

Chemical Analysis Report

SE-DIST-2018-01-25-01

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

Event Description: **SMP- Okeechobee Run**

Request ID: **RQ-2018-01-15-46**

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: 15-FEB-2018 12:02



NON-CONFORMANCE REPORT INCLUDED

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: Otter Creek @ 441

Collection Date/Time: 01/24/2018 10:00

Field ID: G1SE0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962119	EPA 8321B	Sucralose**	0.11		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338801	
		Diuron	0.0020	U	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.0020	U	ug/L	P338801	MS
		Bentazon	8.0E-04	U	ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.017	I	ug/L	P338801	
		MCP	0.0020	U	ug/L	P338801	
		Carbamazepine**	4.0E-04	U	ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	4.0E-04	U	ug/L	P338801	

Sample Location: Otter Creek @ 68

Collection Date/Time: 01/24/2018 10:15

Field ID: G1SE0009

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962120	EPA 8321B	Sucralose**	0.072		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338801	
		Diuron	0.0020	U	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.0020	UJ	ug/L	P338801	MS
		Bentazon	8.0E-04	U	ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.020	I	ug/L	P338801	
		MCP	0.0020	U	ug/L	P338801	
		Carbamazepine**	9.0E-04	I	ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	4.0E-04	U	ug/L	P338801	

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

Sample Location: Taylor Creek @ 441

Collection Date/Time: 01/24/2018 10:40

Field ID: G1SE0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962034	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P338807	
	EPA 300.0 Rev. 2.1	Chloride	69		mg Cl/L	P338912	
		Sulfate	76	Y	mg SO4/L	P338914	
	SM 2120 B	Color (true)	48		PCU	P338809	
	SM 2320 B-97	Total Alkalinity	93	Y	mg CaCO3/L	P339015	
	SM 2540 C-97	TDS	358	AY	mg/L	P339124	
	SM 2540 D-97	TSS	5	IAY	mg/L	P339063	

Field ID: G1SE0008

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962034	SM 4500 F-C-97	Fluoride	0.099	I	mg F/L	P339020	
1962036	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P339121	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P338830	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.017		mg N/L	P338965	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P338956	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P339209	
1962038	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.010		mg P/L	P338842	
1962121	EPA 8321B	Sucralose**	0.13		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338801	
		Diuron	0.0020	U	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.0020	U	ug/L	P338801	MS
		Bentazon	8.0E-04	U	ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.0080	U	ug/L	P338801	
		MCP	0.0020	U	ug/L	P338801	
		Carbamazepine**	4.0E-04	U	ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	4.0E-04	U	ug/L	P338801	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

Sample Location: Popash @ 70

Collection Date/Time: 01/24/2018 11:15

Field ID: G1SE0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962040	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P338808	
	EPA 300.0 Rev. 2.1	Chloride	450		mg Cl/L	P338912	
		Sulfate	110	Y	mg SO4/L	P338914	
	SM 2120 B	Color (true)	230		PCU	P338809	
	SM 2320 B-97	Total Alkalinity	54	Y	mg CaCO3/L	P339015	
	SM 2540 C-97	TDS	1.00E+03	Y	mg/L	P339124	
	SM 2540 D-97	TSS	40	Y	mg/L	P339063	
	SM 4500 F-C-97	Fluoride	0.15		mg F/L	P339020	
1962041	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P339285	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.7		mg N/L	P338830	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P338965	
	EPA 365.1 Rev. 2.0	Total-P	0.61		mg P/L	P338956	
	SM 5310 B-00	Organic Carbon	30		mg C/L	P339209	
1962042	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.33		mg P/L	P338841	

Field ID: G1SE0007

Matrix: W-SURF-FRH

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

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

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

Sample Location: Taylor Creek @ 70

Collection Date/Time: 01/24/2018 12:15

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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1962035	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P338807	
	EPA 300.0 Rev. 2.1	Chloride	61		mg Cl/L	P338912	
		Sulfate	48	Y	mg SO4/L	P338914	
	SM 2120 B	Color (true)	89		PCU	P338809	
	SM 2320 B-97	Total Alkalinity	160	Y	mg CaCO3/L	P339015	
	SM 2540 C-97	TDS	378	Y	mg/L	P339124	
	SM 2540 D-97	TSS	5	IY	mg/L	P339063	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P339020	
1962037	EPA 350.1 Rev. 2.0	Ammonia-N	0.43		mg N/L	P339285	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P338830	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.63		mg N/L	P338965	
	EPA 365.1 Rev. 2.0	Total-P	0.18		mg P/L	P338956	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P339209	
1962039	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.089		mg P/L	P338842	
1962122	EPA 8321B	Sucralose**	0.45		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.0080	I	ug/L	P338801	
		Diuron	0.0020	U	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.0032	I	ug/L	P338801	MS
		Bentazon	0.0083		ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.0080	U	ug/L	P338801	
		MCP	0.0020	U	ug/L	P338801	
		Carbamazepine**	0.0019		ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	4.0E-04	U	ug/L	P338801	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

Sample Location: Mosquito Creek @ 70

Collection Date/Time: 01/24/2018 12:45

Field ID: G1SE0010

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962123	EPA 8321B	Sucralose**	0.33		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.0040	I	ug/L	P338801	
		Diuron	0.0020	U	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.0020	U	ug/L	P338801	MS
		Bentazon	0.0042		ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.0080	U	ug/L	P338801	
		MCP	0.0020	U	ug/L	P338801	
		Carbamazepine**	4.0E-04	U	ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	4.0E-04	U	ug/L	P338801	

Sample Location: Mosquito Creek @ 710

Collection Date/Time: 01/24/2018 13:00

Field ID: G1SE0005

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962124	EPA 8321B	Sucralose**	0.30		ug/L	P338739	
	USGS O-2060-01	2,4-D	0.031		ug/L	P338801	
		Diuron	0.0032	I	ug/L	P338801	
		Fenuron	0.0080	U	ug/L	P338801	
		Imidacloprid	0.0020	U	ug/L	P338801	MS
		Bentazon	0.0035		ug/L	P338801	
		Linuron	0.0040	U	ug/L	P338801	
		Acetaminophen**	0.0080	U	ug/L	P338801	
		MCP	0.0020	U	ug/L	P338801	
		Carbamazepine**	4.0E-04	U	ug/L	P338801	
		Triclopyr**	0.0040	U	ug/L	P338801	
		Primidone**	0.0040	U	ug/L	P338801	
		Fluridone**	4.0E-04	U	ug/L	P338801	

Sample Location: Site in Nubbin Slough

Collection Date/Time: 01/24/2018 13:30

Field ID: G1SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962049	EPA 180.1 Rev. 2.0	Turbidity	8.6		NTU	P338808	
	EPA 300.0 Rev. 2.1	Chloride	46		mg Cl/L	P338912	
		Sulfate	21	Y	mg SO4/L	P338914	
	SM 2120 B	Color (true)	250		PCU	P338809	
	SM 2320 B-97	Total Alkalinity	46	Y	mg CaCO3/L	P339015	
	SM 2540 C-97	TDS	234	Y	mg/L	P339124	
	SM 2540 D-97	TSS	6	IY	mg/L	P339063	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P339020	
		Ammonia-N	0.40		mg N/L	P339285	
1962050	EPA 350.1 Rev. 2.0	Ammonia-N	0.40		mg N/L	P339285	

Field ID: G1SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962050	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.1		mg N/L	P338830	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.6		mg N/L	P338965	
	EPA 365.1 Rev. 2.0	Total-P	0.44		mg P/L	P338956	
	SM 5310 B-00	Organic Carbon	32		mg C/L	P339209	
1962051	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P338842	
1962125	EPA 8321B	Glyphosate**	0.13	I	ug/L	P338691	
		AMPA**	0.10	U	ug/L	P338691	
		Pyraclostrobin**	0.0020	U	ug/L	P338701	
		Sucralose**	0.010	I	ug/L	P338739	
	USGS O-2060-01	2,4-D	0.0020	U	ug/L	P338701	
		Diuron	0.0022	I	ug/L	P338701	
		Fenuron	0.0080	U	ug/L	P338701	
		Imidacloprid	0.0020	U	ug/L	P338701	MS
		Bentazon	8.0E-04	U	ug/L	P338701	
		Linuron	0.0040	U	ug/L	P338701	
		Acetaminophen**	0.0080	U	ug/L	P338701	
		MCP	0.0020	U	ug/L	P338701	
		Carbamazepine**	4.0E-04	U	ug/L	P338701	
		Triclopyr**	0.0040	U	ug/L	P338701	
		Primidone**	0.0040	U	ug/L	P338701	
		Fluridone**	4.0E-04	U	ug/L	P338701	
	EPA 8321B	Aldicarb	0.020	U	ug/L	P338701	
		Aldicarb Sulfone	0.0020	U	ug/L	P338701	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P338701	
		Carbaryl	0.0020	U	ug/L	P338701	
		Carbofuran	0.0020	U	ug/L	P338701	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P338701	
		Methiocarb	0.0020	U	ug/L	P338701	
		Methomyl	0.0020	U	ug/L	P338701	
		Oxamyl	0.0020	U	ug/L	P338701	
		Propoxur	0.0020	U	ug/L	P338701	
	EPA 200.7 Rev. 4.4	Calcium	18.9		mg/L	P338791	
		Iron	1.11E+03		ug/L	P338791	
		Magnesium	5.66		mg/L	P338791	
		Potassium	22.8		mg/L	P338791	
		Sodium	29.3		mg/L	P338791	
		Zinc	6.4	I	ug/L	P338791	
	EPA 200.8 Rev. 5.4	Arsenic	1.03		ug/L	P338791	
		Cadmium	0.022	I	ug/L	P338791	
		Chromium	2.8		ug/L	P338791	
		Copper	1.28		ug/L	P338791	
		Lead	0.28		ug/L	P338791	
		Nickel	1.11		ug/L	P338791	
		Silver	0.010	U	ug/L	P338791	

Field ID: G1SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962128	EPA 8270D	Aldrin	4.4	UJ	ng/L	P338909	RPD
		Alpha-BHC	2.2	U	ng/L	P338909	
		Beta-BHC	4.4	UJ	ng/L	P338909	RPD
		Delta-BHC	4.4	UJ	ng/L	P338909	RPD
		Gamma-BHC	4.4	U	ng/L	P338909	
		Carbophenothion	4.4	U	ng/L	P338909	
		Chlorothalonil	2.2	U	ng/L	P338909	
		Cypermethrin	22	U	ng/L	P338909	
		DDD-p,p'	3.3	UJ	ng/L	P338909	RPD
		DDE-p,p'	3.3	U	ng/L	P338909	
		DDT-p,p'	3.3	UJ	ng/L	P338909	RPD
		Dieldrin	4.4	U	ng/L	P338909	
		Endosulfan I	4.4	U	ng/L	P338909	
		Endosulfan II	4.4	U	ng/L	P338909	
		Endosulfan Sulfate	2.2	UJ	ng/L	P338909	MS, RPD
		Endrin	2.2	U	ng/L	P338909	
		Endrin Aldehyde	2.2	U	ng/L	P338909	
		Heptachlor	1.6	U	ng/L	P338909	
		Heptachlor Epoxide	2.2	U	ng/L	P338909	
		Methoxychlor	4.4	U	ng/L	P338909	
		Mirex	2.2	U	ng/L	P338909	
		Permethrin	11	U	ng/L	P338909	
		Trifluralin	1.1	U	ng/L	P338909	
		Alpha-Chlordane	1.1	U	ng/L	P338909	
		Gamma-Chlordane	1.1	U	ng/L	P338909	
		Endrin Ketone	2.2	UJ	ng/L	P338909	MS
		Dicofol	33	U	ng/L	P338909	
1962129		Alachlor	0.26	U	ng/L	P338832	
		Ametryn	0.34	U	ng/L	P338832	MS
		Atrazine	2.5		ng/L	P338832	
		Atrazine Desethyl	1.5	U	ng/L	P338832	
		Azinphos Methyl	2.3	U	ng/L	P338832	
		Bromacil	0.52	U	ng/L	P338832	
		Butylate	0.41	U	ng/L	P338832	RPD
		Chlorpyrifos Ethyl	0.26	U	ng/L	P338832	
		Chlorpyrifos Methyl	0.10	U	ng/L	P338832	
		Demeton	2.1	U	ng/L	P338832	
		Diazinon	0.13	U	ng/L	P338832	
		Disulfoton	0.52	U	ng/L	P338832	
		EPTC	1.3	U	ng/L	P338832	RPD
		Ethion	0.15	U	ng/L	P338832	
		Ethoprop	0.10	U	ng/L	P338832	
		Fenamiphos	0.26	UJ	ng/L	P338832	LCS, RPD
		Fipronil	0.26	U	ng/L	P338832	
		Fipronil Sulfide	0.15	U	ng/L	P338832	RPD

Field ID: G1SE0002

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1962129	EPA 8270D	Fipronil Sulfone	0.15	U	ng/L	P338832	MS, RPD
		Hexazinone	4.8	J	ng/L	P338832	LCS
		Malathion	0.36	U	ng/L	P338832	
		Metribuzin	0.34	I	ng/L	P338832	
		Mevinphos	0.52	U	ng/L	P338832	
		Molinate	0.31	U	ng/L	P338832	RPD
		Norflurazon	0.52	U	ng/L	P338832	RPD
		Pendimethalin	1.0	U	ng/L	P338832	
		Phorate	0.26	U	ng/L	P338832	
		Prometon	0.93	U	ng/L	P338832	
		Prometryn	0.21	U	ng/L	P338832	
		Simazine	0.52	U	ng/L	P338832	
		Terbufos	0.10	U	ng/L	P338832	
		Terbuthylazine	0.44	U	ng/L	P338832	
		Fonofos	0.21	U	ng/L	P338832	
		Metalaxyl	0.26	UJ	ng/L	P338832	LCS, RPD
		Metolachlor	0.34	I	ng/L	P338832	
		Acetochlor	0.26	U	ng/L	P338832	
		Cyanazine	0.52	U	ng/L	P338832	
		Parathion Ethyl	0.26	U	ng/L	P338832	
		Parathion Methyl	0.26	U	ng/L	P338832	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2320 B-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 C-97: Sample was left out at room temperature overnight, should be stored below 6 degC.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. Sample was left out at room temperature overnight, should be stored below 6 degC.

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

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

Non-Conformance Report

NCR ID: 6886

<u>Event(s)</u>	<u>Job(s)</u>	<u>Sample(s)</u>	<u>Test(s)</u>
SE-DIST-2018-01-25-01	TLH-2018-01-25-39	1962034	
SE-DIST-2018-01-25-01	TLH-2018-01-25-39	1962035	
SE-DIST-2018-01-25-01	TLH-2018-01-25-39	1962040	
SE-DIST-2018-01-25-01	TLH-2018-01-25-39	1962049	

NCR Type: CUSTODY

NCR Category: General

Observation: Samples stored at room temperature overnight on 1/25/2018 because of an oversight. Samples require refrigeration for proper preservation.

Resolution: Samples were returned to refrigerator in the afternoon on 1/26/2018. All analysis done after 1/25/2018 will be Y qualified.

Authorized by/Date: Bettina S. Steinbock 2/9/2018

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry Colin Wright (850) 245-8085
Biology Cheryl Swanson (850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P338807

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P338808

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P338791

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338791

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: P338912

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338914

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339121

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339121

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339285

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338830

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338965

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338956

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P338841

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P338842

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

Reference Method: EPA 8270D
Batch ID: P338832

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P338832

Component	Result	Code	Units
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	0.25	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: P338909

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P338909

Component	Result	Code	Units
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 8321B
Batch ID: P338691

Component	Result	Code	Units
AMPA	0.10	U	ug/L
Glyphosate	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P338701

Component	Result	Code	Units
3-Hydroxycarbofuran	0.0020	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P338739

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P338809

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P339015

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P339124

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P339063

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P339020

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P339209

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

Reference Method: USGS O-2060-01
Batch ID: P338701

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	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P338801

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	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P338801

Component	Result	Code	Units
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P338791

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	109		P	85 - 115
Iron	108		P	85 - 115
Magnesium	113		P	85 - 115
Potassium	104		P	85 - 115
Sodium	109		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338791

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	98.1		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	99.2		P	85 - 115
Copper	95.3		P	85 - 115
Lead	104		P	85 - 115
Nickel	97.8		P	85 - 115
Silver	99.0		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338912

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338914

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339121

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339285

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P338830

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P338965

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: P338956

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P338841

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P338842

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	97.3		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P338832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	101	104	P/P	74 - 119
Alachlor	105	107	P/P	75 - 118
Ametryn	109	105	P/P	59 - 137
Atrazine	100	109	P/P	73 - 120
Atrazine Desethyl	63.1	66.0	P/P	19 - 129
Azinphos Methyl	98.7	111	P/P	65 - 181
Bromacil	72.9	75.5	P/P	43 - 123
Butylate	66.9	80.9	P/P	28 - 85.0
Chlorpyrifos Ethyl	97.1	112	P/P	55 - 112
Chlorpyrifos Methyl	86.3	101	P/P	35 - 124
Cyanazine	97.1	90.1	P/P	26 - 262
Demeton	62.7	82.2	P/P	43 - 122
Diazinon	101	105	P/P	72 - 120
Disulfoton	60.7	77.6	P/P	45 - 137
EPTC	66.4	87.4	P/P	28 - 95.0
Ethion	112	121	P/P	63 - 127
Ethoprop	83.7	94.2	P/P	63 - 109
Fenamiphos	50.1	70.3	F/P	66 - 136
Fipronil	105	101	P/P	63 - 126
Fipronil Sulfide	111	108	P/P	59 - 123
Fipronil Sulfone	110	106	P/P	56 - 122
Fonofos	87.9	95.8	P/P	64 - 114

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P338832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hexazinone	142	158	P/F	49 - 144
Malathion	115	117	P/P	68 - 131
Metalaxyl	33.1	59.5	F/P	57 - 126
Metolachlor	107	111	P/P	75 - 118
Metribuzin	95.2	108	P/P	46 - 169
Mevinphos	81.2	91.7	P/P	34 - 126
Molinate	70.0	88.8	P/P	37 - 101
Norflurazon	92.7	80.2	P/P	63 - 127
Parathion Ethyl	103	103	P/P	78 - 109
Parathion Methyl	101	106	P/P	74 - 123
Pendimethalin	92.3	108	P/P	51 - 130
Phorate	65.3	86.5	P/P	53 - 116
Prometon	98.7	90.5	P/P	66 - 124
Prometryn	102	105	P/P	66 - 124
Simazine	105	110	P/P	62 - 134
Terbufos	81.4	93.1	P/P	59 - 115
Terbutylazine	107	110	P/P	76 - 113

Reference Method: EPA 8270D
Batch ID: P338909

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.7	40.2	P/P	24 - 89.0
Alpha-BHC	88.3	80.6	P/P	58 - 117
Alpha-Chlordane	87.6	75.1	P/P	56 - 115
Beta-BHC	104	83.2	P/P	55 - 137
Carbophenothion	108	91.0	P/P	37 - 145
Chlorothalonil	95.4	90.2	P/P	26 - 163
Cypermethrin	108	94.0	P/P	42 - 156
DDD-p,p'	100	81.8	P/P	59 - 129
DDE-p,p'	88.5	75.3	P/P	52 - 117
DDT-p,p'	90.8	82.9	P/P	48 - 128
Delta-BHC	111	94.6	P/P	59 - 158
Dicofol	70.9	66.7	P/P	19 - 124
Dieldrin	88.0	79.6	P/P	57 - 126
Endosulfan I	90.6	76.7	P/P	59 - 133
Endosulfan II	106	99.0	P/P	58 - 148
Endosulfan Sulfate	91.7	81.8	P/P	56 - 135
Endrin	91.0	74.0	P/P	50 - 140
Endrin Aldehyde	96.3	74.2	P/P	47 - 141
Endrin Ketone	90.9	83.1	P/P	63 - 123
Gamma-BHC	110	98.4	P/P	59 - 132
Gamma-Chlordane	88.4	76.6	P/P	55 - 112
Heptachlor	75.4	66.7	P/P	45 - 102
Heptachlor Epoxide	86.1	76.0	P/P	61 - 116
Methoxychlor	101	93.6	P/P	60 - 133
Mirex	88.0	79.0	P/P	40 - 98.0
Permethrin	103	92.7	P/P	45 - 131
Trifluralin	84.9	77.8	P/P	38 - 179

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P338691

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	106		P	40 - 150
Glyphosate	105		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P338701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	101		P	40 - 150
Aldicarb	124		P	30 - 150
Aldicarb Sulfone	104		P	40 - 150
Aldicarb Sulfoxide	114		P	40 - 150
Carbaryl	81.3		P	40 - 150
Carbofuran	95.2		P	40 - 150
Methiocarb	79.5		P	40 - 150
Methomyl	107		P	40 - 150
Oxamyl	104		P	40 - 150
Propoxur	90.1		P	40 - 150
Pyraclostrobin	104		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P338739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	111		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P339015

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	95 - 108

Reference Method: SM 4500 F-C-97
Batch ID: P339020

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.1		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P339209

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.2		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P338701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	76.3		P	40 - 150
Acetaminophen	102		P	30 - 150
Bentazon	79.7		P	30 - 150
Carbamazepine	106		P	40 - 150
Diuron	92.8		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: USGS O-2060-01
Batch ID: P338701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	120		P	40 - 150
Fluridone	112		P	40 - 150
Imidacloprid	115		P	40 - 160
Linuron	103		P	40 - 150
MCPP	77.2		P	40 - 150
Primidone	118		P	40 - 150
Triclopyr	76.1		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P338801

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	90.4		P	40 - 150
Acetaminophen	105		P	30 - 150
Bentazon	82.7		P	30 - 150
Carbamazepine	99.9		P	40 - 150
Diuron	88.8		P	40 - 150
Fenuron	117		P	40 - 150
Fluridone	117		P	40 - 150
Imidacloprid	112		P	40 - 160
Linuron	103		P	40 - 150
MCPP	84.1		P	40 - 150
Primidone	119		P	40 - 150
Triclopyr	81.2		P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P338791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961215	Calcium	107		P	80 - 120
1961215	Iron	112		P	80 - 120
1961215	Magnesium	115		P	80 - 120
1961215	Potassium	104		P	80 - 120
1961215	Sodium	109		P	80 - 120
1961215	Zinc	109		P	80 - 120
1961785	Calcium	106	106	P/P	80 - 120
1961785	Iron	106	106	P/P	80 - 120
1961785	Magnesium	110	111	P/P	80 - 120
1961785	Potassium	109	107	P/P	80 - 120
1961785	Sodium	104	103	P/P	80 - 120
1961785	Zinc	100	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961215	Arsenic	99.1		P	80 - 120
1961215	Cadmium	100		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338791

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961215	Chromium	100		P	80 - 120
1961215	Copper	98.1		P	80 - 120
1961215	Lead	105		P	80 - 120
1961215	Nickel	100		P	80 - 120
1961215	Silver	97.7		P	80 - 120
1961785	Arsenic	98.9	99.3	P/P	80 - 120
1961785	Cadmium	99.2	101	P/P	80 - 120
1961785	Chromium	101	99.2	P/P	80 - 120
1961785	Copper	96.3	96.9	P/P	80 - 120
1961785	Lead	105	106	P/P	80 - 120
1961785	Nickel	100	99.1	P/P	80 - 120
1961785	Silver	98.5	99.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338912

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961961	Chloride	97.7		P	90 - 110
1961993	Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961961	Sulfate	97.1		P	90 - 110
1961993	Sulfate	97.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961996	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339285

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962062	Ammonia-N	96.7	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338830

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962065	Kjeldahl Nitrogen	99.2	93.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961995	NO2NO3-N	108	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P338956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962065	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P338842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962060	O-Phosphate-P	97.4	97.9	P/P	90 - 110

Reference Method: EPA 8270D

Batch ID: P338832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961026	Acetochlor	102	101	P/P	67 - 125
1961026	Alachlor	106	103	P/P	69 - 123
1961026	Ametryn	170	163	F/F	52 - 151
1961026	Atrazine Desethyl	73.2	54.0	P/P	10 - 129
1961026	Azinphos Methyl	129	120	P/P	48 - 200
1961026	Bromacil	95.7	81.8	P/P	46 - 130
1961026	Butylate	32.2	43.8	P/P	10 - 85.0
1961026	Chlorpyrifos Ethyl	108	106	P/P	54 - 115
1961026	Chlorpyrifos Methyl	104	101	P/P	44 - 117
1961026	Cyanazine	163	129	P/P	10 - 262
1961026	Demeton	61.5	64.6	P/P	24 - 145
1961026	Diazinon	95.7	98.0	P/P	66 - 129
1961026	Disulfoton	88.2	83.0	P/P	45 - 139
1961026	EPTC	32.5	46.6	P/P	10 - 86.0
1961026	Ethion	121	118	P/P	59 - 133
1961026	Ethoprop	72.1	69.9	P/P	54 - 116
1961026	Fenamiphos	104	89.7	P/P	55 - 140
1961026	Fipronil	101	77.4	P/P	37 - 142
1961026	Fipronil Sulfide	98.0	66.4	P/P	37 - 130
1961026	Fipronil Sulfone	92.2	16.1	P/F	18 - 143
1961026	Fonofos	92.1	86.5	P/P	55 - 118
1961026	Hexazinone	126	111	P/P	62 - 140
1961026	Malathion	119	109	P/P	64 - 132
1961026	Metalaxyl	126	112	P/P	55 - 129
1961026	Metolachlor	109	110	P/P	56 - 137
1961026	Metribuzin	163	154	P/P	16 - 218
1961026	Mevinphos	69.4	67.0	P/P	34 - 129
1961026	Molinate	41.3	56.0	P/P	16 - 99.0
1961026	Norflurazon	107	78.3	P/P	43 - 135
1961026	Parathion Ethyl	105	108	P/P	71 - 112
1961026	Parathion Methyl	108	107	P/P	65 - 127
1961026	Pendimethalin	108	116	P/P	35 - 159
1961026	Phorate	72.2	73.3	P/P	41 - 129
1961026	Prometon	116	112	P/P	56 - 140
1961026	Prometryn	105	103	P/P	65 - 130
1961026	Simazine	117	120	P/P	54 - 148
1961026	Terbufos	88.1	84.8	P/P	53 - 126
1961026	Terbutylazine	109	107	P/P	73 - 114

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P338909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962128	Aldrin	61.9	46.5	P/P	26 - 96.0
1962128	Alpha-BHC	93.8	84.8	P/P	51 - 123
1962128	Alpha-Chlordane	76.9	60.6	P/P	45 - 120
1962128	Beta-BHC	71.6	47.8	P/P	43 - 146
1962128	Carbophenothion	153	137	P/P	26 - 179
1962128	Chlorothalonil	67.2	57.1	P/P	10 - 215
1962128	Cypermethrin	125	104	P/P	35 - 169
1962128	DDD-p,p'	77.2	55.7	P/P	49 - 131
1962128	DDE-p,p'	75.4	62.0	P/P	39 - 127
1962128	DDT-p,p'	72.8	53.5	P/P	49 - 120
1962128	Delta-BHC	91.6	62.7	P/P	49 - 187
1962128	Dicofol	60.2	58.8	P/P	10 - 129
1962128	Dieldrin	74.0	57.8	P/P	46 - 132
1962128	Endosulfan I	85.7	69.5	P/P	57 - 130
1962128	Endosulfan II	81.7	62.0	P/P	52 - 148
1962128	Endosulfan Sulfate	63.4	42.8	P/F	55 - 129
1962128	Endrin	80.8	69.8	P/P	45 - 133
1962128	Endrin Aldehyde	28.0	36.9	P/P	26 - 140
1962128	Endrin Ketone	65.3	49.3	P/F	60 - 125
1962128	Gamma-BHC	93.0	97.2	P/P	50 - 145
1962128	Gamma-Chlordane	79.4	62.2	P/P	44 - 118
1962128	Heptachlor	70.1	52.0	P/P	35 - 106
1962128	Heptachlor Epoxide	77.1	59.7	P/P	52 - 123
1962128	Methoxychlor	81.2	64.8	P/P	54 - 132
1962128	Mirex	75.0	59.5	P/P	36 - 107
1962128	Permethrin	111	90.2	P/P	47 - 135
1962128	Trifluralin	78.2	61.3	P/P	32 - 228

Reference Method: EPA 8321B

Batch ID: P338691

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961018	AMPA	101	102	P/P	40 - 150
1961018	Glyphosate	100	104	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P338701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961605	3-Hydroxycarbofuran	127	133	P/P	40 - 150
1961605	Aldicarb	144	145	P/P	30 - 150
1961605	Aldicarb Sulfone	148	147	P/P	40 - 150
1961605	Aldicarb Sulfoxide	100	105	P/P	40 - 150
1961605	Carbaryl	80.1	84.5	P/P	40 - 150
1961605	Carbofuran	86.2	93.5	P/P	40 - 150
1961605	Methiocarb	86.2	89.1	P/P	40 - 150
1961605	Methomyl	97.4	96.7	P/P	40 - 150
1961605	Oxamyl	110	110	P/P	40 - 150
1961605	Propoxur	83.1	86.1	P/P	40 - 150
1961605	Pyraclostrobin	110	111	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P338739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961510	Sucralose	100	119	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P339020

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961779	Fluoride	97.1	98.0	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P339209

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961962	Organic Carbon	103		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P338701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1961605	2,4-D	123	118	P/P	40 - 150
1961605	Acetaminophen	138	137	P/P	30 - 150
1961605	Bentazon	67.7	66.5	P/P	30 - 150
1961605	Carbamazepine	118	122	P/P	40 - 150
1961605	Diuron	102	103	P/P	40 - 150
1961605	Fenuron	105	108	P/P	40 - 150
1961605	Fluridone	104	110	P/P	40 - 150
1961605	Imidacloprid	196	189	F/F	40 - 160
1961605	Linuron	105	108	P/P	40 - 150
1961605	MCP	95.4	91.8	P/P	40 - 150
1961605	Primidone	123	125	P/P	40 - 150
1961605	Triclopyr	105	99.8	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P338801

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1962120	2,4-D	102	90.3	P/P	40 - 150
1962120	Acetaminophen	142	146	P/P	30 - 150
1962120	Bentazon	40.2	37.0	P/P	30 - 150
1962120	Carbamazepine	101	101	P/P	40 - 150
1962120	Diuron	95.8	94.0	P/P	40 - 150
1962120	Fenuron	80.3	81.3	P/P	40 - 150
1962120	Fluridone	89.6	92.1	P/P	40 - 150
1962120	Imidacloprid	189	200	F/F	40 - 160
1962120	Linuron	105	103	P/P	40 - 150
1962120	MCP	86.7	78.8	P/P	40 - 150
1962120	Primidone	79.6	95.7	P/P	40 - 150
1962120	Triclopyr	91.8	82.1	P/P	40 - 150

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P338807

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961849	Turbidity	2.55	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P338808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962040	Turbidity	5.05	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P338791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961785	Calcium	0.495	Spike	P	0 - 20
1961785	Iron	0.557	Spike	P	0 - 20
1961785	Magnesium	0.521	Spike	P	0 - 20
1961785	Potassium	2.20	Spike	P	0 - 20
1961785	Sodium	0.886	Spike	P	0 - 20
1961785	Zinc	1.61	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P338791

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961785	Arsenic	0.396	Spike	P	0 - 20
1961785	Cadmium	1.73	Spike	P	0 - 20
1961785	Chromium	1.54	Spike	P	0 - 20
1961785	Copper	0.658	Spike	P	0 - 20
1961785	Lead	0.644	Spike	P	0 - 20
1961785	Nickel	1.30	Spike	P	0 - 20
1961785	Silver	1.29	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338912

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961961	Chloride	0.0654	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P338914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961961	Sulfate	0.0906	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961996	Ammonia-N	0.598	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P339285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962062	Ammonia-N	0.613	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P338830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962065	Kjeldahl Nitrogen	5.28	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P338965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961995	NO2NO3-N	0.909	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P338956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962065	Total-P	0.775	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P338841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962042	O-Phosphate-P	0.0382	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P338842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962060	O-Phosphate-P	0.512	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P338832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961026	Acetochlor	0.919	Spike	P	0 - 30
1961026	Alachlor	2.72	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P338832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961026	Ametryn	4.49	Spike	P	0 - 30
1961026	Atrazine	6.58	Spike	P	0 - 30
1961026	Atrazine Desethyl	22.7	Spike	P	0 - 30
1961026	Azinphos Methyl	6.83	Spike	P	0 - 30
1961026	Bromacil	15.6	Spike	P	0 - 30
1961026	Butylate	30.3	Spike	F	0 - 30
1961026	Chlorpyrifos Ethyl	2.36	Spike	P	0 - 30
1961026	Chlorpyrifos Methyl	2.77	Spike	P	0 - 30
1961026	Cyanazine	23.5	Spike	P	0 - 30
1961026	Demeton	4.88	Spike	P	0 - 30
1961026	Diazinon	2.30	Spike	P	0 - 30
1961026	Disulfoton	5.98	Spike	P	0 - 30
1961026	EPTC	35.7	Spike	F	0 - 30
1961026	Ethion	2.30	Spike	P	0 - 30
1961026	Ethoprop	3.12	Spike	P	0 - 30
1961026	Fenamiphos	15.0	Spike	P	0 - 30
1961026	Fipronil	26.1	Spike	P	0 - 30
1961026	Fipronil Sulfide	34.3	Spike	F	0 - 30
1961026	Fipronil Sulfone	56.3	Spike	F	0 - 30
1961026	Fonofos	6.17	Spike	P	0 - 30
1961026	Hexazinone	11.0	Spike	P	0 - 30
1961026	Malathion	9.06	Spike	P	0 - 30
1961026	Metalaxyl	12.2	Spike	P	0 - 30
1961026	Metolachlor	1.00	Spike	P	0 - 30
1961026	Metribuzin	5.79	Spike	P	0 - 30
1961026	Mevinphos	3.52	Spike	P	0 - 30
1961026	Molinate	30.2	Spike	F	0 - 30
1961026	Norflurazon	31.0	Spike	F	0 - 30
1961026	Parathion Ethyl	3.00	Spike	P	0 - 30
1961026	Parathion Methyl	1.21	Spike	P	0 - 30
1961026	Pendimethalin	6.91	Spike	P	0 - 30
1961026	Phorate	1.46	Spike	P	0 - 30
1961026	Prometon	3.13	Spike	P	0 - 30
1961026	Prometryn	1.67	Spike	P	0 - 30
1961026	Simazine	2.43	Spike	P	0 - 30
1961026	Terbufos	3.81	Spike	P	0 - 30
1961026	Terbutylazine	1.51	Spike	P	0 - 30
LFB	Acetochlor	3.09	LCS	P	0 - 30
LFB	Alachlor	2.21	LCS	P	0 - 30
LFB	Ametryn	3.76	LCS	P	0 - 30
LFB	Atrazine	8.54	LCS	P	0 - 30
LFB	Atrazine Desethyl	4.43	LCS	P	0 - 30
LFB	Azinphos Methyl	11.7	LCS	P	0 - 30
LFB	Bromacil	3.54	LCS	P	0 - 30
LFB	Butylate	19.1	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.8	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	16.1	LCS	P	0 - 30
LFB	Cyanazine	7.38	LCS	P	0 - 30
LFB	Demeton	26.8	LCS	P	0 - 30
LFB	Diazinon	3.77	LCS	P	0 - 30
LFB	Disulfoton	24.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P338832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	EPTC	27.3	LCS	P	0 - 30
LFB	Ethion	7.49	LCS	P	0 - 30
LFB	Ethoprop	11.8	LCS	P	0 - 30
LFB	Fenamiphos	33.6	LCS	F	0 - 30
LFB	Fipronil	3.99	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.97	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.54	LCS	P	0 - 30
LFB	Fonofos	8.66	LCS	P	0 - 30
LFB	Hexazinone	11.2	LCS	P	0 - 30
LFB	Malathion	1.98	LCS	P	0 - 30
LFB	Metalaxyl	57.0	LCS	F	0 - 30
LFB	Metolachlor	4.37	LCS	P	0 - 30
LFB	Metribuzin	12.6	LCS	P	0 - 30
LFB	Mevinphos	12.2	LCS	P	0 - 30
LFB	Molinate	23.7	LCS	P	0 - 30
LFB	Norflurazon	14.4	LCS	P	0 - 30
LFB	Parathion Ethyl	0.0946	LCS	P	0 - 30
LFB	Parathion Methyl	5.18	LCS	P	0 - 30
LFB	Pendimethalin	15.5	LCS	P	0 - 30
LFB	Phorate	27.9	LCS	P	0 - 30
LFB	Prometon	8.63	LCS	P	0 - 30
LFB	Prometryn	3.34	LCS	P	0 - 30
LFB	Simazine	5.07	LCS	P	0 - 30
LFB	Terbufos	13.4	LCS	P	0 - 30
LFB	Terbuthylazine	3.54	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P338909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962128	Aldrin	28.5	Spike	P	0 - 30
1962128	Alpha-BHC	10.1	Spike	P	0 - 30
1962128	Alpha-Chlordane	23.7	Spike	P	0 - 30
1962128	Beta-BHC	39.8	Spike	F	0 - 30
1962128	Carbophenothion	10.8	Spike	P	0 - 30
1962128	Chlorothalonil	16.4	Spike	P	0 - 30
1962128	Cypermethrin	18.0	Spike	P	0 - 30
1962128	DDD-p,p'	32.4	Spike	F	0 - 30
1962128	DDE-p,p'	19.5	Spike	P	0 - 30
1962128	DDT-p,p'	30.4	Spike	F	0 - 30
1962128	Delta-BHC	37.6	Spike	F	0 - 30
1962128	Dicofol	2.32	Spike	P	0 - 30
1962128	Dieldrin	24.7	Spike	P	0 - 30
1962128	Endosulfan I	20.9	Spike	P	0 - 30
1962128	Endosulfan II	27.3	Spike	P	0 - 30
1962128	Endosulfan Sulfate	38.9	Spike	F	0 - 30
1962128	Endrin	14.5	Spike	P	0 - 30
1962128	Endrin Aldehyde	27.4	Spike	P	0 - 30
1962128	Endrin Ketone	27.9	Spike	P	0 - 30
1962128	Gamma-BHC	4.50	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P338909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962128	Gamma-Chlordane	24.3	Spike	P	0 - 30
1962128	Heptachlor	29.7	Spike	P	0 - 30
1962128	Heptachlor Epoxide	25.3	Spike	P	0 - 30
1962128	Methoxychlor	22.5	Spike	P	0 - 30
1962128	Mirex	23.0	Spike	P	0 - 30
1962128	Permethrin	21.1	Spike	P	0 - 30
1962128	Trifluralin	24.3	Spike	P	0 - 30
LFB	Aldrin	30.6	LCS	F	0 - 30
LFB	Alpha-BHC	9.13	LCS	P	0 - 30
LFB	Alpha-Chlordane	15.4	LCS	P	0 - 30
LFB	Beta-BHC	22.0	LCS	P	0 - 30
LFB	Carbophenothion	17.3	LCS	P	0 - 30
LFB	Chlorothalonil	5.63	LCS	P	0 - 30
LFB	Cypermethrin	13.8	LCS	P	0 - 30
LFB	DDD-p,p'	20.1	LCS	P	0 - 30
LFB	DDE-p,p'	16.1	LCS	P	0 - 30
LFB	DDT-p,p'	9.16	LCS	P	0 - 30
LFB	Delta-BHC	16.0	LCS	P	0 - 30
LFB	Dicofol	5.99	LCS	P	0 - 30
LFB	Dieldrin	10.0	LCS	P	0 - 30
LFB	Endosulfan I	16.6	LCS	P	0 - 30
LFB	Endosulfan II	6.64	LCS	P	0 - 30
LFB	Endosulfan Sulfate	11.4	LCS	P	0 - 30
LFB	Endrin	20.7	LCS	P	0 - 30
LFB	Endrin Aldehyde	26.0	LCS	P	0 - 30
LFB	Endrin Ketone	8.92	LCS	P	0 - 30
LFB	Gamma-BHC	11.1	LCS	P	0 - 30
LFB	Gamma-Chlordane	14.2	LCS	P	0 - 30
LFB	Heptachlor	12.3	LCS	P	0 - 30
LFB	Heptachlor Epoxide	12.6	LCS	P	0 - 30
LFB	Methoxychlor	7.10	LCS	P	0 - 30
LFB	Mirex	10.7	LCS	P	0 - 30
LFB	Permethrin	10.8	LCS	P	0 - 30
LFB	Trifluralin	8.65	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P338691

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961018	AMPA	1.43	Spike	P	0 - 30
1961018	Glyphosate	3.53	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P338701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961605	3-Hydroxycarbofuran	4.41	Spike	P	0 - 30
1961605	Aldicarb	0.758	Spike	P	0 - 30
1961605	Aldicarb Sulfone	1.02	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P338701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961605	Aldicarb Sulfoxide	4.82	Spike	P	0 - 30
1961605	Carbaryl	5.31	Spike	P	0 - 30
1961605	Carbofuran	8.16	Spike	P	0 - 30
1961605	Methiocarb	3.34	Spike	P	0 - 30
1961605	Methomyl	0.767	Spike	P	0 - 30
1961605	Oxamyl	0.0650	Spike	P	0 - 30
1961605	Propoxur	3.56	Spike	P	0 - 30
1961605	Pyraclostrobin	1.26	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P338739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961510	Sucralose	14.1	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P338809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962022	Color (true)	8.08	Sample	P	0 - 20

Reference Method: SM 2540 C-97
Batch ID: P339124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962034	TDS	0.839	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P339020

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961779	Fluoride	0.938	Spike	P	0 - 3.0

Reference Method: SM 5310 B-00
Batch ID: P339209

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961962	Organic Carbon	0.304	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P338701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961605	2,4-D	4.40	Spike	P	0 - 30
1961605	Acetaminophen	1.09	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P338701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1961605	Bentazon	1.79	Spike	P	0 - 30
1961605	Carbamazepine	2.50	Spike	P	0 - 30
1961605	Diuron	1.36	Spike	P	0 - 30
1961605	Fenuron	3.20	Spike	P	0 - 30
1961605	Fluridone	5.77	Spike	P	0 - 30
1961605	Imidacloprid	3.48	Spike	P	0 - 30
1961605	Linuron	2.35	Spike	P	0 - 30
1961605	MCP	3.85	Spike	P	0 - 30
1961605	Primidone	1.29	Spike	P	0 - 30
1961605	Triclopyr	5.25	Spike	P	0 - 30

Reference Method: USGS O-2060-01
Batch ID: P338801

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1962120	2,4-D	11.8	Spike	P	0 - 30
1962120	Acetaminophen	2.18	Spike	P	0 - 30
1962120	Bentazon	8.16	Spike	P	0 - 30
1962120	Carbamazepine	0.0981	Spike	P	0 - 30
1962120	Diuron	1.98	Spike	P	0 - 30
1962120	Fenuron	1.27	Spike	P	0 - 30
1962120	Fluridone	2.84	Spike	P	0 - 30
1962120	Imidacloprid	5.81	Spike	P	0 - 30
1962120	Linuron	1.54	Spike	P	0 - 30
1962120	MCP	9.53	Spike	P	0 - 30
1962120	Primidone	18.4	Spike	P	0 - 30
1962120	Triclopyr	11.1	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: 1962119
Field Sample ID: G1SE0003

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	86.5	P	30 - 160
EPA 8321B	Diuron-d6	80.1	P	30 - 160
EPA 8321B	Primidone-d5	83.0	P	30 - 160
EPA 8321B	Sucralose-d6	126	P	40 - 160
USGS O-2060-01	2,4-D-d3	85.2	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	111	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	86.5	P	30 - 160
USGS O-2060-01	Diuron-d6	80.1	P	30 - 160
USGS O-2060-01	Primidone-d5	83.0	P	30 - 160
USGS O-2060-01	Sucralose-d6	126	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1962120
Field Sample ID: G1SE0009

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	136	P	30 - 160
EPA 8321B	Carbamazepine-d10	97.0	P	30 - 160
EPA 8321B	Diuron-d6	87.2	P	30 - 160
EPA 8321B	Primidone-d5	86.9	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	40 - 160
USGS O-2060-01	2,4-D-d3	90.4	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	136	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	97.0	P	30 - 160
USGS O-2060-01	Diuron-d6	87.2	P	30 - 160
USGS O-2060-01	Primidone-d5	86.9	P	30 - 160
USGS O-2060-01	Sucralose-d6	119	P	40 - 160

Lab Sample ID: 1962121
Field Sample ID: G1SE0008

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	106	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.0	P	30 - 160
EPA 8321B	Diuron-d6	78.4	P	30 - 160
EPA 8321B	Primidone-d5	98.8	P	30 - 160
EPA 8321B	Sucralose-d6	124	P	40 - 160
USGS O-2060-01	2,4-D-d3	79.6	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	106	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	90.0	P	30 - 160
USGS O-2060-01	Diuron-d6	78.4	P	30 - 160
USGS O-2060-01	Primidone-d5	98.8	P	30 - 160
USGS O-2060-01	Sucralose-d6	124	P	40 - 160

Lab Sample ID: 1962122
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	120	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	85.6	P	30 - 160
EPA 8321B	Primidone-d5	110	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	40 - 160
USGS O-2060-01	2,4-D-d3	86.4	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	120	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	101	P	30 - 160
USGS O-2060-01	Diuron-d6	85.6	P	30 - 160
USGS O-2060-01	Primidone-d5	110	P	30 - 160
USGS O-2060-01	Sucralose-d6	116	P	40 - 160

Lab Sample ID: 1962123
Field Sample ID: G1SE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	135	P	30 - 160
EPA 8321B	Carbamazepine-d10	100	P	30 - 160
EPA 8321B	Diuron-d6	84.2	P	30 - 160
EPA 8321B	Primidone-d5	98.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1962123
Field Sample ID: G1SE0010

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Sucralose-d6	152	P	40 - 160
USGS O-2060-01	2,4-D-d3	77.6	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	135	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	100	P	30 - 160
USGS O-2060-01	Diuron-d6	84.2	P	30 - 160
USGS O-2060-01	Primidone-d5	98.1	P	30 - 160
USGS O-2060-01	Sucralose-d6	152	P	40 - 160

Lab Sample ID: 1962124
Field Sample ID: G1SE0005

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	127	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.8	P	30 - 160
EPA 8321B	Diuron-d6	89.1	P	30 - 160
EPA 8321B	Primidone-d5	96.4	P	30 - 160
EPA 8321B	Sucralose-d6	141	P	40 - 160
USGS O-2060-01	2,4-D-d3	78.9	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	127	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	96.8	P	30 - 160
USGS O-2060-01	Diuron-d6	89.1	P	30 - 160
USGS O-2060-01	Primidone-d5	96.4	P	30 - 160
USGS O-2060-01	Sucralose-d6	141	P	40 - 160

Lab Sample ID: 1962125
Field Sample ID: G1SE0002

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	145	P	30 - 160
EPA 8321B	Acetaminophen-d4	145	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Carbamazepine-d10	108	P	30 - 160
EPA 8321B	Diuron-d6	88.6	P	30 - 160
EPA 8321B	Diuron-d6	88.6	P	30 - 160
EPA 8321B	Diuron-d6	88.6	P	30 - 160
EPA 8321B	Diuron-d6	88.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	40 - 160
EPA 8321B	Primidone-d5	81.8	P	30 - 160
EPA 8321B	Primidone-d5	81.8	P	30 - 160
EPA 8321B	Sucralose-d6	142	P	40 - 160
EPA 8321B	Sucralose-d6	142	P	40 - 160
USGS O-2060-01	2,4-D-d3	98.4	P	30 - 160
USGS O-2060-01	Acetaminophen-d4	145	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	108	P	30 - 160
USGS O-2060-01	Diuron-d6	88.6	P	30 - 160
USGS O-2060-01	Diuron-d6	88.6	P	30 - 160
USGS O-2060-01	Primidone-d5	81.8	P	30 - 160
USGS O-2060-01	Sucralose-d6	142	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1962126
Field Sample ID: G1SE0002

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	55.2	P	30 - 160

Lab Sample ID: 1962128
Field Sample ID: G1SE0002

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	72.1	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	45.6	P	34 - 101

Lab Sample ID: 1962129
Field Sample ID: G1SE0002

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	114	P	71 - 126
EPA 8270D	Terbufos-d10	121	P	50 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A81616
Included Lab Sample IDs: 1962034, 1962035, 1962040, 1962049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	101	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110

Reference Method: SM 2120 B
Run ID: A81652
Included Lab Sample IDs: 1962034, 1962035, 1962040, 1962049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	85 - 115
Color (true)	103	104	P/P	85 - 115
Color (true)	104	103	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A81653
Included Lab Sample IDs: 1962034, 1962035, 1962040, 1962049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.5	P/P	95 - 105
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A81660
Included Lab Sample IDs: 1962038, 1962039, 1962042, 1962051

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	99.7	P/P	90 - 110
O-Phosphate-P	99.2	99.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A81671

Included Lab Sample IDs: 1962125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	110	108	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A81671

Included Lab Sample IDs: 1962119, 1962120, 1962121, 1962122, 1962123, 1962124, 1962125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.3	88.5	P/P	50 - 150
2,4-D	92.0	102	P/P	50 - 150
Acetaminophen	103	109	P/P	60 - 150
Acetaminophen	106	109	P/P	60 - 150
Bentazon	104	101	P/P	50 - 150
Bentazon	94.8	102	P/P	50 - 150
Carbamazepine	102	107	P/P	60 - 150
Carbamazepine	107	110	P/P	60 - 150
Diuron	101	113	P/P	60 - 150
Diuron	109	114	P/P	60 - 150
Fenuron	109	112	P/P	60 - 150
Fenuron	111	110	P/P	60 - 150
Fluridone	110	119	P/P	60 - 160
Fluridone	121	121	P/P	60 - 160
Imidacloprid	105	102	P/P	60 - 150
Imidacloprid	109	98.2	P/P	60 - 150
Linuron	111	106	P/P	60 - 150
Linuron	114	113	P/P	60 - 150
MCPP	88.5	95.5	P/P	50 - 150
MCPP	93.6	96.9	P/P	50 - 150
Primidone	103	96.5	P/P	60 - 150
Primidone	116	104	P/P	60 - 150
Triclopyr	84.4	91.4	P/P	50 - 150
Triclopyr	90.7	99.6	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A81676

Included Lab Sample IDs: 1962125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	75.8	77.0	P/P	60 - 150
Glyphosate	73.6	78.5	P/P	60 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A81688

Included Lab Sample IDs: 1962127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	100	P/P	90 - 110
Iron	99.0	98.3	P/P	90 - 110
Magnesium	99.1	98.7	P/P	90 - 110
Sodium	105	102	P/P	90 - 110
Zinc	97.8	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A81701

Included Lab Sample IDs: 1962036, 1962037, 1962041, 1962050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	103	P/P	90 - 110
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A81714

Included Lab Sample IDs: 1962036, 1962037, 1962041, 1962050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A81723

Included Lab Sample IDs: 1962036, 1962037, 1962041, 1962050

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

Reference Method: EPA 8321B

Run ID: A81727

Included Lab Sample IDs: 1962119, 1962120, 1962121, 1962122, 1962123, 1962124, 1962125

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	103	124	P/P	60 - 150
Sucralose	114	103	P/P	60 - 150

Reference Method: SM 2320 B-97

Run ID: A81736

Included Lab Sample IDs: 1962034, 1962035, 1962040, 1962049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.2	102	P/P	90 - 110
Total Alkalinity	99.0	97.2	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A81736

Included Lab Sample IDs: 1962034, 1962035, 1962040, 1962049

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81741

Included Lab Sample IDs: 1962127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.2	97.7	P/P	90 - 110
Cadmium	99.3	98.4	P/P	90 - 110
Chromium	98.1	98.2	P/P	90 - 110
Copper	96.4	96.8	P/P	90 - 110
Lead	104	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A81741

Included Lab Sample IDs: 1962127

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	97.6	97.7	P/P	90 - 110
Silver	101	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81777

Included Lab Sample IDs: 1962036

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

Reference Method: SM 5310 B-00

Run ID: A81810

Included Lab Sample IDs: 1962036, 1962037, 1962041, 1962050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	94.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A81838

Included Lab Sample IDs: 1962037, 1962041, 1962050

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.2	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A81858

Included Lab Sample IDs: 1962128

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.1		P	80 - 120
Alpha-BHC	94.1		P	80 - 120
Alpha-Chlordane	99.0		P	80 - 120
Beta-BHC	91.5		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorothalonil	102		P	80 - 120
Cypermethrin	98.3		P	80 - 120
DDD-p,p'	99.0		P	80 - 120
DDE-p,p'	99.3		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	96.5		P	80 - 120
Dicofol	99.2		P	80 - 120
Dieldrin	95.8		P	80 - 120
Endosulfan I	96.9		P	80 - 120
Endosulfan II	97.7		P	80 - 120
Endosulfan Sulfate	99.5		P	80 - 120
Endrin	99.6		P	80 - 120
Endrin Aldehyde	95.3		P	80 - 120
Endrin Ketone	98.5		P	80 - 120
Gamma-BHC	93.3		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	96.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A81858

Included Lab Sample IDs: 1962128

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Heptachlor Epoxide	99.0		P	80 - 120
Methoxychlor	104		P	80 - 120
Mirex	104		P	80 - 120
Permethrin	97.6		P	80 - 120
Trifluralin	99.0		P	80 - 120

Reference Method: EPA 8270D

Run ID: A81885

Included Lab Sample IDs: 1962129

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	99.4		P	80 - 120
Atrazine	112		P	80 - 120
Atrazine Desethyl	108		P	80 - 120
Azinphos Methyl	98.6		P	80 - 120
Bromacil	109		P	80 - 120
Butylate	97.4		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	109		P	80 - 120
Cyanazine	109		P	80 - 120
Demeton	106		P	80 - 120
Diazinon	108		P	80 - 120
Disulfoton	103		P	80 - 120
EPTC	110		P	80 - 120
Ethion	104		P	80 - 120
Ethoprop	94.5		P	80 - 120
Fenamiphos	106		P	80 - 120
Fipronil	98.9		P	80 - 120
Fipronil Sulfide	107		P	80 - 120
Fipronil Sulfone	105		P	80 - 120
Fonofos	109		P	80 - 120
Hexazinone	108		P	80 - 120
Malathion	106		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	105		P	80 - 120
Metribuzin	115		P	80 - 120
Mevinphos	111		P	80 - 120
Molinate	103		P	80 - 120
Norflurazon	104		P	80 - 120
Parathion Ethyl	109		P	80 - 120
Parathion Methyl	115		P	80 - 120
Pendimethalin	107		P	80 - 120
Phorate	111		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	107		P	80 - 120
Terbufos	110		P	80 - 120
Terbuthylazine	105		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			Precision		
			LCS	SMP	MS	LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						2.55	
	Turbidity						5.05	
EPA 200.7 Rev. 4.4	Calcium	109	107	106	106			0.495
	Iron	108	112	106	106			0.557
	Magnesium	113	115	110	111			0.521
	Potassium	104	104	109	107			2.20
	Sodium	109	109	104	103			0.886
	Zinc	102	109	100	102			1.61
EPA 200.8 Rev. 5.4	Arsenic	98.1	99.1	98.9	99.3			0.396
	Cadmium	98.9	100	99.2	101			1.73
	Chromium	99.2	100	101	99.2			1.54
	Copper	95.3	98.1	96.3	96.9			0.658
	Lead	104	105	105	106			0.644
	Nickel	97.8	100	100	99.1			1.30
	Silver	99.0	97.7	98.5	99.7			1.29
EPA 300.0 Rev. 2.1	Chloride	97.5	97.7	98.4			0.0654	
	Sulfate	96.4	97.1	97.5			0.0906	
EPA 350.1 Rev. 2.0	Ammonia-N	102	101	102				0.598
	Ammonia-N	100	96.7	96.0				0.613
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107	99.2	93.4				5.28
EPA 353.2 Rev. 2.0	NO2NO3-N	106	108	107				0.909
EPA 365.1 Rev. 2.0	Total-P	104	104	105				0.775
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.1						0.0382

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.3		97.4	97.9			0.512
EPA 8270D	Acetochlor	101	104	102	101	3.09		0.919
	Alachlor	105	107	106	103	2.21		2.72
	Aldrin	54.7	40.2	61.9	46.5	30.6		28.5
	Alpha-BHC	88.3	80.6	93.8	84.8	9.13		10.1
	Alpha-Chlordane	87.6	75.1	76.9	60.6	15.4		23.7
	Ametryn	109	105	170	163	3.76		4.49
	Atrazine	100	109			8.54		6.58
	Atrazine Desethyl	63.1	66.0	73.2	54.0	4.43		22.7
	Azinphos Methyl	98.7	111	129	120	11.7		6.83
	Beta-BHC	104	83.2	71.6	47.8	22.0		39.8
	Bromacil	72.9	75.5	95.7	81.8	3.54		15.6
	Butylate	66.9	80.9	32.2	43.8	19.1		30.3
	Carbophenothion	108	91.0	153	137	17.3		10.8
	Chlorothalonil	95.4	90.2	67.2	57.1	5.63		16.4
	Chlorpyrifos Ethyl	97.1	112	108	106	13.8		2.36
	Chlorpyrifos Methyl	86.3	101	104	101	16.1		2.77
	Cyanazine	97.1	90.1	163	129	7.38		23.5
	Cypermethrin	108	94.0	125	104	13.8		18.0
	DDD-p,p'	100	81.8	77.2	55.7	20.1		32.4
	DDE-p,p'	88.5	75.3	75.4	62.0	16.1		19.5
	DDT-p,p'	90.8	82.9	72.8	53.5	9.16		30.4
	Delta-BHC	111	94.6	91.6	62.7	16.0		37.6
	Demeton	62.7	82.2	61.5	64.6	26.8		4.88
	Diazinon	101	105	95.7	98.0	3.77		2.30
	Dicofol	70.9	66.7	60.2	58.8	5.99		2.32
	Dieldrin	88.0	79.6	74.0	57.8	10.0		24.7
	Disulfoton	60.7	77.6	88.2	83.0	24.5		5.98
	Endosulfan I	90.6	76.7	85.7	69.5	16.6		20.9
	Endosulfan II	106	99.0	81.7	62.0	6.64		27.3
	Endosulfan Sulfate	91.7	81.8	63.4	42.8	11.4		38.9
	Endrin	91.0	74.0	80.8	69.8	20.7		14.5
	Endrin Aldehyde	96.3	74.2	28.0	36.9	26.0		27.4
	Endrin Ketone	90.9	83.1	65.3	49.3	8.92		27.9
	EPTC	66.4	87.4	32.5	46.6	27.3		35.7
	Ethion	112	121	121	118	7.49		2.30
	Ethoprop	83.7	94.2	72.1	69.9	11.8		3.12
	Fenamiphos	50.1	70.3	104	89.7	33.6		15.0
	Fipronil	105	101	101	77.4	3.99		26.1
	Fipronil Sulfide	111	108	98.0	66.4	2.97		34.3
	Fipronil Sulfone	110	106	92.2	16.1	3.54		56.3
	Fonofos	87.9	95.8	92.1	86.5	8.66		6.17
	Gamma-BHC	110	98.4	93.0	97.2	11.1		4.50
	Gamma-Chlordane	88.4	76.6	79.4	62.2	14.2		24.3
	Heptachlor	75.4	66.7	70.1	52.0	12.3		29.7
	Heptachlor Epoxide	86.1	76.0	77.1	59.7	12.6		25.3
	Hexazinone	142	158	126	111	11.2		11.0
	Malathion	115	117	119	109	1.98		9.06
	Metalaxyl	33.1	59.5	126	112	57.0		12.2
	Methoxychlor	101	93.6	81.2	64.8	7.10		22.5
	Metolachlor	107	111	109	110	4.37		1.00
	Metribuzin	95.2	108	163	154	12.6		5.79
	Mevinphos	81.2	91.7	69.4	67.0	12.2		3.52
	Mirex	88.0	79.0	75.0	59.5	10.7		23.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Molinate	70.0	88.8	41.3	56.0	23.7	30.2
	Norflurazon	92.7	80.2	107	78.3	14.4	31.0
	Parathion Ethyl	103	103	105	108	0.0946	3.00
	Parathion Methyl	101	106	108	107	5.18	1.21
	Pendimethalin	92.3	108	108	116	15.5	6.91
	Permethrin	103	92.7	111	90.2	10.8	21.1
	Phorate	65.3	86.5	72.2	73.3	27.9	1.46
	Prometon	98.7	90.5	116	112	8.63	3.13
	Prometryn	102	105	105	103	3.34	1.67
	Simazine	105	110	117	120	5.07	2.43
	Terbufos	81.4	93.1	88.1	84.8	13.4	3.81
	Terbutylazine	107	110	109	107	3.54	1.51
	Trifluralin	84.9	77.8	78.2	61.3	8.65	24.3
	3-Hydroxycarbofuran	101		127	133		4.41
EPA 8321B	Aldicarb	124		144	145		0.758
	Aldicarb Sulfone	104		148	147		1.02
	Aldicarb Sulfoxide	114		100	105		4.82
	AMPA	106		101	102		1.43
	Carbaryl	81.3		80.1	84.5		5.31
	Carbofuran	95.2		86.2	93.5		8.16
	Glyphosate	105		100	104		3.53
	Methiocarb	79.5		86.2	89.1		3.34
	Methomyl	107		97.4	96.7		0.767
	Oxamyl	104		110	110		0.0650
	Propoxur	90.1		83.1	86.1		3.56
	Pyraclostrobin	104		110	111		1.26
	Sucralose	111		100	119		14.1
	Color (true)					8.08	
SM 2120 B	Total Alkalinity	101					
SM 2320 B-97	TDS					0.839	
SM 2540 C-97	Fluoride	96.1		97.1	98.0		0.938
SM 4500 F-C-97	Organic Carbon	93.2		103			0.304
SM 5310 B-00	2,4-D	76.3		118	123		4.40
USGS O-2060-01	2,4-D	90.4		90.3	102		11.8
	Acetaminophen	102		138	137		1.09
	Acetaminophen	105		142	146		2.18
	Bentazon	79.7		66.5	67.7		1.79
	Bentazon	82.7		37.0	40.2		8.16
	Carbamazepine	106		118	122		2.50
	Carbamazepine	99.9		101	101		0.0981
	Diuron	92.8		102	103		1.36
	Diuron	88.8		95.8	94.0		1.98
	Fenuron	120		105	108		3.20
	Fenuron	117		80.3	81.3		1.27
	Fluridone	112		104	110		5.77
	Fluridone	117		89.6	92.1		2.84
	Imidacloprid	115		196	189		3.48
	Imidacloprid	112		189	200		5.81
	Linuron	103		105	108		2.35
	Linuron	103		105	103		1.54
	MCPP	77.2		91.8	95.4		3.85
	MCPP	84.1		78.8	86.7		9.53
	Primidone	118		123	125		1.29
	Primidone	119		79.6	95.7		18.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
USGS O-2060-01	Triclopyr	76.1	99.8	105		5.25
	Triclopyr	81.2	82.1	91.8		11.1

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1962034, 1962035, 1962040, 1962049
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1962127
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1962127
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1962034, 1962035, 1962040, 1962049
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1962034, 1962035, 1962040, 1962049
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1962036, 1962037, 1962041, 1962050
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1962036, 1962037, 1962041, 1962050
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1962036, 1962037, 1962041, 1962050
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1962036, 1962037, 1962041, 1962050
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1962038, 1962039, 1962042, 1962051
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1962128
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1962129
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1962119, 1962120, 1962121, 1962122, 1962123, 1962124, 1962125
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1962126
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1962125
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1962125
SM 2120 B / E31780	True Color measured at 450 nm	1962034, 1962035, 1962040, 1962049
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1962034, 1962035, 1962040, 1962049
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1962034, 1962035, 1962040, 1962049
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1962034, 1962035, 1962040, 1962049
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1962034, 1962035, 1962040, 1962049
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1962036, 1962037, 1962041, 1962050
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1962119, 1962120, 1962121, 1962122, 1962123, 1962124, 1962125
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1962119, 1962120, 1962121, 1962122, 1962123, 1962124, 1962125

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	01/25/2018			01/25/2018 16:15	DeAsia Armster	1962034, 1962035, 1962040, 1962049
EPA 200.7 Rev. 4.4	01/25/2018	01/25/2018	Elliott D. Healy	01/26/2018	Martin Acosta	1962127
	01/25/2018	01/25/2018	Elliott D. Healy	02/08/2018	Betina Topolski	1962127
EPA 200.8 Rev. 5.4	01/25/2018	01/25/2018	Elliott D. Healy	01/30/2018	Nadine Brooks	1962127
EPA 300.0 Rev. 2.1	01/25/2018			01/26/2018	Julia Storbeck	1962034, 1962035, 1962040, 1962049
EPA 350.1 Rev. 2.0	01/25/2018			01/31/2018	Ping Hua	1962036
	01/25/2018			02/02/2018	Ping Hua	1962037, 1962041, 1962050
EPA 351.2 Rev. 2.0	01/25/2018	01/26/2018	Adrian Shelby	01/29/2018	Joseph Suarez	1962036, 1962037, 1962041, 1962050
EPA 353.2 Rev. 2.0	01/25/2018			01/29/2018	Beverly Y. Sanders	1962036, 1962037, 1962041, 1962050
EPA 365.1 Rev. 2.0	01/25/2018	01/29/2018	Sima Feizi	01/30/2018	Beverly Y. Sanders	1962036, 1962037, 1962041, 1962050
EPA 365.1 Rev. 2.0 dissolved	01/25/2018			01/25/2018 15:39	Megan Treadwell	1962042
	01/25/2018			01/25/2018 16:18	Megan Treadwell	1962038, 1962039
	01/25/2018			01/25/2018 16:19	Megan Treadwell	1962051
EPA 8270D	01/25/2018	01/26/2018	John Kaba	01/31/2018	Vandana T. Nagar	1962129
	01/25/2018	01/29/2018	John Kaba	02/01/2018	Marek Topolski	1962128
EPA 8321B	01/25/2018	01/25/2018	Hoor Shaik	01/26/2018	Julie Michelle Frank	1962126
	01/25/2018	01/25/2018	Hoor Shaik	01/26/2018	S. M. Reddy	1962125
	01/25/2018	01/26/2018	Juyoung Kim	01/26/2018	Juyoung Kim	1962125
	01/25/2018	01/26/2018	Juyoung Kim	01/27/2018	Juyoung Kim	1962119, 1962120, 1962121, 1962122, 1962123, 1962124, 1962125
SM 2120 B	01/25/2018			01/25/2018 15:28	Tanya Welborn	1962034
	01/25/2018			01/25/2018 15:29	Tanya Welborn	1962035
	01/25/2018			01/25/2018 15:54	Tanya Welborn	1962040
	01/25/2018			01/25/2018 15:59	Tanya Welborn	1962049
SM 2320 B-97	01/25/2018			01/30/2018	Lauren Bottorf	1962034, 1962035, 1962040, 1962049
SM 2540 C-97	01/25/2018			01/26/2018	DeAsia Armster	1962034, 1962035, 1962040, 1962049
SM 2540 D-97	01/25/2018			01/26/2018	DeAsia Armster	1962034, 1962035, 1962040, 1962049
SM 4500 F-C-97	01/25/2018			01/30/2018	Lauren Bottorf	1962034, 1962035, 1962040, 1962049
SM 5310 B-00	01/25/2018			02/01/2018	Megan Treadwell	1962036, 1962037, 1962041, 1962050
USGS O-2060-01	01/25/2018	01/25/2018	Hoor Shaik	01/26/2018	Julie Michelle Frank	1962125
	01/25/2018	01/25/2018	Hoor Shaik	01/27/2018	Julie Michelle Frank	1962125
	01/25/2018	01/26/2018	Hoor Shaik	01/27/2018	Julie Michelle Frank	1962119, 1962120, 1962121, 1962122, 1962123, 1962124
	01/25/2018	01/26/2018	Hoor Shaik	01/28/2018	Julie Michelle Frank	1962119, 1962120, 1962121, 1962122, 1962123, 1962124