

Chemical Analysis Report

CEN-DIST-2017-10-27-02

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

Event Description: **Tick Island Mud Lake**
Request ID: **RQ-2017-10-23-33**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Michael Linger

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Certified by: Colin Wright, Program Administrator

Date Certified: 30-NOV-2017 14:17

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Reedy Creek @ SR 192

Collection Date/Time: 10/26/2017 09:50

Field ID: G4CE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1940678	EPA 180.1 Rev. 2.0	Turbidity	1.8		NTU	P334218	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P334680	
		Sulfate	6.3		mg SO4/L	P334683	
	SM 2120 B	Color (true)	600		PCU	P334222	
	SM 2320 B-97	Total Alkalinity	16		mg CaCO3/L	P334547	
	SM 2540 C-97	TDS	164	A	mg/L	P334824	
	SM 2540 D-97	TSS	3	IA	mg/L	P334834	
	SM 4500 F-C-97	Fluoride	0.063	I	mg F/L	P334550	
1940679	EPA 350.1 Rev. 2.0	Ammonia-N	0.017		mg N/L	P334713	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P334539	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P334638	
	EPA 365.1 Rev. 2.0	Total-P	0.062		mg P/L	P334390	
	SM 5310 B-00	Organic Carbon	38		mg C/L	P334774	
1940680	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.036		mg P/L	P334212	
1940685	EPA 200.7 Rev. 4.4	Calcium	9.89		mg/L	P334444	
		Iron	470		ug/L	P334444	
		Magnesium	3.17		mg/L	P334444	
		Potassium	5.2		mg/L	P334444	
		Sodium	19.6		mg/L	P334444	
		Zinc	5.0	U	ug/L	P334444	
	EPA 200.8 Rev. 5.4	Arsenic	0.69		ug/L	P334444	
		Cadmium	0.020	U	ug/L	P334444	
		Chromium	0.65	I	ug/L	P334444	
		Copper	0.91		ug/L	P334444	
		Lead	0.32		ug/L	P334444	
		Nickel	0.50	I	ug/L	P334444	
		Silver	0.010	U	ug/L	P334444	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Chloride: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for lead are unavailable because of high analyte concentration in the QC sample.

Sample Location: Reedy Creek @ SR 192

Collection Date/Time: 10/26/2017 09:50

Field ID: G4CE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1940682	EPA 8321B	Glyphosate**	1.0		ug/L	P334110	
		Pyraclostrobin**	0.0020	U	ug/L	P334111	
		Sucralose**	2.2		ug/L	P334230	
	USGS O-2060-01	2,4-D	0.030	Q	ug/L	P335855	
		Diuron	0.0014	I	ug/L	P334232	
		Fenuron	0.0080	U	ug/L	P334232	
		Imidacloprid	0.011		ug/L	P334232	
		Bentazon	0.016	Q	ug/L	P335855	

Field ID: G4CE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1940682	USGS O-2060-01	Linuron	0.0040	U	ug/L	P334232	
		Acetaminophen**	0.0080	U	ug/L	P334232	
		MCPP	0.0020	UQ	ug/L	P335855	
		Carbamazepine**	0.0029		ug/L	P334232	
		Triclopyr**	0.0040	UQ	ug/L	P335855	
		Primidone**	0.0052	I	ug/L	P334232	
		Fluridone**	0.046		ug/L	P334232	
1940683	EPA 8270D	Aldrin	4.4	U	ng/L	P334412	
		Alpha-BHC	2.2	U	ng/L	P334412	
		Beta-BHC	4.4	U	ng/L	P334412	
		Delta-BHC	4.4	U	ng/L	P334412	
		Gamma-BHC	4.4	U	ng/L	P334412	
		Carbophenothion	4.4	U	ng/L	P334412	
		Chlorothalonil	2.2	U	ng/L	P334412	
		Cypermethrin	22	U	ng/L	P334412	
		DDD-p,p'	3.3	U	ng/L	P334412	
		DDE-p,p'	3.3	U	ng/L	P334412	
		DDT-p,p'	3.3	U	ng/L	P334412	
		Dieldrin	4.4	U	ng/L	P334412	
		Endosulfan I	4.4	U	ng/L	P334412	
		Endosulfan II	4.4	U	ng/L	P334412	
		Endosulfan Sulfate	2.2	U	ng/L	P334412	
		Endrin	2.2	U	ng/L	P334412	
		Endrin Aldehyde	2.2	U	ng/L	P334412	
		Heptachlor	1.7	U	ng/L	P334412	
		Heptachlor Epoxide	2.2	U	ng/L	P334412	
		Methoxychlor	4.4	U	ng/L	P334412	
		Mirex	2.2	U	ng/L	P334412	
		Permethrin	11	U	ng/L	P334412	
		Trifluralin	1.1	U	ng/L	P334412	
		Alpha-Chlordane	1.1	U	ng/L	P334412	
		Gamma-Chlordane	1.1	U	ng/L	P334412	
		Endrin Ketone	2.2	U	ng/L	P334412	
		Dicofol	33	U	ng/L	P334412	
	EPA 8276	Chlordane**	2.8	U	ng/L	P334412	
		Toxaphene**	14	U	ng/L	P334412	
1940684	EPA 8270D	Alachlor	0.27	U	ng/L	P334190	
		Ametryn	0.35	U	ng/L	P334190	
		Atrazine	0.53	I	ng/L	P334190	
		Atrazine Desethyl	1.6	U	ng/L	P334190	
		Azinphos Methyl	2.4	U	ng/L	P334190	
		Bromacil	11		ng/L	P334190	
		Butylate	0.43	U	ng/L	P334190	
		Chlorpyrifos Ethyl	0.27	U	ng/L	P334190	
		Chlorpyrifos Methyl	0.11	U	ng/L	P334190	MS

Field ID: G4CE0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1940684	EPA 8270D	Demeton	2.2	U	ng/L	P334190	RPD
		Diazinon	0.13	U	ng/L	P334190	
		Disulfoton	0.54	U	ng/L	P334190	
		EPTC	1.3	U	ng/L	P334190	
		Ethion	0.16	U	ng/L	P334190	
		Ethoprop	0.11	U	ng/L	P334190	
		Fenamiphos	0.27	U	ng/L	P334190	
		Fipronil	0.27	U	ng/L	P334190	MS
		Fipronil Sulfide	0.27	I	ng/L	P334190	
		Fipronil Sulfone	0.45	I	ng/L	P334190	MS
		Hexazinone	0.54	U	ng/L	P334190	
		Malathion	3.0		ng/L	P334190	
		Metribuzin	0.22	UJ	ng/L	P334190	MS, RPD
		Mevinphos	0.54	U	ng/L	P334190	
		Molinate	0.32	U	ng/L	P334190	
		Norflurazon	0.56	I	ng/L	P334190	
		Pendimethalin	1.1	U	ng/L	P334190	
		Phorate	0.27	U	ng/L	P334190	
		Prometon	0.97	U	ng/L	P334190	
		Prometryn	0.22	U	ng/L	P334190	
		Simazine	0.54	U	ng/L	P334190	
		Terbufos	0.11	UJ	ng/L	P334190	LCS
		Terbuthylazine	0.46	U	ng/L	P334190	
		Fonofos	0.22	U	ng/L	P334190	
		Metalaxyl	0.64	I	ng/L	P334190	
		Metolachlor	0.34	I	ng/L	P334190	
		Acetochlor	0.27	U	ng/L	P334190	
		Cyanazine	0.54	UJ	ng/L	P334190	LCS, MS, RPD
		Parathion Ethyl	0.27	U	ng/L	P334190	
		Parathion Methyl	0.27	U	ng/L	P334190	

Ref. Method and Comment:

USGS O-2060-01: Sample required re-extraction beyond normal holding time due to reagent performance inconsistencies.

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.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P334218

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P334444

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P334444

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: P334444

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: P334680

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334683

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334713

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334539

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334638

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P334390

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P334212

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

Reference Method: EPA 8270D

Batch ID: P334190

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.25	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
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P334412

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

Reference Method: EPA 8276
Batch ID: P334412

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

Reference Method: EPA 8321B
Batch ID: P334110

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P334111

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: EPA 8321B
Batch ID: P334230

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P334222

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P334547

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

Reference Method: SM 2540 C-97
Batch ID: P334824

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P334834

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P334550

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P334774

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

Reference Method: USGS O-2060-01
Batch ID: P334232

Component	Result	Code	Units
Acetaminophen	0.0080	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
Primidone	0.0040	U	ug/L

Reference Method: USGS O-2060-01
Batch ID: P335855

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
MCPP	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P335855

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: P334444

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	105		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	99.3		P	85 - 115
Sodium	104		P	85 - 115
Zinc	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334444

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	100		P	85 - 115
Copper	95.5		P	85 - 115
Lead	99.1		P	85 - 115
Nickel	97.8		P	85 - 115
Silver	95.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334680

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	97.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334683

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334713

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334539

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P334638

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P334390

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P334212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	96.8		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P334190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	99.2	100	P/P	78 - 118
Alachlor	95.1	94.1	P/P	77 - 119
Ametryn	102	98.9	P/P	61 - 136
Atrazine	90.5	94.5	P/P	73 - 120
Atrazine Desethyl	79.9	62.2	P/P	16 - 122
Azinphos Methyl	160	124	P/P	69 - 186
Bromacil	91.4	86.2	P/P	40 - 125
Butylate	62.3	75.2	P/P	32 - 87.0
Chlorpyrifos Ethyl	90.0	97.3	P/P	53 - 110
Chlorpyrifos Methyl	112	111	P/P	31 - 119
Cyanazine	281	119	F/P	36 - 224
Demeton	87.8	93.8	P/P	39 - 122
Diazinon	99.4	93.4	P/P	75 - 119
Disulfoton	87.7	96.9	P/P	42 - 139
EPTC	56.3	69.7	P/P	33 - 96.0
Ethion	119	114	P/P	63 - 127
Ethoprop	89.9	95.7	P/P	65 - 107
Fenamiphos	105	97.1	P/P	64 - 137
Fipronil	104	91.3	P/P	60 - 126
Fipronil Sulfide	95.2	88.8	P/P	58 - 124
Fipronil Sulfone	108	97.1	P/P	57 - 126
Fonofos	85.7	92.4	P/P	65 - 111
Hexazinone	91.2	101	P/P	46 - 151
Malathion	115	105	P/P	68 - 132
Metaxyl	83.3	78.3	P/P	51 - 132
Metolachlor	94.3	92.4	P/P	78 - 119
Metribuzin	137	91.9	P/P	58 - 148
Mevinphos	86.4	98.0	P/P	34 - 128
Molinate	67.4	76.7	P/P	44 - 101
Norflurazon	99.5	93.8	P/P	63 - 129
Parathion Ethyl	88.4	91.8	P/P	80 - 109
Parathion Methyl	97.0	112	P/P	74 - 125
Pendimethalin	87.3	97.2	P/P	48 - 134
Phorate	103	106	P/P	52 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P334190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometon	89.7	96.0	P/P	69 - 124
Prometryn	101	95.8	P/P	66 - 124
Simazine	88.7	101	P/P	61 - 134
Terbufos	113	121	P/F	58 - 115
Terbutylazine	94.0	95.6	P/P	77 - 113

Reference Method: EPA 8270D

Batch ID: P334412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	78.4	82.2	P/P	26 - 88.0
Alpha-BHC	88.1	70.7	P/P	63 - 114
Alpha-Chlordane	87.4	89.6	P/P	56 - 117
Beta-BHC	88.1	83.4	P/P	57 - 138
Carbophenothion	97.3	93.5	P/P	36 - 148
Chlorothalonil	79.5	106	P/P	26 - 173
Cypermethrin	91.7	96.9	P/P	42 - 159
DDD-p,p'	93.9	93.6	P/P	62 - 126
DDE-p,p'	91.3	92.9	P/P	53 - 115
DDT-p,p'	96.3	99.7	P/P	54 - 117
Delta-BHC	103	83.3	P/P	68 - 158
Dicofol	66.7	51.7	P/P	25 - 114
Dieldrin	88.6	90.6	P/P	59 - 126
Endosulfan I	91.5	93.1	P/P	62 - 138
Endosulfan II	91.8	92.0	P/P	61 - 150
Endosulfan Sulfate	94.2	92.3	P/P	63 - 132
Endrin	95.7	92.9	P/P	49 - 148
Endrin Aldehyde	91.8	90.7	P/P	50 - 144
Endrin Ketone	93.7	93.4	P/P	66 - 122
Gamma-BHC	90.1	88.3	P/P	60 - 137
Gamma-Chlordane	85.9	88.6	P/P	54 - 113
Heptachlor	81.7	84.7	P/P	43 - 104
Heptachlor Epoxide	89.1	89.8	P/P	64 - 118
Methoxychlor	102	107	P/P	63 - 129
Mirex	85.4	85.5	P/P	39 - 93.0
Permethrin	88.0	93.8	P/P	51 - 123
Trifluralin	83.5	87.0	P/P	35 - 187

Reference Method: EPA 8276

Batch ID: P334412

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	74.5	71.6	P/P	48 - 121
Toxaphene	99.5	102	P/P	43 - 135

Reference Method: EPA 8321B

Batch ID: P334110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	87.6		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P334111

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	62.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P334230

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	94.9		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P334547

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

Reference Method: SM 4500 F-C-97
Batch ID: P334550

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P334774

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.3		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P334232

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	89.6		P	30 - 150
Carbamazepine	114		P	40 - 150
Diuron	107		P	40 - 150
Fenuron	108		P	40 - 150
Fluridone	110		P	40 - 150
Imidacloprid	106		P	40 - 160
Linuron	110		P	40 - 150
Primidone	104		P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335855

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	101		P	40 - 150
Bentazon	93.5		P	30 - 150
MCPP	94.7		P	40 - 150
Triclopyr	94.6		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: P334444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940811	Calcium	105		P	80 - 120
1940811	Iron	101	98.7	P/P	80 - 120
1940811	Magnesium	103	102	P/P	80 - 120
1940811	Potassium	98.5	96.7	P/P	80 - 120
1940811	Sodium	104		P	80 - 120
1940811	Zinc	102	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940811	Arsenic	98.6	101	P/P	80 - 120
1940811	Cadmium	102	102	P/P	80 - 120
1940811	Chromium	95.7	97.8	P/P	80 - 120
1940811	Copper	93.1	95.8	P/P	80 - 120
1940811	Nickel	94.3	96.7	P/P	80 - 120
1940811	Silver	94.8	94.7	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334680

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940637	Chloride	97.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334683

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940637	Sulfate	99.2		P	90 - 110
1940691	Sulfate	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940679	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334539

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940660	Kjeldahl Nitrogen	98.2	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334638

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940692	NO2NO3-N	110	109	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P334390

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940692	Total-P	98.2	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P334212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940760	O-Phosphate-P	94.3	100	P/P	90 - 110

Reference Method: EPA 8270D

Batch ID: P334190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940131	Acetochlor	104	102	P/P	74 - 123
1940131	Alachlor	103	96.3	P/P	73 - 124
1940131	Ametryn	118	110	P/P	56 - 149
1940131	Atrazine Desethyl	83.7	93.4	P/P	12 - 103
1940131	Azinphos Methyl	157	154	P/P	60 - 202
1940131	Bromacil	108	86.8	P/P	42 - 133
1940131	Butylate	33.8	43.1	P/P	10 - 85.0
1940131	Chlorpyrifos Ethyl	109	104	P/P	53 - 113
1940131	Chlorpyrifos Methyl	113	121	P/F	40 - 115
1940131	Cyanazine	307	347	F/F	22 - 210
1940131	Demeton	65.4	101	P/P	17 - 149
1940131	Diazinon	103	101	P/P	72 - 124
1940131	Disulfoton	102	107	P/P	43 - 139
1940131	EPTC	31.1	34.2	P/P	10 - 86.0
1940131	Ethion	126	126	P/P	65 - 131
1940131	Ethoprop	98.3	103	P/P	59 - 110
1940131	Fenamiphos	104	128	P/P	57 - 138
1940131	Fipronil	131	125	F/P	40 - 130
1940131	Fipronil Sulfide	124	119	P/P	36 - 128
1940131	Fipronil Sulfone	201	186	F/F	16 - 145
1940131	Fonofos	85.2	99.3	P/P	60 - 112
1940131	Hexazinone	110	106	P/P	69 - 142
1940131	Malathion	117	119	P/P	68 - 132
1940131	Metalaxyl	101	90.6	P/P	66 - 118
1940131	Metolachlor	104	95.5	P/P	71 - 124
1940131	Metribuzin	154	160	F/F	61 - 140
1940131	Mevinphos	90.4	98.0	P/P	38 - 130
1940131	Molinate	54.2	58.8	P/P	23 - 99.0
1940131	Norflurazon	113	103	P/P	39 - 139
1940131	Parathion Ethyl	90.9	98.7	P/P	75 - 111
1940131	Parathion Methyl	103	111	P/P	64 - 130
1940131	Pendimethalin	111	115	P/P	26 - 173
1940131	Phorate	97.1	113	P/P	43 - 127
1940131	Prometon	126	96.0	P/P	50 - 144
1940131	Prometryn	110	108	P/P	69 - 126
1940131	Simazine	104	108	P/P	51 - 152
1940131	Terbufos	111	125	P/P	54 - 125
1940131	Terbutylazine	105	97.9	P/P	76 - 113

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P334412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940366	Aldrin	84.8	86.2	P/P	22 - 97.0
1940366	Alpha-BHC	96.3	98.6	P/P	43 - 132
1940366	Alpha-Chlordane	96.8	96.3	P/P	36 - 126
1940366	Beta-BHC	97.6	75.8	P/P	41 - 150
1940366	Carbophenothion	114	118	P/P	13 - 196
1940366	Chlorothalonil	128	130	P/P	10 - 266
1940366	Cypermethrin	93.6	125	P/P	37 - 161
1940366	DDD-p,p'	105	93.7	P/P	44 - 131
1940366	DDE-p,p'	95.1	95.2	P/P	32 - 127
1940366	DDT-p,p'	97.9	103	P/P	45 - 116
1940366	Delta-BHC	124	102	P/P	50 - 201
1940366	Dicofol	64.2	65.1	P/P	10 - 100
1940366	Dieldrin	99.7	95.8	P/P	39 - 142
1940366	Endosulfan I	103	97.9	P/P	51 - 139
1940366	Endosulfan II	98.9	98.7	P/P	49 - 155
1940366	Endosulfan Sulfate	98.2	96.4	P/P	54 - 136
1940366	Endrin	108	103	P/P	38 - 141
1940366	Endrin Aldehyde	89.4	99.6	P/P	14 - 152
1940366	Endrin Ketone	99.8	100	P/P	60 - 128
1940366	Gamma-BHC	95.8	90.6	P/P	48 - 157
1940366	Gamma-Chlordane	93.4	94.1	P/P	35 - 123
1940366	Heptachlor	86.7	91.2	P/P	25 - 112
1940366	Heptachlor Epoxide	101	97.3	P/P	48 - 125
1940366	Methoxychlor	111	114	P/P	52 - 127
1940366	Mirex	85.8	91.3	P/P	25 - 108
1940366	Permethrin	90.3	116	P/P	46 - 133
1940366	Trifluralin	90.9	92.4	P/P	29 - 254

Reference Method: EPA 8276
Batch ID: P334412

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940324	Chlordane	49.4	49.7	P/P	44 - 134
1940324	Toxaphene	72.8	75.2	P/P	36 - 147

Reference Method: EPA 8321B
Batch ID: P334110

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940315	Glyphosate	101	105	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P334111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1939436	Pyraclostrobin	55.8	59.6	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P334230

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940129	Sucralose	94.0	92.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P334550

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1941294	Fluoride	96.3	98.1	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P334774

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940459	Organic Carbon	99.4	98.6	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P334232

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1941073	Acetaminophen	98.3	103	P/P	30 - 150
1941073	Carbamazepine	133	136	P/P	40 - 150
1941073	Diuron	105	109	P/P	40 - 150
1941073	Fenuron	107	102	P/P	40 - 150
1941073	Fluridone	112	114	P/P	40 - 150
1941073	Imidacloprid	147	150	P/P	40 - 160
1941073	Linuron	109	114	P/P	40 - 150
1941073	Primidone	125	124	P/P	40 - 150

Reference Method: USGS O-2060-01
Batch ID: P335855

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1940704	2,4-D	84.2	80.2	P/P	40 - 150
1940704	Bentazon	83.8	80.9	P/P	30 - 150
1940704	MCPP	64.0	60.9	P/P	40 - 150
1940704	Triclopyr	60.1	58.3	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P334218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940654	Turbidity	4.08	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P334444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940811	Calcium	0.124	Spike	P	0 - 20
1940811	Iron	1.17	Spike	P	0 - 20
1940811	Magnesium	0.496	Spike	P	0 - 20
1940811	Potassium	1.10	Spike	P	0 - 20
1940811	Sodium	0.224	Spike	P	0 - 20
1940811	Zinc	1.13	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P334444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940811	Arsenic	1.91	Spike	P	0 - 20
1940811	Cadmium	0.328	Spike	P	0 - 20
1940811	Chromium	2.16	Spike	P	0 - 20
1940811	Copper	2.72	Spike	P	0 - 20
1940811	Lead	0.937	Spike	P	0 - 20
1940811	Nickel	2.37	Spike	P	0 - 20
1940811	Silver	0.0383	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334680

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940637	Chloride	0.461	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P334683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940637	Sulfate	0.428	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P334713

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940679	Ammonia-N	0.428	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P334539

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940660	Kjeldahl Nitrogen	0.263	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P334638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940692	NO2NO3-N	0.458	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P334390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940692	Total-P	1.22	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P334212

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940760	O-Phosphate-P	4.12	Spike	P	0 - 20

Reference Method: EPA 8270D

Batch ID: P334190

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940131	Acetochlor	1.72	Spike	P	0 - 30
1940131	Alachlor	7.09	Spike	P	0 - 30
1940131	Ametryn	6.95	Spike	P	0 - 30
1940131	Atrazine	4.11	Spike	P	0 - 30
1940131	Atrazine Desethyl	7.70	Spike	P	0 - 30
1940131	Azinphos Methyl	1.85	Spike	P	0 - 30
1940131	Bromacil	14.8	Spike	P	0 - 30
1940131	Butylate	24.2	Spike	P	0 - 30
1940131	Chlorpyrifos Ethyl	4.40	Spike	P	0 - 30
1940131	Chlorpyrifos Methyl	7.51	Spike	P	0 - 30
1940131	Cyanazine	12.1	Spike	P	0 - 30
1940131	Demeton	42.8	Spike	F	0 - 30
1940131	Diazinon	1.88	Spike	P	0 - 30
1940131	Disulfoton	5.20	Spike	P	0 - 30
1940131	EPTC	9.68	Spike	P	0 - 30
1940131	Ethion	0.410	Spike	P	0 - 30
1940131	Ethoprop	4.34	Spike	P	0 - 30
1940131	Fenamiphos	21.2	Spike	P	0 - 30
1940131	Fipronil	3.17	Spike	P	0 - 30
1940131	Fipronil Sulfide	1.61	Spike	P	0 - 30
1940131	Fipronil Sulfone	2.48	Spike	P	0 - 30
1940131	Fonofos	15.3	Spike	P	0 - 30
1940131	Hexazinone	1.93	Spike	P	0 - 30
1940131	Malathion	2.07	Spike	P	0 - 30
1940131	Metalaxyl	5.58	Spike	P	0 - 30
1940131	Metolachlor	8.53	Spike	P	0 - 30
1940131	Metribuzin	3.22	Spike	P	0 - 30
1940131	Mevinphos	8.10	Spike	P	0 - 30
1940131	Molinate	8.13	Spike	P	0 - 30
1940131	Norflurazon	8.60	Spike	P	0 - 30
1940131	Parathion Ethyl	8.22	Spike	P	0 - 30
1940131	Parathion Methyl	6.76	Spike	P	0 - 30
1940131	Pendimethalin	3.87	Spike	P	0 - 30
1940131	Phorate	14.8	Spike	P	0 - 30
1940131	Prometon	26.9	Spike	P	0 - 30
1940131	Prometryn	1.40	Spike	P	0 - 30
1940131	Simazine	3.34	Spike	P	0 - 30
1940131	Terbufos	11.9	Spike	P	0 - 30
1940131	Terbutylazine	6.80	Spike	P	0 - 30
LFB	Acetochlor	1.19	LCS	P	0 - 30
LFB	Alachlor	1.08	LCS	P	0 - 30
LFB	Ametryn	2.62	LCS	P	0 - 30
LFB	Atrazine	4.39	LCS	P	0 - 30
LFB	Atrazine Desethyl	25.0	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P334190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Azinphos Methyl	25.0	LCS	P	0 - 30
LFB	Bromacil	5.77	LCS	P	0 - 30
LFB	Butylate	18.8	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	7.76	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.06	LCS	P	0 - 30
LFB	Cyanazine	80.7	LCS	F	0 - 30
LFB	Demeton	6.65	LCS	P	0 - 30
LFB	Diazinon	6.19	LCS	P	0 - 30
LFB	Disulfoton	9.90	LCS	P	0 - 30
LFB	EPTC	21.3	LCS	P	0 - 30
LFB	Ethion	4.74	LCS	P	0 - 30
LFB	Ethoprop	6.33	LCS	P	0 - 30
LFB	Fenamiphos	8.02	LCS	P	0 - 30
LFB	Fipronil	13.3	LCS	P	0 - 30
LFB	Fipronil Sulfide	6.95	LCS	P	0 - 30
LFB	Fipronil Sulfone	10.2	LCS	P	0 - 30
LFB	Fonofos	7.55	LCS	P	0 - 30
LFB	Hexazinone	10.4	LCS	P	0 - 30
LFB	Malathion	9.31	LCS	P	0 - 30
LFB	Metalaxyl	6.16	LCS	P	0 - 30
LFB	Metolachlor	2.01	LCS	P	0 - 30
LFB	Metribuzin	39.4	LCS	F	0 - 30
LFB	Mevinphos	12.7	LCS	P	0 - 30
LFB	Molinate	12.9	LCS	P	0 - 30
LFB	Norflurazon	5.91	LCS	P	0 - 30
LFB	Parathion Ethyl	3.78	LCS	P	0 - 30
LFB	Parathion Methyl	14.6	LCS	P	0 - 30
LFB	Pendimethalin	10.7	LCS	P	0 - 30
LFB	Phorate	2.29	LCS	P	0 - 30
LFB	Prometon	6.74	LCS	P	0 - 30
LFB	Prometryn	5.63	LCS	P	0 - 30
LFB	Simazine	13.1	LCS	P	0 - 30
LFB	Terbufos	6.96	LCS	P	0 - 30
LFB	Terbuthylazine	1.72	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P334412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940366	Aldrin	1.56	Spike	P	0 - 30
1940366	Alpha-BHC	2.33	Spike	P	0 - 30
1940366	Alpha-Chlordane	0.586	Spike	P	0 - 30
1940366	Beta-BHC	25.1	Spike	P	0 - 30
1940366	Carbophenothion	3.82	Spike	P	0 - 30
1940366	Chlorothalonil	1.45	Spike	P	0 - 30
1940366	Cypermethrin	28.6	Spike	P	0 - 30
1940366	DDD-p,p'	11.2	Spike	P	0 - 30
1940366	DDE-p,p'	0.115	Spike	P	0 - 30
1940366	DDT-p,p'	5.03	Spike	P	0 - 30
1940366	Delta-BHC	19.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P334412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940366	Dicofol	1.49	Spike	P	0 - 30
1940366	Dieldrin	3.98	Spike	P	0 - 30
1940366	Endosulfan I	4.94	Spike	P	0 - 30
1940366	Endosulfan II	0.137	Spike	P	0 - 30
1940366	Endosulfan Sulfate	1.82	Spike	P	0 - 30
1940366	Endrin	4.49	Spike	P	0 - 30
1940366	Endrin Aldehyde	10.8	Spike	P	0 - 30
1940366	Endrin Ketone	0.661	Spike	P	0 - 30
1940366	Gamma-BHC	5.51	Spike	P	0 - 30
1940366	Gamma-Chlordane	0.782	Spike	P	0 - 30
1940366	Heptachlor	5.03	Spike	P	0 - 30
1940366	Heptachlor Epoxide	3.82	Spike	P	0 - 30
1940366	Methoxychlor	2.75	Spike	P	0 - 30
1940366	Mirex	6.30	Spike	P	0 - 30
1940366	Permethrin	25.0	Spike	P	0 - 30
1940366	Trifluralin	1.73	Spike	P	0 - 30
LFB	Aldrin	4.78	LCS	P	0 - 30
LFB	Alpha-BHC	21.9	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.49	LCS	P	0 - 30
LFB	Beta-BHC	5.47	LCS	P	0 - 30
LFB	Carbophenothion	4.04	LCS	P	0 - 30
LFB	Chlorothalonil	28.3	LCS	P	0 - 30
LFB	Cypermethrin	5.50	LCS	P	0 - 30
LFB	DDD-p,p'	0.316	LCS	P	0 - 30
LFB	DDE-p,p'	1.80	LCS	P	0 - 30
LFB	DDT-p,p'	3.51	LCS	P	0 - 30
LFB	Delta-BHC	20.8	LCS	P	0 - 30
LFB	Dicofol	25.4	LCS	P	0 - 30
LFB	Dieldrin	2.26	LCS	P	0 - 30
LFB	Endosulfan I	1.80	LCS	P	0 - 30
LFB	Endosulfan II	0.221	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.06	LCS	P	0 - 30
LFB	Endrin	2.95	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.21	LCS	P	0 - 30
LFB	Endrin Ketone	0.292	LCS	P	0 - 30
LFB	Gamma-BHC	1.97	LCS	P	0 - 30
LFB	Gamma-Chlordane	3.08	LCS	P	0 - 30
LFB	Heptachlor	3.60	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.758	LCS	P	0 - 30
LFB	Methoxychlor	5.41	LCS	P	0 - 30
LFB	Mirex	0.0933	LCS	P	0 - 30
LFB	Permethrin	6.36	LCS	P	0 - 30
LFB	Trifluralin	4.09	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P334412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940324	Chlordane	0.619	Spike	P	0 - 30
1940324	Toxaphene	3.24	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P334412

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	3.91	LCS	P	0 - 30
LFB	Toxaphene	2.04	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P334110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940315	Glyphosate	2.74	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P334111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1939436	Pyraclostrobin	6.50	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P334230

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940129	Sucralose	1.07	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P334222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940691	Color (true)	0.323	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P334547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1941294	Total Alkalinity	0.107	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P334824

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940678	TDS	3.04	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P334550

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1941294	Fluoride	1.48	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
 Batch ID: P334774

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940459	Organic Carbon	0.724	Spike	P	0 - 20

Reference Method: USGS O-2060-01
 Batch ID: P334232

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1941073	Acetaminophen	4.98	Spike	P	0 - 30
1941073	Carbamazepine	2.78	Spike	P	0 - 30
1941073	Diuron	3.60	Spike	P	0 - 30
1941073	Fenuron	4.64	Spike	P	0 - 30
1941073	Fluridone	1.61	Spike	P	0 - 30
1941073	Imidacloprid	1.88	Spike	P	0 - 30
1941073	Linuron	4.36	Spike	P	0 - 30
1941073	Primidone	0.498	Spike	P	0 - 30

Reference Method: USGS O-2060-01
 Batch ID: P335855

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1940704	2,4-D	4.91	Spike	P	0 - 30
1940704	Bentazon	3.52	Spike	P	0 - 30
1940704	MCP	4.91	Spike	P	0 - 30
1940704	Triclopyr	3.14	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: 1940682
 Field Sample ID: G4CE0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	101	P	30 - 160
EPA 8321B	Diuron-d6	74.8	P	30 - 160
EPA 8321B	Diuron-d6	91.6	P	30 - 160
EPA 8321B	Diuron-d6	74.8	P	30 - 160
EPA 8321B	Diuron-d6	91.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	102	P	40 - 160
EPA 8321B	Primidone-d5	96.8	P	30 - 160
EPA 8321B	Primidone-d5	96.8	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160
EPA 8321B	Sucralose-d6	102	P	40 - 160
USGS O-2060-01	2,4-D-d3	63.4	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 1940682
Field Sample ID: G4CE0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
USGS O-2060-01	Acetaminophen-d4	112	P	30 - 160
USGS O-2060-01	Carbamazepine-d10	101	P	30 - 160
USGS O-2060-01	Diuron-d6	74.8	P	30 - 160
USGS O-2060-01	Diuron-d6	91.6	P	30 - 160
USGS O-2060-01	Primidone-d5	96.8	P	30 - 160
USGS O-2060-01	Sucralose-d6	102	P	40 - 160

Lab Sample ID: 1940683
Field Sample ID: G4CE0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	66.9	P	39 - 118
EPA 8270D	Tetrachloro-m-xylene	58.0	P	32 - 103
EPA 8276	Decachlorobiphenyl	57.8	P	31 - 100

Lab Sample ID: 1940684
Field Sample ID: G4CE0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	99.9	P	53 - 135
EPA 8270D	Simazine-d10	97.0	P	71 - 126

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A79865
Included Lab Sample IDs: 1940680

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.7	97.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A79866
Included Lab Sample IDs: 1940678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	100	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A79867
Included Lab Sample IDs: 1940678

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

Reference Method: EPA 8321B
Run ID: A79873
Included Lab Sample IDs: 1940682

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

Reference Method: EPA 8321B
Run ID: A79873
Included Lab Sample IDs: 1940682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	87.2	91.6	P/P	70 - 160

Reference Method: EPA 8321B
Run ID: A79874
Included Lab Sample IDs: 1940682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	77.0	78.0	P/P	60 - 150

Reference Method: EPA 8321B
Run ID: A79934
Included Lab Sample IDs: 1940682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	111	114	P/P	60 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A79947
Included Lab Sample IDs: 1940679

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A79984
Included Lab Sample IDs: 1940679

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	106	P/P	90 - 110

Reference Method: SM 2320 B-97
Run ID: A79986
Included Lab Sample IDs: 1940678

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

Reference Method: SM 4500 F-C-97
Run ID: A79986
Included Lab Sample IDs: 1940678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.6	98.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A80007
Included Lab Sample IDs: 1940685

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A80007

Included Lab Sample IDs: 1940685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	101	101	P/P	90 - 110
Potassium	100	99.6	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Zinc	97.4	98.1	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A80039

Included Lab Sample IDs: 1940678

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	100	P/P	90 - 110
Sulfate	101	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A80044

Included Lab Sample IDs: 1940685

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	103	104	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Copper	100	101	P/P	90 - 110
Lead	100	99.8	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Silver	95.6	94.9	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80055

Included Lab Sample IDs: 1940679

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80070

Included Lab Sample IDs: 1940679

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

Reference Method: SM 5310 B-00

Run ID: A80078

Included Lab Sample IDs: 1940679

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276
Run ID: A80234
Included Lab Sample IDs: 1940683

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	86.8		P	80 - 120
Toxaphene	108		P	80 - 120

Reference Method: EPA 8270D
Run ID: A80284
Included Lab Sample IDs: 1940683

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	101		P	80 - 120
Alpha-BHC	98.5		P	80 - 120
Alpha-Chlordane	103		P	80 - 120
Beta-BHC	97.4		P	80 - 120
Carbophenothion	86.8		P	80 - 120
Chlorothalonil	90.4		P	80 - 120
Cypermethrin	94.3		P	80 - 120
DDD-p,p'	106		P	80 - 120
DDE-p,p'	106		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	94.9		P	80 - 120
Dicofol	98.7		P	80 - 120
Dieldrin	97.6		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	114		P	80 - 120
Endosulfan Sulfate	99.2		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	97.3		P	80 - 120
Gamma-BHC	94.2		P	80 - 120
Gamma-Chlordane	102		P	80 - 120
Heptachlor	100		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	93.7		P	80 - 120
Trifluralin	99.7		P	80 - 120

Reference Method: EPA 8270D
Run ID: A80519
Included Lab Sample IDs: 1940684

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	98.2		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine	93.0		P	80 - 120
Atrazine Desethyl	94.0		P	80 - 120
Azinphos Methyl	93.8		P	80 - 120
Bromacil	97.8		P	80 - 120
Butylate	99.9		P	80 - 120
Chlorpyrifos Ethyl	99.1		P	80 - 120
Chlorpyrifos Methyl	95.4		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270D

Run ID: A80519

Included Lab Sample IDs: 1940684

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cyanazine	102		P	80 - 120
Demeton	90.1		P	80 - 120
Diazinon	93.3		P	80 - 120
Disulfoton	94.1		P	80 - 120
EPTC	98.2		P	80 - 120
Ethion	95.7		P	80 - 120
Ethoprop	97.2		P	80 - 120
Fenamiphos	96.1		P	80 - 120
Fipronil	94.4		P	80 - 120
Fipronil Sulfide	94.0		P	80 - 120
Fipronil Sulfone	94.0		P	80 - 120
Fonofos	86.1		P	80 - 120
Hexazinone	102		P	80 - 120
Malathion	94.3		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	97.8		P	80 - 120
Metribuzin	90.7		P	80 - 120
Mevinphos	90.1		P	80 - 120
Molinate	95.0		P	80 - 120
Norflurazon	101		P	80 - 120
Parathion Ethyl	92.9		P	80 - 120
Parathion Methyl	104		P	80 - 120
Pendimethalin	93.6		P	80 - 120
Phorate	89.2		P	80 - 120
Prometon	93.9		P	80 - 120
Prometryn	101		P	80 - 120
Simazine	97.5		P	80 - 120
Terbufos	86.2		P	80 - 120
Terbutylazine	94.3		P	80 - 120

Reference Method: USGS O-2060-01

Run ID: A80527

Included Lab Sample IDs: 1940682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	104	96.6	P/P	50 - 150
Bentazon	122	110	P/P	50 - 150
MCP	105	93.1	P/P	50 - 150
Triclopyr	98.6	93.4	P/P	50 - 150

Reference Method: USGS O-2060-01

Run ID: A80584

Included Lab Sample IDs: 1940682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	97.6	99.0	P/P	60 - 150
Carbamazepine	112	111	P/P	60 - 150
Diuron	105	104	P/P	60 - 150
Fenuron	104	107	P/P	60 - 150
Fluridone	112	112	P/P	60 - 160
Imidacloprid	105	101	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A80584

Included Lab Sample IDs: 1940682

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Linuron	107	110	P/P	60 - 150
Primidone	100	106	P/P	60 - 150

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						4.08	
EPA 200.7 Rev. 4.4	Calcium	104		105				0.124
	Iron	105		101	98.7			1.17
	Magnesium	107		103	102			0.496
	Potassium	99.3		98.5	96.7			1.10
	Sodium	104		104				0.224
	Zinc	99.5		102	100			1.13
EPA 200.8 Rev. 5.4	Arsenic	101		98.6	101			1.91
	Cadmium	103		102	102			0.328
	Chromium	100		95.7	97.8			2.16
	Copper	95.5		93.1	95.8			2.72
	Lead	99.1						0.937
	Nickel	97.8		94.3	96.7			2.37
	Silver	95.3		94.8	94.7			0.0383
EPA 300.0 Rev. 2.1	Chloride	97.7		97.9			0.461	
	Sulfate	99.9		99.2	97.7		0.428	
EPA 350.1 Rev. 2.0	Ammonia-N	95.0		101	102			0.428
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.9		98.2	97.8			0.263
EPA 353.2 Rev. 2.0	NO2NO3-N	108		110	109			0.458
EPA 365.1 Rev. 2.0	Total-P	106		98.2	99.5			1.22
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.8		94.3	100			4.12
EPA 8270D	Acetochlor	99.2	100	104	102	1.19		1.72
	Alachlor	95.1	94.1	103	96.3	1.08		7.09
	Aldrin	78.4	82.2	84.8	86.2	4.78		1.56
	Alpha-BHC	88.1	70.7	96.3	98.6	21.9		2.33
	Alpha-Chlordane	87.4	89.6	96.3	96.8	2.49		0.586
	Ametryn	102	98.9	118	110	2.62		6.95
	Atrazine	90.5	94.5			4.39		4.11
	Atrazine Desethyl	79.9	62.2	83.7	93.4	25.0		7.70
	Azinphos Methyl	160	124	157	154	25.0		1.85
	Beta-BHC	88.1	83.4	75.8	97.6	5.47		25.1
	Bromacil	91.4	86.2	108	86.8	5.77		14.8
	Butylate	62.3	75.2	33.8	43.1	18.8		24.2
	Carbophenothion	97.3	93.5	118	114	4.04		3.82
	Chlorothalonil	79.5	106	130	128	28.3		1.45
	Chlorpyrifos Ethyl	90.0	97.3	109	104	7.76		4.40
	Chlorpyrifos Methyl	112	111	113	121	1.06		7.51
	Cyanazine	281	119	307	347	80.7		12.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Cypermethrin	91.7	96.9	125	93.6	5.50	28.6
	DDD-p,p'	93.9	93.6	93.7	105	0.316	11.2
	DDE-p,p'	91.3	92.9	95.1	95.2	1.80	0.115
	DDT-p,p'	96.3	99.7	97.9	103	3.51	5.03
	Delta-BHC	103	83.3	102	124	20.8	19.1
	Demeton	87.8	93.8	65.4	101	6.65	42.8
	Diazinon	99.4	93.4	103	101	6.19	1.88
	Dicofol	66.7	51.7	65.1	64.2	25.4	1.49
	Dieldrin	88.6	90.6	99.7	95.8	2.26	3.98
	Disulfoton	87.7	96.9	102	107	9.90	5.20
	Endosulfan I	91.5	93.1	103	97.9	1.80	4.94
	Endosulfan II	91.8	92.0	98.9	98.7	0.221	0.137
	Endosulfan Sulfate	94.2	92.3	98.2	96.4	2.06	1.82
	Endrin	95.7	92.9	108	103	2.95	4.49
	Endrin Aldehyde	91.8	90.7	89.4	99.6	1.21	10.8
	Endrin Ketone	93.7	93.4	100	99.8	0.292	0.661
	EPTC	56.3	69.7	31.1	34.2	21.3	9.68
	Ethion	119	114	126	126	4.74	0.410
	Ethoprop	89.9	95.7	98.3	103	6.33	4.34
	Fenamiphos	105	97.1	104	128	8.02	21.2
	Fipronil	104	91.3	131	125	13.3	3.17
	Fipronil Sulfide	95.2	88.8	124	119	6.95	1.61
	Fipronil Sulfone	108	97.1	201	186	10.2	2.48
	Fonofos	85.7	92.4	85.2	99.3	7.55	15.3
	Gamma-BHC	90.1	88.3	90.6	95.8	1.97	5.51
	Gamma-Chlordane	85.9	88.6	94.1	93.4	3.08	0.782
	Heptachlor	81.7	84.7	86.7	91.2	3.60	5.03
	Heptachlor Epoxide	89.1	89.8	101	97.3	0.758	3.82
	Hexazinone	91.2	101	110	106	10.4	1.93
	Malathion	115	105	117	119	9.31	2.07
	Metalaxyl	83.3	78.3	101	90.6	6.16	5.58
	Methoxychlor	102	107	111	114	5.41	2.75
	Metolachlor	94.3	92.4	104	95.5	2.01	8.53
	Metribuzin	137	91.9	154	160	39.4	3.22
	Mevinphos	86.4	98.0	90.4	98.0	12.7	8.10
	Mirex	85.4	85.5	85.8	91.3	0.0933	6.30
	Molinate	67.4	76.7	54.2	58.8	12.9	8.13
	Norflurazon	99.5	93.8	113	103	5.91	8.60
	Parathion Ethyl	88.4	91.8	90.9	98.7	3.78	8.22
	Parathion Methyl	97.0	112	103	111	14.6	6.76
	Pendimethalin	87.3	97.2	111	115	10.7	3.87
	Permethrin	88.0	93.8	116	90.3	6.36	25.0
	Phorate	103	106	97.1	113	2.29	14.8
	Prometon	89.7	96.0	126	96.0	6.74	26.9
	Prometryn	101	95.8	110	108	5.63	1.40
	Simazine	88.7	101	104	108	13.1	3.34
	Terbufos	113	121	111	125	6.96	11.9
	Terbutylazine	94.0	95.6	105	97.9	1.72	6.80
	Trifluralin	83.5	87.0	92.4	90.9	4.09	1.73
EPA 8276	Chlordane	74.5	71.6	49.4	49.7	3.91	0.619
	Toxaphene	99.5	102	72.8	75.2	2.04	3.24
EPA 8321B	Glyphosate	87.6		101	105		2.74
	Pyraclostrobin	62.2		55.8	59.6		6.50
	Sucralose	94.9		94.0	92.6		1.07

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
SM 2120 B	Color (true)					0.323	
SM 2320 B-97	Total Alkalinity	103				0.107	
SM 2540 C-97	TDS					3.04	
SM 4500 F-C-97	Fluoride	97.5	96.3	98.1			1.48
SM 5310 B-00	Organic Carbon	98.3	99.4	98.6			0.724
USGS O-2060-01	2,4-D	101	84.2	80.2			4.91
	Acetaminophen	89.6	98.3	103			4.98
	Bentazon	93.5	83.8	80.9			3.52
	Carbamazepine	114	133	136			2.78
	Diuron	107	105	109			3.60
	Fenuron	108	107	102			4.64
	Fluridone	110	112	114			1.61
	Imidacloprid	106	147	150			1.88
	Linuron	110	109	114			4.36
	MCPPP	94.7	64.0	60.9			4.91
	Primidone	104	125	124			0.498
	Triclopyr	94.6	60.1	58.3			3.14

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1940678
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1940685
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1940685
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1940678
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1940678
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1940679
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1940679
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1940679
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1940679
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1940680
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1940683
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1940684
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1940683
EPA 8321B / E31780	Analysis of sucralose in water matrices by HPLC/MS/MS	1940682
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1940682
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1940682
SM 2120 B / E31780	True Color measured at 450 nm	1940678
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1940678
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1940678
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1940678
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1940678
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1940679

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1940682
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1940682

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	10/27/2017			10/27/2017 17:19	Tanya Welborn	1940678
EPA 200.7 Rev. 4.4	10/27/2017	10/31/2017	Elliott D. Healy	11/02/2017	Betina Topolski	1940685
EPA 200.8 Rev. 5.4	10/27/2017	10/31/2017	Elliott D. Healy	11/05/2017	Robert K Palmer	1940685
EPA 300.0 Rev. 2.1	10/27/2017			11/02/2017	Julia Storbeck	1940678
EPA 350.1 Rev. 2.0	10/27/2017			11/03/2017	Sofia Elnemr	1940679
EPA 351.2 Rev. 2.0	10/27/2017	11/02/2017	Adrian Shelby	11/03/2017	Joseph Suarez	1940679
EPA 353.2 Rev. 2.0	10/27/2017			11/02/2017	Beverly Y. Sanders	1940679
EPA 365.1 Rev. 2.0	10/27/2017	10/31/2017	Sima Feizi	11/01/2017	Lipi Saha	1940679
EPA 365.1 Rev. 2.0 dissolved	10/27/2017			10/27/2017 15:11	Megan Treadwell	1940680
EPA 8270D	10/27/2017	10/31/2017	Fe-Val Siddell	11/03/2017	Vandana T. Nagar	1940684
	10/27/2017	10/31/2017	Rasheda Ghaffari	11/10/2017	Goutam Palui	1940683
EPA 8276	10/27/2017	10/31/2017	Rasheda Ghaffari	11/10/2017	John P. Burgos	1940683
EPA 8321B	10/27/2017	10/27/2017	Juyoung Kim	10/27/2017	Juyoung Kim	1940682
	10/27/2017	10/30/2017	Juyoung Kim	11/01/2017	Juyoung Kim	1940682
SM 2120 B	10/27/2017			10/27/2017 16:39	Tanya Welborn	1940678
SM 2320 B-97	10/27/2017			11/01/2017	Dale L. Simmons	1940678
SM 2540 C-97	10/27/2017			11/01/2017	Yijie Li	1940678
SM 2540 D-97	10/27/2017			11/01/2017	Yijie Li	1940678
SM 4500 F-C-97	10/27/2017			11/01/2017	Dale L. Simmons	1940678
SM 5310 B-00	10/27/2017			11/06/2017	Ping Hua	1940679
USGS O-2060-01	10/27/2017	11/01/2017	Hoor Shaik	11/04/2017	Julie Michelle Frank	1940682
	10/27/2017	11/27/2017	Hoor Shaik	11/27/2017	Julie Michelle Frank	1940682