
		Carbamazepine**	8.3E-04	I	ug/L	P330602	
		Triclopyr**	0.0040	U	ug/L	P330602	
		Primidone**	0.0040	U	ug/L	P330602	
		Fluridone**	4.0E-04	U	ug/L	P330602	

Ref. Method and Comment:

USGS O-2060-01: MS accuracy for diuron and imidacloprid 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: Hogtown Creek @ SW 20TH Ave.

Collection Date/Time: 08/17/2017 11:45

Field ID: G1NE0871 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922736	EPA 8321B	Sucralose**	0.080		ug/L	P330492	
	USGS O-2060-01	2,4-D	0.0046	I	ug/L	P330602	
		Diuron	0.0024	I	ug/L	P330602	
		Fenuron	0.0080	U	ug/L	P330602	
		Imidacloprid	0.026		ug/L	P330602	
		Bentazon	0.0013	I	ug/L	P330602	
		Linuron	0.0040	U	ug/L	P330602	
		Acetaminophen**	0.0080	U	ug/L	P330602	MS
		MCP	0.0020	U	ug/L	P330602	
		Carbamazepine**	4.0E-04	U	ug/L	P330602	
		Triclopyr**	0.0040	U	ug/L	P330602	
		Primidone**	0.0040	U	ug/L	P330602	
		Fluridone**	4.0E-04	U	ug/L	P330602	

Ref. Method and Comment:

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

Sample Location: Alligator Creek above Starke WWTP on US 301 Collection Date/Time: 08/17/2017 09:30

Field ID: G1NE0557 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922783	EPA 180.1 Rev. 2.0	Turbidity	5.7		NTU	P330525	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P330715	
		Sulfate	21		mg SO4/L	P330717	
		Color (true)	150		PCU	P330530	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P330798	
	SM 2540 C-97	TDS	125		mg/L	P330966	
	SM 2540 D-97	TSS	4	I	mg/L	P330984	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P330800	
1922791	EPA 350.1 Rev. 2.0	Ammonia-N	0.091		mg N/L	P330756	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.61		mg N/L	P330548	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.050		mg N/L	P330616	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P330622	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P330770	
1922793	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P330508	
1922797	EPA 8321B	Sucralose**	0.010	U	ug/L	P330492	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P330602	
		Diuron	8.0E-04	U	ug/L	P330602	
		Fenuron	0.0080	U	ug/L	P330602	
		Imidacloprid	8.0E-04	U	ug/L	P330602	
		Bentazon	8.0E-04	U	ug/L	P330602	
		Linuron	0.0040	U	ug/L	P330602	
		Acetaminophen**	0.0080	U	ug/L	P330602	MS
		MCP	0.0020	U	ug/L	P330602	
		Carbamazepine**	4.0E-04	U	ug/L	P330602	
		Triclopyr**	0.0040	U	ug/L	P330602	
		Primidone**	0.0040	U	ug/L	P330602	
		Fluridone**	4.0E-04	U	ug/L	P330602	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Montecocha Creek @ CR 340 (NE 156th Ave)

Collection Date/Time: 08/17/2017 10:05

Field ID: G1NE0591 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922784	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P330525	
	EPA 300.0 Rev. 2.1	Chloride	6.3		mg Cl/L	P330715	
		Sulfate	0.31	I	mg SO4/L	P330717	
		Color (true)	1.0E+03		PCU	P330530	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P330798	
	SM 2540 C-97	TDS	169		mg/L	P330966	
	SM 2540 D-97	TSS	2	I	mg/L	P330984	
	SM 4500 F-C-97	Fluoride	0.042	I	mg F/L	P330800	
1922792	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P330756	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.0		mg N/L	P330548	

Field ID: G1NE0591 08162017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1922792	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P330616	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P330622	
	SM 5310 B-00	Organic Carbon	68		mg C/L	P330770	
1922794	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.064		mg P/L	P330508	
1922798	EPA 8321B	Sucralose**	0.010	U	ug/L	P330492	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P330602	
		Diuron	9.2E-04	I	ug/L	P330602	
		Fenuron	0.0080	U	ug/L	P330602	
		Imidacloprid	0.016		ug/L	P330602	
		Bentazon	8.0E-04	U	ug/L	P330602	
		Linuron	0.0040	U	ug/L	P330602	
		Acetaminophen**	0.0080	U	ug/L	P330602	MS
		MCP	0.0020	U	ug/L	P330602	
		Carbamazepine**	4.0E-04	U	ug/L	P330602	
		Triclopyr**	0.0040	U	ug/L	P330602	
		Primidone**	0.0040	U	ug/L	P330602	
		Fluridone**	4.0E-04	U	ug/L	P330602	

Ref. Method and Comment:

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

SM 5310 B-00: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

USGS O-2060-01: Results confirmed in re-extraction.

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

Results confirmed in re-extraction.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P330525

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P330526

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P330587

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330587

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
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331017

Component	Result	Code	Units
Lead	0.050	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330715

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330717

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330756

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330757

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330548

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330647

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P330777

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P330616

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P330617

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P330621

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P330622

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P330508

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

Reference Method: EPA 8270D
 Batch ID: P330463

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P330463

Component	Result	Code	Units
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
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
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P330746

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P330746

Component	Result	Code	Units
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: P330746

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

Reference Method: EPA 8321B
Batch ID: P330487

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P330489

Component	Result	Code	Units
Glyphosate	0.50	U	ug/L

Reference Method: EPA 8321B
Batch ID: P330492

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P330530

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P330531

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P330798

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

Reference Method: SM 2540 C-97
Batch ID: P330965

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P330965

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P330966

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330983

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P330984

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P330800

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P330770

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

Reference Method: USGS O-2060-01
Batch ID: P330455

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

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
 Batch ID: P330602

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P330587

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	106		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	99.6		P	85 - 115
Sodium	100		P	85 - 115
Zinc	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P330587

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	106		P	85 - 115
Cadmium	99.4		P	85 - 115
Chromium	99.0		P	85 - 115
Copper	99.8		P	85 - 115
Nickel	103		P	85 - 115
Silver	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P331017

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P330715

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.7		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330717

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330756

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: P330757

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: P330548

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330647

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330777

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330616

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330617

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330621

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P330622

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P330508

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	95.4		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P330463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	87.8	90.8	P/P	78 - 118
Alachlor	89.4	92.0	P/P	77 - 119
Ametryn	76.7	82.7	P/P	61 - 136
Atrazine	94.7	94.7	P/P	73 - 120
Atrazine Desethyl	90.8	76.7	P/P	16 - 122
Azinphos Methyl	108	102	P/P	69 - 186
Bromacil	91.3	80.7	P/P	40 - 125
Butylate	41.6	44.1	P/P	32 - 87.0
Chlorpyrifos Ethyl	92.1	89.2	P/P	53 - 110
Chlorpyrifos Methyl	91.8	93.5	P/P	31 - 119
Cyanazine	178	182	P/P	36 - 224
Demeton	82.3	80.7	P/P	39 - 122
Diazinon	90.9	97.7	P/P	75 - 119
Disulfoton	96.0	97.8	P/P	42 - 139
EPTC	40.5	47.0	P/P	33 - 96.0
Ethion	91.9	92.5	P/P	63 - 127
Ethoprop	69.3	88.6	P/P	65 - 107
Fenamiphos	89.6	80.2	P/P	64 - 137
Fipronil	85.5	79.1	P/P	60 - 126
Fipronil Sulfide	83.4	74.0	P/P	58 - 124
Fipronil Sulfone	74.1	63.3	P/P	57 - 126
Fonofos	84.4	92.6	P/P	65 - 111
Hexazinone	80.6	86.0	P/P	46 - 151
Malathion	93.0	93.7	P/P	68 - 132
Metaxyl	81.2	79.0	P/P	51 - 132
Metolachlor	90.0	92.6	P/P	78 - 119
Metribuzin	180	168	F/F	58 - 148
Mevinphos	71.1	70.9	P/P	34 - 128
Molinate	52.6	51.9	P/P	44 - 101
Norflurazon	81.2	73.3	P/P	63 - 129
Parathion Ethyl	90.1	92.3	P/P	80 - 109
Parathion Methyl	97.7	97.0	P/P	74 - 125
Pendimethalin	84.6	86.7	P/P	48 - 134
Phorate	74.1	80.5	P/P	52 - 119
Prometon	79.4	79.0	P/P	69 - 124
Prometryn	83.8	77.8	P/P	66 - 124
Simazine	95.3	91.2	P/P	61 - 134
Terbufos	84.9	90.6	P/P	58 - 115
Terbutylazine	91.4	92.6	P/P	77 - 113

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P330746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.1	49.5	P/P	26 - 88.0
Alpha-BHC	75.1	84.5	P/P	63 - 114
Alpha-Chlordane	85.0	85.1	P/P	56 - 117
Beta-BHC	91.6	101	P/P	57 - 138
Carbophenothion	75.6	84.1	P/P	36 - 148
Chlorothalonil	99.2	79.5	P/P	26 - 173
Cypermethrin	88.3	88.6	P/P	42 - 159
DDD-p,p'	92.7	92.1	P/P	62 - 126
DDE-p,p'	86.5	83.9	P/P	53 - 115
DDT-p,p'	79.8	83.9	P/P	54 - 117
Delta-BHC	118	123	P/P	68 - 158
Dicofol	42.2	44.9	P/P	25 - 114
Dieldrin	89.8	87.8	P/P	59 - 126
Endosulfan I	94.5	94.2	P/P	62 - 138
Endosulfan II	97.8	96.4	P/P	61 - 150
Endosulfan Sulfate	86.6	91.5	P/P	63 - 132
Endrin	66.7	90.4	P/P	49 - 148
Endrin Aldehyde	112	108	P/P	50 - 144
Endrin Ketone	96.5	86.6	P/P	66 - 122
Gamma-BHC	87.5	93.0	P/P	60 - 137
Gamma-Chlordane	83.8	83.3	P/P	54 - 113
Heptachlor	67.1	70.7	P/P	43 - 104
Heptachlor Epoxide	85.4	86.3	P/P	64 - 118
Methoxychlor	94.0	95.9	P/P	63 - 129
Mirex	64.8	66.1	P/P	39 - 93.0
Permethrin	76.5	76.3	P/P	51 - 123
Trifluralin	108	113	P/P	35 - 187

Reference Method: EPA 8276
Batch ID: P330746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	101	106	P/P	48 - 121
Toxaphene	108	118	P/P	43 - 135

Reference Method: EPA 8321B
Batch ID: P330487

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	110		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P330489

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	109		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P330492

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	118		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P330798

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

Reference Method: SM 4500 F-C-97
Batch ID: P330800

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P330770

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.2		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P330455

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	79.6		P	40 - 150
Acetaminophen	69.6		P	30 - 150
Bentazon	88.7		P	40 - 150
Carbamazepine	109		P	40 - 150
Diuron	121		P	40 - 150
Fenuron	105		P	40 - 150
Fluridone	110		P	40 - 150
Imidacloprid	114		P	40 - 160
Linuron	108		P	40 - 150
MCP	80.3		P	40 - 150
Primidone	104		P	40 - 150
Triclopyr	75.0		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P330602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.1		P	40 - 150
Acetaminophen	149		P	30 - 150
Bentazon	104		P	40 - 150
Carbamazepine	118		P	40 - 150
Diuron	109		P	40 - 150
Fenuron	123		P	40 - 150
Fluridone	87.3		P	40 - 150
Imidacloprid	131		P	40 - 160
Linuron	110		P	40 - 150
MCP	76.2		P	40 - 150
Primidone	116		P	40 - 150
Triclopyr	73.9		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922123	Calcium	103		P	80 - 120
1922123	Iron	109		P	80 - 120
1922123	Magnesium	103		P	80 - 120
1922123	Zinc	104		P	80 - 120
1922604	Calcium	104	105	P/P	80 - 120
1922604	Iron	107	108	P/P	80 - 120
1922604	Magnesium	106	108	P/P	80 - 120
1922604	Potassium	99.5	99.0	P/P	80 - 120
1922604	Sodium	98.5	98.2	P/P	80 - 120
1922604	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922123	Arsenic	111		P	80 - 120
1922123	Cadmium	100		P	80 - 120
1922123	Chromium	93.2		P	80 - 120
1922123	Copper	97.0		P	80 - 120
1922123	Nickel	99.5		P	80 - 120
1922123	Silver	102		P	80 - 120
1922604	Arsenic	102	103	P/P	80 - 120
1922604	Cadmium	101	101	P/P	80 - 120
1922604	Chromium	98.3	100	P/P	80 - 120
1922604	Copper	97.8	98.8	P/P	80 - 120
1922604	Nickel	99.0	101	P/P	80 - 120
1922604	Silver	105	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1925897	Lead	101		P	80 - 120
1926055	Lead	105	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330715

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922581	Chloride	97.7		P	90 - 110
1922770	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330717

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922581	Sulfate	97.8		P	90 - 110
1922770	Sulfate	98.1		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922554	Ammonia-N	97.3	97.6	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330757

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922708	Ammonia-N	100	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922583	Kjeldahl Nitrogen	106	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330647

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922800	Kjeldahl Nitrogen	92.3	94.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330777

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923253	Kjeldahl Nitrogen	98.0	95.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922563	NO2NO3-N	100	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922709	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922600	Total-P	93.0	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922710	Total-P	97.4	93.8	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922585	O-Phosphate-P	94.4	94.2	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P330463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1921573	Acetochlor	81.4	85.2	P/P	74 - 123
1921573	Alachlor	84.0	88.1	P/P	73 - 124
1921573	Ametryn	97.8	85.6	P/P	56 - 149
1921573	Atrazine Desethyl	81.3	33.3	P/P	12 - 103
1921573	Azinphos Methyl	89.9	78.5	P/P	60 - 202
1921573	Bromacil	96.0	48.5	P/P	42 - 133
1921573	Butylate	13.9	19.9	P/P	10 - 85.0
1921573	Chlorpyrifos Ethyl	85.1	83.6	P/P	53 - 113
1921573	Chlorpyrifos Methyl	79.5	79.6	P/P	40 - 115
1921573	Cyanazine	135	79.5	P/P	22 - 210
1921573	Demeton	68.0	70.3	P/P	17 - 149
1921573	Diazinon	82.4	88.7	P/P	72 - 124
1921573	Disulfoton	82.8	83.6	P/P	43 - 139
1921573	EPTC	13.2	21.3	P/P	10 - 86.0
1921573	Ethion	112	87.2	P/P	65 - 131
1921573	Ethoprop	61.2	67.5	P/P	59 - 110
1921573	Fenamiphos	73.4	63.4	P/P	57 - 138
1921573	Fipronil	84.7	33.8	P/F	40 - 130
1921573	Fipronil Sulfide	97.6	9.16	P/F	36 - 128
1921573	Fonofos	73.2	76.7	P/P	60 - 112
1921573	Hexazinone	111	18.2	P/F	69 - 142
1921573	Malathion	95.5	82.9	P/P	68 - 132
1921573	Metolachlor	88.5	89.4	P/P	71 - 124
1921573	Metribuzin	187	134	F/P	61 - 140
1921573	Mevinphos	57.8	61.5	P/P	38 - 130
1921573	Molinate	22.3	34.4	F/P	23 - 99.0
1921573	Norflurazon	79.9	48.1	P/P	39 - 139
1921573	Parathion Ethyl	91.4	81.0	P/P	75 - 111
1921573	Parathion Methyl	93.3	85.1	P/P	64 - 130
1921573	Pendimethalin	85.3	82.5	P/P	26 - 173
1921573	Phorate	53.3	61.4	P/P	43 - 127
1921573	Prometon	91.6	83.2	P/P	50 - 144
1921573	Prometryn	91.8	87.1	P/P	69 - 126
1921573	Simazine	96.2	81.5	P/P	51 - 152
1921573	Terbufos	71.4	77.2	P/P	54 - 125
1921573	Terbuthylazine	90.7	83.2	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P330746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923194	Aldrin	62.2	61.7	P/P	22 - 97.0
1923194	Alpha-BHC	82.8	94.4	P/P	43 - 132
1923194	Alpha-Chlordane	85.5	97.1	P/P	36 - 126
1923194	Beta-BHC	102	134	P/P	41 - 150
1923194	Carbophenothion	91.3	105	P/P	13 - 196

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P330746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1923194	Chlorothalonil	116	117	P/P	10 - 266
1923194	Cypermethrin	95.3	108	P/P	37 - 161
1923194	DDD-p,p'	89.9	109	P/P	44 - 131
1923194	DDE-p,p'	88.3	96.9	P/P	32 - 127
1923194	DDT-p,p'	81.4	88.1	P/P	45 - 116
1923194	Delta-BHC	143	164	P/P	50 - 201
1923194	Dicofol	23.2	36.3	P/P	10 - 100
1923194	Endosulfan I	99.9	113	P/P	51 - 139
1923194	Endosulfan II	103	121	P/P	49 - 155
1923194	Endosulfan Sulfate	77.4	104	P/P	54 - 136
1923194	Endrin	78.5	99.4	P/P	38 - 141
1923194	Endrin Aldehyde	68.3	118	P/P	14 - 152
1923194	Endrin Ketone	86.8	103	P/P	60 - 128
1923194	Gamma-BHC	117	110	P/P	48 - 157
1923194	Gamma-Chlordane	83.0	95.7	P/P	35 - 123
1923194	Heptachlor	67.7	70.8	P/P	25 - 112
1923194	Heptachlor Epoxide	92.4	106	P/P	48 - 125
1923194	Methoxychlor	90.7	99.2	P/P	52 - 127
1923194	Mirex	68.7	72.5	P/P	25 - 108
1923194	Permethrin	80.6	86.6	P/P	46 - 133
1923194	Trifluralin	140	156	P/P	29 - 254

Reference Method: EPA 8276
Batch ID: P330746

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922737	Chlordane	92.6	101	P/P	44 - 134
1922737	Toxaphene	104	109	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P330487

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922598	Pyraclostrobin	111	75.3	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P330489

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922118	Glyphosate	106	108	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P330492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922732	Sucralose	97.6	121	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P330800

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922707	Fluoride	97.5	98.2	P/P	91 - 105

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P330455

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922320	2,4-D	128	129	P/P	40 - 150
1922320	Acetaminophen	111	123	P/P	30 - 150
1922320	Bentazon	46.2	44.4	P/P	40 - 150
1922320	Carbamazepine	94.3	97.8	P/P	40 - 150
1922320	Diuron	65.8	74.5	P/P	40 - 150
1922320	Fenuron	58.9	57.3	P/P	40 - 150
1922320	Fluridone	37.2	35.9	F/F	40 - 150
1922320	Linuron	80.8	81.4	P/P	40 - 150
1922320	MCP	97.2	123	P/P	40 - 150
1922320	Primidone	98.2	91.4	P/P	40 - 150
1922320	Triclopyr	89.2	103	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P330602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1922735	2,4-D	114	97.9	P/P	40 - 150
1922735	Acetaminophen	157	137	F/P	30 - 150
1922735	Bentazon	57.0	59.5	P/P	40 - 150
1922735	Carbamazepine	127	130	P/P	40 - 150
1922735	Fenuron	76.9	74.8	P/P	40 - 150
1922735	Fluridone	80.7	75.2	P/P	40 - 150
1922735	Linuron	108	100	P/P	40 - 150
1922735	MCP	93.0	79.0	P/P	40 - 150
1922735	Primidone	115	113	P/P	40 - 150
1922735	Triclopyr	79.3	95.9	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922599	Turbidity	0.573	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P330526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922714	Turbidity	1.56	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922604	Calcium	0.983	Spike	P	0 - 20
1922604	Iron	0.974	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P330587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922604	Magnesium	1.37	Spike	P	0 - 20
1922604	Potassium	0.475	Spike	P	0 - 20
1922604	Sodium	0.202	Spike	P	0 - 20
1922604	Zinc	0.849	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P330587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922604	Arsenic	1.16	Spike	P	0 - 20
1922604	Cadmium	0.245	Spike	P	0 - 20
1922604	Chromium	1.78	Spike	P	0 - 20
1922604	Copper	0.941	Spike	P	0 - 20
1922604	Nickel	1.86	Spike	P	0 - 20
1922604	Silver	0.615	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P331017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1926055	Lead	0.0370	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330715

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922770	Chloride	1.44	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P330717

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922770	Sulfate	0.304	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922554	Ammonia-N	0.223	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P330757

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922708	Ammonia-N	0.0475	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922583	Kjeldahl Nitrogen	3.79	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330647

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922800	Kjeldahl Nitrogen	1.57	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P330777

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923253	Kjeldahl Nitrogen	1.94	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922563	NO2NO3-N	0.501	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P330617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922709	NO2NO3-N	0.332	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922600	Total-P	3.73	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P330622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922710	Total-P	2.67	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P330508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922585	O-Phosphate-P	0.212	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P330463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1921573	Acetochlor	4.52	Spike	P	0 - 30
1921573	Alachlor	4.86	Spike	P	0 - 30
1921573	Ametryn	13.2	Spike	P	0 - 30
1921573	Atrazine	24.6	Spike	P	0 - 30
1921573	Atrazine Desethyl	45.9	Spike	F	0 - 30
1921573	Azinphos Methyl	13.5	Spike	P	0 - 30
1921573	Bromacil	51.0	Spike	F	0 - 30
1921573	Butylate	35.3	Spike	F	0 - 30
1921573	Chlorpyrifos Ethyl	1.88	Spike	P	0 - 30
1921573	Chlorpyrifos Methyl	0.143	Spike	P	0 - 30
1921573	Cyanazine	51.6	Spike	F	0 - 30
1921573	Demeton	3.27	Spike	P	0 - 30
1921573	Diazinon	7.37	Spike	P	0 - 30
1921573	Disulfoton	0.966	Spike	P	0 - 30
1921573	EPTC	47.2	Spike	F	0 - 30
1921573	Ethion	24.5	Spike	P	0 - 30
1921573	Ethoprop	9.80	Spike	P	0 - 30
1921573	Fenamiphos	14.7	Spike	P	0 - 30
1921573	Fipronil	48.8	Spike	F	0 - 30
1921573	Fipronil Sulfide	66.3	Spike	F	0 - 30
1921573	Fipronil Sulfone	76.3	Spike	F	0 - 30
1921573	Fonofos	4.58	Spike	P	0 - 30
1921573	Hexazinone	63.4	Spike	F	0 - 30
1921573	Malathion	14.2	Spike	P	0 - 30
1921573	Metalaxyl	26.6	Spike	P	0 - 30
1921573	Metolachlor	0.958	Spike	P	0 - 30
1921573	Metribuzin	26.5	Spike	P	0 - 30
1921573	Mevinphos	6.34	Spike	P	0 - 30
1921573	Molinate	42.8	Spike	F	0 - 30
1921573	Norflurazon	49.6	Spike	F	0 - 30
1921573	Parathion Ethyl	12.1	Spike	P	0 - 30
1921573	Parathion Methyl	9.24	Spike	P	0 - 30
1921573	Pendimethalin	3.33	Spike	P	0 - 30
1921573	Phorate	14.1	Spike	P	0 - 30
1921573	Prometon	9.70	Spike	P	0 - 30
1921573	Prometryn	5.21	Spike	P	0 - 30
1921573	Simazine	16.6	Spike	P	0 - 30
1921573	Terbufos	7.82	Spike	P	0 - 30
1921573	Terbuthylazine	8.64	Spike	P	0 - 30
LFB	Acetochlor	3.39	LCS	P	0 - 30
LFB	Alachlor	2.93	LCS	P	0 - 30
LFB	Ametryn	7.44	LCS	P	0 - 30
LFB	Atrazine	0.0125	LCS	P	0 - 30
LFB	Atrazine Desethyl	16.8	LCS	P	0 - 30
LFB	Azinphos Methyl	6.38	LCS	P	0 - 30
LFB	Bromacil	12.3	LCS	P	0 - 30
LFB	Butylate	5.86	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.20	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.88	LCS	P	0 - 30
LFB	Cyanazine	2.69	LCS	P	0 - 30
LFB	Demeton	1.95	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P330463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	7.14	LCS	P	0 - 30
LFB	Disulfoton	1.80	LCS	P	0 - 30
LFB	EPTC	14.9	LCS	P	0 - 30
LFB	Ethion	0.691	LCS	P	0 - 30
LFB	Ethoprop	24.5	LCS	P	0 - 30
LFB	Fenamiphos	11.1	LCS	P	0 - 30
LFB	Fipronil	7.70	LCS	P	0 - 30
LFB	Fipronil Sulfide	12.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	15.7	LCS	P	0 - 30
LFB	Fonofos	9.30	LCS	P	0 - 30
LFB	Hexazinone	6.47	LCS	P	0 - 30
LFB	Malathion	0.760	LCS	P	0 - 30
LFB	Metaxyl	2.74	LCS	P	0 - 30
LFB	Metolachlor	2.86	LCS	P	0 - 30
LFB	Metribuzin	7.00	LCS	P	0 - 30
LFB	Mevinphos	0.284	LCS	P	0 - 30
LFB	Molinate	1.41	LCS	P	0 - 30
LFB	Norflurazon	10.3	LCS	P	0 - 30
LFB	Parathion Ethyl	2.45	LCS	P	0 - 30
LFB	Parathion Methyl	0.679	LCS	P	0 - 30
LFB	Pendimethalin	2.39	LCS	P	0 - 30
LFB	Phorate	8.32	LCS	P	0 - 30
LFB	Prometon	0.431	LCS	P	0 - 30
LFB	Prometryn	7.36	LCS	P	0 - 30
LFB	Simazine	4.33	LCS	P	0 - 30
LFB	Terbufos	6.43	LCS	P	0 - 30
LFB	Terbutylazine	1.26	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P330746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923194	Aldrin	0.764	Spike	P	0 - 30
1923194	Alpha-BHC	13.1	Spike	P	0 - 30
1923194	Alpha-Chlordane	11.7	Spike	P	0 - 30
1923194	Beta-BHC	27.6	Spike	P	0 - 30
1923194	Carbophenothion	13.6	Spike	P	0 - 30
1923194	Chlorothalonil	1.36	Spike	P	0 - 30
1923194	Cypermethrin	12.5	Spike	P	0 - 30
1923194	DDD-p,p'	18.7	Spike	P	0 - 30
1923194	DDE-p,p'	9.31	Spike	P	0 - 30
1923194	DDT-p,p'	7.97	Spike	P	0 - 30
1923194	Delta-BHC	13.1	Spike	P	0 - 30
1923194	Dicofol	44.1	Spike	F	0 - 30
1923194	Dieldrin	16.1	Spike	P	0 - 30
1923194	Endosulfan I	12.0	Spike	P	0 - 30
1923194	Endosulfan II	16.5	Spike	P	0 - 30
1923194	Endosulfan Sulfate	29.7	Spike	P	0 - 30
1923194	Endrin	23.5	Spike	P	0 - 30
1923194	Endrin Aldehyde	53.3	Spike	F	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P330746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1923194	Endrin Ketone	17.3	Spike	P	0 - 30
1923194	Gamma-BHC	5.92	Spike	P	0 - 30
1923194	Gamma-Chlordane	13.3	Spike	P	0 - 30
1923194	Heptachlor	4.58	Spike	P	0 - 30
1923194	Heptachlor Epoxide	14.1	Spike	P	0 - 30
1923194	Methoxychlor	8.95	Spike	P	0 - 30
1923194	Mirex	5.39	Spike	P	0 - 30
1923194	Permethrin	7.12	Spike	P	0 - 30
1923194	Trifluralin	10.8	Spike	P	0 - 30
LFB	Aldrin	0.641	LCS	P	0 - 30
LFB	Alpha-BHC	11.7	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.0879	LCS	P	0 - 30
LFB	Beta-BHC	10.0	LCS	P	0 - 30
LFB	Carbophenothion	10.6	LCS	P	0 - 30
LFB	Chlorothalonil	22.0	LCS	P	0 - 30
LFB	Cypermethrin	0.326	LCS	P	0 - 30
LFB	DDD-p,p'	0.604	LCS	P	0 - 30
LFB	DDE-p,p'	2.99	LCS	P	0 - 30
LFB	DDT-p,p'	4.93	LCS	P	0 - 30
LFB	Delta-BHC	3.44	LCS	P	0 - 30
LFB	Dicofol	6.15	LCS	P	0 - 30
LFB	Dieldrin	2.25	LCS	P	0 - 30
LFB	Endosulfan I	0.312	LCS	P	0 - 30
LFB	Endosulfan II	1.42	LCS	P	0 - 30
LFB	Endosulfan Sulfate	5.47	LCS	P	0 - 30
LFB	Endrin	30.0	LCS	F	0 - 30
LFB	Endrin Aldehyde	3.74	LCS	P	0 - 30
LFB	Endrin Ketone	10.7	LCS	P	0 - 30
LFB	Gamma-BHC	6.08	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.535	LCS	P	0 - 30
LFB	Heptachlor	5.09	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.11	LCS	P	0 - 30
LFB	Methoxychlor	2.00	LCS	P	0 - 30
LFB	Mirex	1.94	LCS	P	0 - 30
LFB	Permethrin	0.242	LCS	P	0 - 30
LFB	Trifluralin	5.03	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P330746

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922737	Chlordane	7.59	Spike	P	0 - 30
1922737	Toxaphene	4.14	Spike	P	0 - 30
LFB	Chlordane	4.76	LCS	P	0 - 30
LFB	Toxaphene	8.72	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P330487

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922598	Pyraclostrobin	38.4	Spike	F	0 - 30

Reference Method: EPA 8321B
Batch ID: P330489

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922118	Glyphosate	2.05	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P330492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922732	Sucralose	4.68	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P330530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922599	Color (true)	3.03	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P330531

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922714	Color (true)	2.09	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P330798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922707	Total Alkalinity	0.206	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P330965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922551	TDS	2.94	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P330966

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922714	TDS	3.46	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P330800

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922707	Fluoride	0.473	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P330770

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922563	Organic Carbon	0.401	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P330455

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922320	2,4-D	1.00	Spike	P	0 - 30
1922320	Acetaminophen	10.1	Spike	P	0 - 30
1922320	Bentazon	2.59	Spike	P	0 - 30
1922320	Carbamazepine	3.71	Spike	P	0 - 30
1922320	Diuron	11.9	Spike	P	0 - 30
1922320	Fenuron	2.79	Spike	P	0 - 30
1922320	Fluridone	3.50	Spike	P	0 - 30
1922320	Imidacloprid	10.4	Spike	P	0 - 30
1922320	Linuron	0.691	Spike	P	0 - 30
1922320	MCPP	23.1	Spike	P	0 - 30
1922320	Primidone	7.18	Spike	P	0 - 30
1922320	Triclopyr	13.9	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P330602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1922735	2,4-D	14.7	Spike	P	0 - 30
1922735	Acetaminophen	13.2	Spike	P	0 - 30
1922735	Bentazon	4.01	Spike	P	0 - 30
1922735	Carbamazepine	2.62	Spike	P	0 - 30
1922735	Diuron	18.6	Spike	P	0 - 30
1922735	Fenuron	2.74	Spike	P	0 - 30
1922735	Fluridone	7.01	Spike	P	0 - 30
1922735	Imidacloprid	5.59	Spike	P	0 - 30
1922735	Linuron	7.66	Spike	P	0 - 30
1922735	MCPP	16.2	Spike	P	0 - 30
1922735	Primidone	1.30	Spike	P	0 - 30
1922735	Triclopyr	19.0	Spike	P	0 - 30

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Quality Assurance Report Surrogates

Lab Sample ID: 1922732
Field Sample ID: G1NE0038 0817017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	148	P	30 - 160
EPA 8321B	Acetaminophen-d4	148	P	30 - 160
EPA 8321B	Carbamazepine-d10	125	P	30 - 160
EPA 8321B	Carbamazepine-d10	125	P	30 - 160
EPA 8321B	Diuron-d6	87.3	P	30 - 160
EPA 8321B	Diuron-d6	117	P	30 - 160
EPA 8321B	Diuron-d6	87.3	P	30 - 160
EPA 8321B	Diuron-d6	117	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	40 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	73.3	P	40 - 160
EPA 8321B	Sucralose-d6	73.3	P	40 - 160
USGS O-2060-01	2,4-D-d3	116	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	148	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	125	P	30 - 160
USGS O-2060-01	Diuron-d6	87.3	P	30 - 160
USGS O-2060-01	Diuron-d6	117	P	30 - 160
USGS O-2060-01	Primidone-d5	113	P	30 - 160
USGS O-2060-01	Sucralose-d6	73.3	P	40 - 160

Lab Sample ID: 1922733
Field Sample ID: G1NE0568 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	153	P	30 - 160
EPA 8321B	Carbamazepine-d10	99.2	P	30 - 160
EPA 8321B	Diuron-d6	62.2	P	30 - 160
EPA 8321B	Primidone-d5	91.7	P	30 - 160
EPA 8321B	Sucralose-d6	55.6	P	40 - 160
USGS O-2060-01	2,4-D-d3	135	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	153	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	99.2	P	30 - 160
USGS O-2060-01	Diuron-d6	62.2	P	30 - 160
USGS O-2060-01	Primidone-d5	91.7	P	30 - 160
USGS O-2060-01	Sucralose-d6	55.6	P	40 - 160

Lab Sample ID: 1922734
Field Sample ID: G1NE0083 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	95.0	P	30 - 160
EPA 8321B	Diuron-d6	69.2	P	30 - 160
EPA 8321B	Primidone-d5	98.1	P	30 - 160
EPA 8321B	Sucralose-d6	41.8	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	132	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	95.0	P	30 - 160
USGS O-2060-01	Diuron-d6	69.2	P	30 - 160
USGS O-2060-01	Primidone-d5	98.1	P	30 - 160
USGS O-2060-01	Sucralose-d6	41.8	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1922735
Field Sample ID: G1NE0856 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	135	P	30 - 160
EPA 8321B	Carbamazepine-d10	140	P	30 - 160
EPA 8321B	Diuron-d6	101	P	30 - 160
EPA 8321B	Primidone-d5	127	P	30 - 160
EPA 8321B	Sucralose-d6	63.7	P	40 - 160
USGS O-2060-01	2,4-D-d3	117	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	135	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	140	P	30 - 160
USGS O-2060-01	Diuron-d6	101	P	30 - 160
USGS O-2060-01	Primidone-d5	127	P	30 - 160
USGS O-2060-01	Sucralose-d6	63.7	P	40 - 160

Lab Sample ID: 1922736
Field Sample ID: G1NE0871 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	117	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	74.2	P	30 - 160
EPA 8321B	Primidone-d5	114	P	30 - 160
EPA 8321B	Sucralose-d6	55.6	P	40 - 160
EPA 8321B	Sucralose-d6	61.5	P	40 - 160
USGS O-2060-01	2,4-D-d3	130	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	117	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	106	P	30 - 160
USGS O-2060-01	Diuron-d6	74.2	P	30 - 160
USGS O-2060-01	Primidone-d5	114	P	30 - 160
USGS O-2060-01	Sucralose-d6	55.6	P	40 - 160
USGS O-2060-01	Sucralose-d6	61.5	P	40 - 160

Lab Sample ID: 1922737
Field Sample ID: G1NE0038 0817017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	75.9	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	48.3	P	32 - 103
EPA 8276	Decachlorobiphenyl	77.8	P	31 - 100

Lab Sample ID: 1922738
Field Sample ID: G1NE0038 0817017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	70.7	P	53 - 135
EPA 8270D	Simazine-d10	99.1	P	71 - 126

Lab Sample ID: 1922797
Field Sample ID: G1NE0557 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	159	P	30 - 160
EPA 8321B	Carbamazepine-d10	76.7	P	30 - 160
EPA 8321B	Diuron-d6	59.6	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1922797
Field Sample ID: G1NE0557 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Primidone-d5	69.1	P	30 - 160
EPA 8321B	Sucralose-d6	54.2	P	40 - 160
USGS O-2060-01	2,4-D-d3	111	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	159	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	76.7	P	30 - 160
USGS O-2060-01	Diuron-d6	59.6	P	30 - 160
USGS O-2060-01	Primidone-d5	69.1	P	30 - 160
USGS O-2060-01	Sucralose-d6	54.2	P	40 - 160

Lab Sample ID: 1922798
Field Sample ID: G1NE0591 08162017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	122	P	30 - 160
EPA 8321B	Carbamazepine-d10	124	P	30 - 160
EPA 8321B	Diuron-d6	96.5	P	30 - 160
EPA 8321B	Primidone-d5	88.9	P	30 - 160
EPA 8321B	Sucralose-d6	57.8	P	40 - 160
USGS O-2060-01	2,4-D-d3	126	P	40 - 160
USGS O-2060-01	Acetaminophen-d4	122	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	124	P	30 - 160
USGS O-2060-01	Diuron-d6	96.5	P	30 - 160
USGS O-2060-01	Primidone-d5	88.9	P	30 - 160
USGS O-2060-01	Sucralose-d6	57.8	P	40 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A78508
Included Lab Sample IDs: 1922711, 1922712, 1922713, 1922716, 1922793, 1922794

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.4	97.7	P/P	90 - 110
O-Phosphate-P	96.7	97.5	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A78515
Included Lab Sample IDs: 1922705, 1922706, 1922707, 1922714, 1922783, 1922784

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

Reference Method: SM 2120 B
Run ID: A78517
Included Lab Sample IDs: 1922705, 1922706, 1922707, 1922714, 1922783, 1922784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	85 - 115
Color (true)	101	100	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A78546

Included Lab Sample IDs: 1922732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	94.9	106	P/P	70 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78554

Included Lab Sample IDs: 1922708, 1922709, 1922710, 1922715, 1922791, 1922792

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78569

Included Lab Sample IDs: 1922791, 1922792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78578

Included Lab Sample IDs: 1922708, 1922709, 1922710, 1922715, 1922792

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78584

Included Lab Sample IDs: 1922705, 1922706, 1922707, 1922714, 1922783, 1922784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.9	98.9	P/P	90 - 110
Chloride	98.9	99.1	P/P	90 - 110
Sulfate	98.2	99.4	P/P	90 - 110
Sulfate	99.4	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78593

Included Lab Sample IDs: 1922708, 1922709, 1922710, 1922715, 1922791, 1922792

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.9	P/P	90 - 110
Ammonia-N	96.9	96.5	P/P	90 - 110
Ammonia-N	99.9	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78595

Included Lab Sample IDs: 1922791

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.5	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A78598

Included Lab Sample IDs: 1922708, 1922709, 1922710, 1922715, 1922791, 1922792

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78599

Included Lab Sample IDs: 1922709, 1922710, 1922715

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A78604

Included Lab Sample IDs: 1922705, 1922706, 1922707, 1922714, 1922783, 1922784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A78604

Included Lab Sample IDs: 1922705, 1922706, 1922707, 1922714, 1922783, 1922784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78607

Included Lab Sample IDs: 1922739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	98.3	99.9	P/P	90 - 110
Iron	102	102	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	98.3	97.5	P/P	90 - 110
Sodium	95.0	95.9	P/P	90 - 110
Zinc	100	98.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78612

Included Lab Sample IDs: 1922739

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.4	96.9	P/P	90 - 110
Cadmium	99.5	97.9	P/P	90 - 110
Chromium	98.0	96.9	P/P	90 - 110
Copper	98.3	97.2	P/P	90 - 110
Nickel	97.7	96.5	P/P	90 - 110
Silver	96.9	94.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78615

Included Lab Sample IDs: 1922708

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A78635

Included Lab Sample IDs: 1922732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	97.3	103	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A78635

Included Lab Sample IDs: 1922732, 1922733, 1922734, 1922735, 1922736, 1922797, 1922798

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	98.3	P/P	50 - 150
2,4-D	88.5	96.3	P/P	50 - 150
2,4-D	91.7	88.5	P/P	50 - 150
2,4-D	96.3	87.7	P/P	50 - 150
Acetaminophen	109	117	P/P	60 - 150
Acetaminophen	117	129	P/P	60 - 150
Acetaminophen	129	119	P/P	60 - 150
Bentazon	108	131	P/P	50 - 150
Bentazon	120	123	P/P	50 - 150
Bentazon	123	108	P/P	50 - 150
Carbamazepine	108	109	P/P	60 - 150
Carbamazepine	109	122	P/P	60 - 150
Carbamazepine	122	96.2	P/P	60 - 150
Diuron	106	114	P/P	60 - 150
Diuron	112	105	P/P	60 - 150
Diuron	114	112	P/P	60 - 150
Fenuron	109	116	P/P	60 - 150
Fenuron	110	109	P/P	60 - 150
Fenuron	110	110	P/P	60 - 150
Fluridone	101	114	P/P	60 - 160
Fluridone	106	101	P/P	60 - 160
Fluridone	121	106	P/P	60 - 160
Imidacloprid	123	132	P/P	60 - 150
Imidacloprid	128	121	P/P	60 - 150
Imidacloprid	132	128	P/P	60 - 150
Linuron	106	111	P/P	60 - 150
Linuron	111	118	P/P	60 - 150
Linuron	118	141	P/P	60 - 150
MCPP	83.2	87.7	P/P	50 - 150
MCPP	86.3	83.2	P/P	50 - 150
MCPP	87.7	105	P/P	50 - 150
Primidone	103	109	P/P	60 - 150
Primidone	109	99.6	P/P	60 - 150
Primidone	115	103	P/P	60 - 150
Triclopyr	100	95.8	P/P	50 - 160
Triclopyr	100	100	P/P	50 - 160
Triclopyr	92.0	100	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
 Run ID: A78688
 Included Lab Sample IDs: 1922738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	107		P	80 - 120
Ametryn	96.9		P	80 - 120
Atrazine	96.5		P	80 - 120
Atrazine Desethyl	94.9		P	80 - 120
Azinphos Methyl	98.7		P	80 - 120
Bromacil	97.3		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	94.6		P	80 - 120
Demeton	98.5		P	80 - 120
Diazinon	101		P	80 - 120
Disulfoton	95.7		P	80 - 120
EPTC	105		P	80 - 120
Ethion	97.7		P	80 - 120
Ethoprop	103		P	80 - 120
Fenamiphos	96.8		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Sulfide	97.6		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	99.4		P	80 - 120
Malathion	98.4		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	103		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	109		P	80 - 120
Norflurazon	102		P	80 - 120
Parathion Ethyl	95.4		P	80 - 120
Parathion Methyl	97.1		P	80 - 120
Pendimethalin	91.4		P	80 - 120
Phorate	99.1		P	80 - 120
Prometon	96.9		P	80 - 120
Prometryn	98.9		P	80 - 120
Simazine	102		P	80 - 120
Terbufos	97.3		P	80 - 120
Terbuthylazine	101		P	80 - 120

Reference Method: EPA 8270D
 Run ID: A78694
 Included Lab Sample IDs: 1922738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexazinone	98.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A78716
 Included Lab Sample IDs: 1922739

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78716

Included Lab Sample IDs: 1922739

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

Reference Method: EPA 8321B

Run ID: A78750

Included Lab Sample IDs: 1922732, 1922733, 1922734, 1922735, 1922736, 1922797, 1922798

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	117	119	P/P	60 - 150
Sucralose	119	121	P/P	60 - 150

Reference Method: EPA 8276

Run ID: A78764

Included Lab Sample IDs: 1922737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	110		P	80 - 120

Reference Method: EPA 8270D

Run ID: A78789

Included Lab Sample IDs: 1922737

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.5		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	97.7		P	80 - 120
Beta-BHC	97.6		P	80 - 120
Carbophenothion	95.7		P	80 - 120
Chlorothalonil	104		P	80 - 120
Cypermethrin	95.5		P	80 - 120
DDD-p,p'	99.4		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	106		P	80 - 120
Delta-BHC	94.4		P	80 - 120
Dicofol	98.8		P	80 - 120
Dieldrin	97.2		P	80 - 120
Endosulfan I	98.2		P	80 - 120
Endosulfan II	92.9		P	80 - 120
Endosulfan Sulfate	92.2		P	80 - 120
Endrin	91.9		P	80 - 120
Endrin Aldehyde	89.4		P	80 - 120
Endrin Ketone	93.5		P	80 - 120
Gamma-BHC	103		P	80 - 120
Gamma-Chlordane	97.3		P	80 - 120
Heptachlor	94.2		P	80 - 120
Heptachlor Epoxide	99.6		P	80 - 120
Methoxychlor	103		P	80 - 120
Mirex	98.7		P	80 - 120
Permethrin	95.3		P	80 - 120
Trifluralin	96.7		P	80 - 120

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			Precision		
							LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							0.573	
	Turbidity							1.56	
EPA 200.7 Rev. 4.4	Calcium	106		103	104	105			0.983
	Iron	106		109	107	108			0.974
	Magnesium	107		103	106	108			1.37
	Potassium	99.6		99.5	99.0				0.475
	Sodium	100		98.5	98.2				0.202
	Zinc	99.5		104	101	102			0.849
EPA 200.8 Rev. 5.4	Arsenic	106		111	102	103			1.16
	Cadmium	99.4		100	101	101			0.245
	Chromium	99.0		93.2	98.3	100			1.78
	Copper	99.8		97.0	97.8	98.8			0.941
	Lead	100		101	105	105			0.0370
	Nickel	103		99.5	99.0	101			1.86
	Silver	104		102	105	104			0.615
EPA 300.0 Rev. 2.1	Chloride	99.7		99.0	97.7			1.44	
	Sulfate	99.0		98.1	97.8			0.304	
EPA 350.1 Rev. 2.0	Ammonia-N	100		97.3	97.6				0.223
	Ammonia-N	101		100	100				0.0475
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106		106	102				3.79
	Kjeldahl Nitrogen	99.1		92.3	94.6				1.57
	Kjeldahl Nitrogen	100		98.0	95.2				1.94
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	106		100	99.5				0.501
	NO ₂ NO ₃ -N	106		101	100				0.332
EPA 365.1 Rev. 2.0	Total-P	100		93.0	96.9				3.73
	Total-P	97.8		97.4	93.8				2.67
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	95.4		94.4	94.2				0.212
EPA 8270D	Acetochlor	87.8	90.8	81.4	85.2	3.39			4.52
	Alachlor	89.4	92.0	84.0	88.1	2.93			4.86
	Aldrin	49.5	49.1	62.2	61.7	0.641			0.764
	Alpha-BHC	84.5	75.1	82.8	94.4	11.7			13.1
	Alpha-Chlordane	85.1	85.0	85.5	97.1	0.0879			11.7
	Ametryn	76.7	82.7	97.8	85.6	7.44			13.2
	Atrazine	94.7	94.7			0.0125			24.6
	Atrazine Desethyl	90.8	76.7	81.3	33.3	16.8			45.9
	Azinphos Methyl	108	102	89.9	78.5	6.38			13.5
	Beta-BHC	91.6	101	102	134	10.0			27.6
	Bromacil	91.3	80.7	96.0	48.5	12.3			51.0
	Butylate	41.6	44.1	19.9	13.9	5.86			35.3
	Carbophenothion	75.6	84.1	91.3	105	10.6			13.6
	Chlorothalonil	99.2	79.5	116	117	22.0			1.36
	Chlorpyrifos Ethyl	92.1	89.2	85.1	83.6	3.20			1.88
	Chlorpyrifos Methyl	91.8	93.5	79.5	79.6	1.88			0.143
	Cyanazine	178	182	135	79.5	2.69			51.6
	Cypermethrin	88.3	88.6	95.3	108	0.326			12.5
	DDD-p,p'	92.7	92.1	89.9	109	0.604			18.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	DDE-p,p'	83.9	86.5	88.3	96.9	2.99	9.31
	DDT-p,p'	83.9	79.8	81.4	88.1	4.93	7.97
	Delta-BHC	118	123	143	164	3.44	13.1
	Demeton	82.3	80.7	68.0	70.3	1.95	3.27
	Diazinon	90.9	97.7	82.4	88.7	7.14	7.37
	Dicofol	42.2	44.9	23.2	36.3	6.15	44.1
	Dieldrin	87.8	89.8			2.25	16.1
	Disulfoton	96.0	97.8	82.8	83.6	1.80	0.966
	Endosulfan I	94.2	94.5	99.9	113	0.312	12.0
	Endosulfan II	96.4	97.8	103	121	1.42	16.5
	Endosulfan Sulfate	91.5	86.6	77.4	104	5.47	29.7
	Endrin	90.4	66.7	78.5	99.4	30.0	23.5
	Endrin Aldehyde	108	112	68.3	118	3.74	53.3
	Endrin Ketone	86.6	96.5	86.8	103	10.7	17.3
	EPTC	40.5	47.0	13.2	21.3	14.9	47.2
	Ethion	91.9	92.5	112	87.2	0.691	24.5
	Ethoprop	69.3	88.6	61.2	67.5	24.5	9.80
	Fenamiphos	89.6	80.2	73.4	63.4	11.1	14.7
	Fipronil	85.5	79.1	84.7	33.8	7.70	48.8
	Fipronil Sulfide	83.4	74.0	97.6	9.16	12.0	66.3
	Fipronil Sulfone	74.1	63.3			15.7	76.3
	Fonofos	84.4	92.6	73.2	76.7	9.30	4.58
	Gamma-BHC	87.5	93.0	117	110	6.08	5.92
	Gamma-Chlordane	83.3	83.8	83.0	95.7	0.535	13.3
	Heptachlor	70.7	67.1	67.7	70.8	5.09	4.58
	Heptachlor Epoxide	86.3	85.4	92.4	106	1.11	14.1
	Hexazinone	80.6	86.0	111	18.2	6.47	63.4
	Malathion	93.0	93.7	95.5	82.9	0.760	14.2
	Metalaxyl	81.2	79.0			2.74	26.6
	Methoxychlor	95.9	94.0	90.7	99.2	2.00	8.95
	Metolachlor	90.0	92.6	88.5	89.4	2.86	0.958
	Metribuzin	180	168	187	134	7.00	26.5
	Mevinphos	71.1	70.9	57.8	61.5	0.284	6.34
	Mirex	66.1	64.8	68.7	72.5	1.94	5.39
	Molinate	52.6	51.9	22.3	34.4	1.41	42.8
	Norflurazon	81.2	73.3	79.9	48.1	10.3	49.6
	Parathion Ethyl	90.1	92.3	91.4	81.0	2.45	12.1
	Parathion Methyl	97.7	97.0	93.3	85.1	0.679	9.24
	Pendimethalin	84.6	86.7	85.3	82.5	2.39	3.33
	Permethrin	76.3	76.5	80.6	86.6	0.242	7.12
	Phorate	74.1	80.5	53.3	61.4	8.32	14.1
	Prometon	79.4	79.0	91.6	83.2	0.431	9.70
	Prometryn	83.8	77.8	91.8	87.1	7.36	5.21
	Simazine	95.3	91.2	81.5	96.2	4.33	16.6
	Terbufos	84.9	90.6	71.4	77.2	6.43	7.82
	Terbutylazine	91.4	92.6	90.7	83.2	1.26	8.64
	Trifluralin	113	108	140	156	5.03	10.8
EPA 8276	Chlordane	101	106	92.6	101	4.76	7.59
	Toxaphene	108	118	104	109	8.72	4.14
EPA 8321B	Glyphosate	109		106	108		2.05
	Pyraclostrobin	110		111	75.3		38.4
	Sucralose	118		97.6	121		4.68
SM 2120 B	Color (true)					3.03	
	Color (true)					2.09	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2320 B-97	Total Alkalinity	103				0.206	
SM 2540 C-97	TDS					2.94	
	TDS					3.46	
SM 4500 F-C-97	Fluoride	96.2	97.5	98.2			0.473
SM 5310 B-00	Organic Carbon	97.2					0.401
USGS O-2060-01	2,4-D	79.6	128	129			1.00
	2,4-D	74.1	114	97.9			14.7
	Acetaminophen	69.6	111	123			10.1
	Acetaminophen	149	157	137			13.2
	Bentazon	88.7	46.2	44.4			2.59
	Bentazon	104	57.0	59.5			4.01
	Carbamazepine	109	94.3	97.8			3.71
	Carbamazepine	118	127	130			2.62
	Diuron	121	65.8	74.5			11.9
	Diuron	109					18.6
	Fenuron	105	58.9	57.3			2.79
	Fenuron	123	76.9	74.8			2.74
	Fluridone	110	37.2	35.9			3.50
	Fluridone	87.3	80.7	75.2			7.01
	Imidacloprid	114					10.4
	Imidacloprid	131					5.59
	Linuron	108	80.8	81.4			0.691
	Linuron	110	108	100			7.66
	MCP	80.3	97.2	123			23.1
	MCP	76.2	79.0	93.0			16.2
	Primidone	104	98.2	91.4			7.18
	Primidone	116	115	113			1.30
	Triclopyr	75.0	89.2	103			13.9
	Triclopyr	73.9	79.3	95.9			19.0

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1922739
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1922739
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1922711, 1922712, 1922713, 1922716, 1922793, 1922794
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1922737

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1922738
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1922737
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1922732, 1922733, 1922734, 1922735, 1922736, 1922797, 1922798
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1922732
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1922732
SM 2120 B / E31780	True Color measured at 450 nm	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1922732, 1922733, 1922734, 1922735, 1922736, 1922797, 1922798
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1922732, 1922733, 1922734, 1922735, 1922736, 1922797, 1922798

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	08/18/2017			08/18/2017 17:28	Tanya Welborn	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
EPA 200.7 Rev. 4.4	08/18/2017	08/21/2017	Elliott D. Healy	08/23/2017	Betina Topolski	1922739
EPA 200.8 Rev. 5.4	08/18/2017	08/21/2017	Elliott D. Healy	08/24/2017	Nadine Brooks	1922739
	08/18/2017	08/29/2017	Elliott D. Healy	08/30/2017	Nadine Brooks	1922739
EPA 300.0 Rev. 2.1	08/18/2017			08/22/2017	Julia Storbeck	1922783, 1922784
	08/18/2017			08/23/2017	Julia Storbeck	1922705, 1922706, 1922707, 1922714
EPA 350.1 Rev. 2.0	08/18/2017			08/23/2017	Sofia Elnemr	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 351.2 Rev. 2.0	08/18/2017	08/21/2017	Adrian Shelby	08/22/2017	Joseph Suarez	1922791, 1922792
	08/18/2017	08/23/2017	Adrian Shelby	08/24/2017	Joseph Suarez	1922709, 1922710, 1922715
	08/18/2017	08/24/2017	Adrian Shelby	08/25/2017	Joseph Suarez	1922708
EPA 353.2 Rev. 2.0	08/18/2017			08/22/2017	Beverly Y. Sanders	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 365.1 Rev. 2.0	08/18/2017	08/22/2017	Sima Feizi	08/23/2017	Lipi Saha	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
EPA 365.1 Rev. 2.0 dissolved	08/18/2017			08/18/2017 13:50	Megan Treadwell	1922793
	08/18/2017			08/18/2017 13:51	Megan Treadwell	1922713
	08/18/2017			08/18/2017 14:15	Megan Treadwell	1922794
	08/18/2017			08/18/2017 14:16	Megan Treadwell	1922712, 1922716
	08/18/2017			08/18/2017 14:17	Megan Treadwell	1922711
EPA 8270D	08/18/2017	08/18/2017	John Kaba	08/24/2017	Irina Carbone	1922738
	08/18/2017	08/18/2017	John Kaba	08/25/2017	Irina Carbone	1922738
	08/18/2017	08/24/2017	John Kaba	08/31/2017	Marek Topolski	1922737
EPA 8276	08/18/2017	08/24/2017	John Kaba	08/31/2017	Vandana T. Nagar	1922737
EPA 8321B	08/18/2017	08/21/2017	Julie Michelle Frank	08/21/2017	Julie Michelle Frank	1922732
	08/18/2017	08/22/2017	Hoor Shaik	08/24/2017	Julie Michelle Frank	1922732
	08/18/2017	08/25/2017	Hoor Shaik	09/01/2017	Julie Michelle Frank	1922732, 1922733, 1922734, 1922735, 1922797, 1922798
	08/18/2017	08/30/2017	Hoor Shaik	09/01/2017	Julie Michelle Frank	1922736
SM 2120 B	08/18/2017			08/18/2017 15:54	Tanya Welborn	1922783
	08/18/2017			08/18/2017 15:57	Tanya Welborn	1922707
	08/18/2017			08/18/2017 16:02	Tanya Welborn	1922714
	08/18/2017			08/18/2017 16:06	Tanya Welborn	1922784
	08/18/2017			08/18/2017 16:07	Tanya Welborn	1922705, 1922706
SM 2320 B-97	08/18/2017			08/23/2017	Dale L. Simmons	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 2540 C-97	08/18/2017			08/23/2017	Yijie Li	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 2540 D-97	08/18/2017			08/23/2017	Yijie Li	1922705, 1922706, 1922707, 1922714, 1922783, 1922784

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-97	08/18/2017			08/23/2017	Dale L. Simmons	1922705, 1922706, 1922707, 1922714, 1922783, 1922784
SM 5310 B-00	08/18/2017			08/24/2017	Ping Hua	1922708, 1922709, 1922710, 1922715, 1922791, 1922792
USGS O-2060-01	08/18/2017	08/22/2017	Hoor Shaik	08/24/2017	Juyoung Kim	1922732
	08/18/2017	08/23/2017	Hoor Shaik	08/25/2017	Juyoung Kim	1922733, 1922734, 1922735, 1922736, 1922797, 1922798
	08/18/2017	08/23/2017	Hoor Shaik	08/28/2017	Juyoung Kim	1922734