

Chemical Analysis Report

SE-DIST-2016-03-18-02

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

Event Description: **SMP_add to 03-14-55_1 Pesticide**

Request ID: **RQ-2016-03-14-57**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

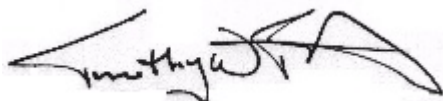
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Attn: Jordan Skaggs

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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 14-APR-2016 09:22



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: 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: Martin Hwy Canal 100yds east of Melear Dairy Rd **Collection Date/Time: 03/17/2016 12:25**

Field ID: G1SE0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781661	EPA 180.1 Rev. 2.0	Turbidity	2.3	A	NTU	P300670	
	EPA 300.0 Rev. 2.1	Chloride	45		mg Cl/L	P300889	
		Sulfate	8.1		mg SO4/L	P300891	
	SM 2120 B	Color (true)	210		PCU	P300672	
	SM 2320 B-97	Total Alkalinity	120		mg CaCO3/L	P301027	
	SM 2540 C-97	TDS	268		mg/L	P301238	
	SM 2540 D-97	TSS	2	U	mg/L	P301201	
	SM 4500 F-C-97	Fluoride	0.14		mg F/L	P301031	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P301266	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P301211	MS
1781662	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P301000	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P301182	
	SM 5310 B-00	Organic Carbon	32		mg C/L	P301064	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.35		mg P/L	P300644	
	dissolved						

Ref. Method and Comment:

SM 2540 D-97: The precision data is unavailable due to the low analyte concentration in the QC sample.

EPA 350.1 Rev. 2.0: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

EPA 365.1 Rev. 2.0: Total-P: Matrix spike recovery data is unavailable due to high analyte concentration in the QC sample.

Sample Location: Martin Hwy Canal 100yds east of Melear Dairy Rd **Collection Date/Time: 03/17/2016 12:25**

Field ID: G1SE0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781666	EPA 8321B	Glyphosate**	10	U	ug/L	P300598	
	USGS O-2060-01	2,4-D	0.0036	I	ug/L	P300555	MS
		Diuron	0.0020	U	ug/L	P300555	
		2,4-DB	0.0020	U	ug/L	P300555	
		Fenuron	0.0080	U	ug/L	P300555	
		2,4,5-T	0.0020	U	ug/L	P300555	
		Acifluorfen	0.0020	U	ug/L	P300555	
		Imidacloprid	0.0040	U	ug/L	P300555	
		Bentazon	0.013		ug/L	P300555	MS
		Linuron	0.0040	U	ug/L	P300555	
		Dichlorprop	0.0020	U	ug/L	P300555	
		Dinoseb	0.020	U	ug/L	P300555	
		MCPA	0.0040	U	ug/L	P300555	
		Acetaminophen**	0.0040	U	ug/L	P300555	
		MCPP	0.0040	U	ug/L	P300555	MS
		Carbamazepine**	4.0E-04	U	ug/L	P300555	
		Silvex	0.0020	U	ug/L	P300555	MS
		Primidone**	0.0080	U	ug/L	P300555	
		Fluridone**	4.0E-04	U	ug/L	P300555	

Field ID: G1SE0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781668	DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	0.0020	U	ug/L	P300825	MS
		Alpha-BHC	0.0020	U	ug/L	P300825	RPD
		Beta-BHC	0.0020	U	ug/L	P300825	
		Delta-BHC	0.0020	U	ug/L	P300825	
		Gamma-BHC	0.0020	U	ug/L	P300825	
		Carbophenothion	0.0060	U	ug/L	P300825	
		Chlorothalonil	0.0080	U	ug/L	P300825	
		Cypermethrin	0.012	U	ug/L	P300825	CCV
		DDD-p,p'	0.0040	U	ug/L	P300825	
		DDE-p,p'	0.0040	U	ug/L	P300825	
		DDT-p,p'	0.0040	U	ug/L	P300825	
		Dicofol	0.024	UJ	ug/L	P300825	
		Diieldrin	0.0020	U	ug/L	P300825	
		Endosulfan I	0.0020	U	ug/L	P300825	LCS
		Endosulfan II	0.0020	U	ug/L	P300825	
		Endosulfan Sulfate	0.0040	UJ	ug/L	P300825	
		Endrin	0.0040	U	ug/L	P300825	
		Endrin Aldehyde	0.0040	U	ug/L	P300825	
		Heptachlor	0.0020	U	ug/L	P300825	
		Heptachlor Epoxide	0.0020	U	ug/L	P300825	RPD
		Methoxychlor	0.010	U	ug/L	P300825	
		Mirex	0.0040	U	ug/L	P300825	
		Permethrin	0.010	U	ug/L	P300825	
		Trifluralin	0.0080	U	ug/L	P300825	
1781669	EPA 8270D	Ametryn**	1.7		ng/L	P300634	
		Atrazine**	3.4		ng/L	P300634	
		Chlorpyrifos Ethyl**	0.10	U	ng/L	P300634	
		Chlorpyrifos Methyl**	0.10	U	ng/L	P300634	
		Disulfoton**	0.32	UJ	ng/L	P300634	
		Ethion**	0.15	U	ng/L	P300634	
		Ethoprop**	0.10	U	ng/L	P300634	
		Hexazinone**	5.2		ng/L	P300634	
		Malathion**	0.35	U	ng/L	P300634	
		Metribuzin**	0.80		ng/L	P300634	
		Mevinphos**	0.50	U	ng/L	P300634	
		Norflurazon**	0.50	U	ng/L	P300634	
		Phorate**	0.25	U	ng/L	P300634	
		Prometryn**	0.20	U	ng/L	P300634	
		Simazine**	0.50	U	ng/L	P300634	
		Atrazine Desethyl**	1.5	U	ng/L	P300634	
		Prometon**	0.90	U	ng/L	P300634	
		Fipronil**	0.25	U	ng/L	P300634	
		Molinate**	0.30	U	ng/L	P300634	
		Pendimethalin**	2.0	U	ng/L	P300634	

Field ID: G1SE0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781669	EPA 8270D	Terbufos**	0.10	U	ng/L	P300634	
		EPTC**	1.2	U	ng/L	P300634	
		Terbutylazine**	0.42	U	ng/L	P300634	
		Bromacil**	0.50	U	ng/L	P300634	
		Fipronil Sulfide**	0.15	U	ng/L	P300634	
		Fipronil Sulfone**	0.15	U	ng/L	P300634	
		Alachlor**	0.25	U	ng/L	P300634	
		Azinphos Methyl**	2.2	U	ng/L	P300634	
		Butylate**	0.40	U	ng/L	P300634	
		Demeton**	1.0	UJ	ng/L	P300634	LCS
		Diazinon**	0.12	U	ng/L	P300634	
		Fenamiphos**	0.25	U	ng/L	P300634	MS
		Fonofos**	0.20	U	ng/L	P300634	
		Metalaxyl**	0.20	U	ng/L	P300634	
		Metolachlor**	0.25	T	ng/L	P300634	
		Acetochlor**	0.25	U	ng/L	P300634	
		Cyanazine**	0.50	U	ng/L	P300634	
		Parathion Ethyl**	0.25	U	ng/L	P300634	
		Parathion Methyl**	0.25	UJ	ng/L	P300634	LCS

Ref. Method and Comment:

USGS O-2060-01: Triclopyr = 0.010 l ug/L.

DEP SOP: GC-011-5 (based on EPA 608 and 617): Refer to the narrative for an explanation of QC Codes.

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

Sample Location: Martin Hwy Canal 100yds east of Melear Dairy Rd Collection Date/Time: 03/17/2016 12:25

Field ID: G1SE0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1781667	EPA 8321B	Pyraclostrobin**	0.0020	U	ug/L	P300983	

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Batch ID: P300825

Component	Result	Code	Units
Aldrin	0.0020	U	ug/L
Alpha-BHC	0.0020	U	ug/L
Beta-BHC	0.0020	U	ug/L
Carbophenothion	0.0060	U	ug/L
Chlorothalonil	0.0080	U	ug/L
Cypermethrin	0.012	U	ug/L
DDD-p,p'	0.0040	U	ug/L
DDE-p,p'	0.0040	U	ug/L
DDT-p,p'	0.0040	U	ug/L
Delta-BHC	0.0020	U	ug/L
Dicofol	0.024	U	ug/L
Dieldrin	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300825

Component	Result	Code	Units
Endosulfan I	0.0020	U	ug/L
Endosulfan II	0.0020	U	ug/L
Endosulfan Sulfate	0.0040	U	ug/L
Endrin	0.0040	U	ug/L
Endrin Aldehyde	0.0040	U	ug/L
Gamma-BHC	0.0020	U	ug/L
Heptachlor	0.0020	U	ug/L
Heptachlor Epoxide	0.0020	U	ug/L
Methoxychlor	0.010	U	ug/L
Mirex	0.0040	U	ug/L
Permethrin	0.010	U	ug/L
Trifluralin	0.0080	U	ug/L

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300670

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300889

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300891

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301266

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301211

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P301000

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: P301182

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300644

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

Reference Method: EPA 8270D
Batch ID: P300634

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	0.10	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	1.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.32	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	2.0	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 8321B
Batch ID: P300598

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: EPA 8321B
Batch ID: P300983

Component	Result	Code	Units
Pyraclostrobin	0.0020	U	ug/L

Reference Method: SM 2120 B
Batch ID: P300672

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P301027

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

Reference Method: SM 2540 C-97
Batch ID: P301238

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P301201

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P301064

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

Reference Method: USGS O-2060-01
Batch ID: P300555

Component	Result	Code	Units
2,4,5-T	0.0020	U	ug/L
2,4-D	0.0020	U	ug/L
2,4-DB	0.0020	U	ug/L
Acetaminophen	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P300555

Component	Result	Code	Units
Acifluorfen	0.0020	U	ug/L
Bentazon	0.0020	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Dichlorprop	0.0020	U	ug/L
Dinoseb	0.020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.0080	U	ug/L
Fluridone	4.0E-04	U	ug/L
Imidacloprid	0.0040	U	ug/L
Linuron	0.0040	U	ug/L
MCPA	0.0040	U	ug/L
MCPP	0.0040	U	ug/L
Primidone	0.0080	U	ug/L
Silvex	0.0020	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300825

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	70.3	75.5	P/P	70 - 130
Alpha-BHC	75.9	79.0	P/P	70 - 130
Beta-BHC	94.0	97.9	P/P	70 - 130
DDD-p,p'	92.7	93.3	P/P	70 - 130
DDE-p,p'	85.4	89.9	P/P	70 - 130
DDT-p,p'	92.2	80.1	P/P	70 - 130
Delta-BHC	81.6	82.1	P/P	70 - 130
Dieldrin	74.7	85.7	P/P	70 - 130
Endosulfan I	85.5	86.8	P/P	70 - 130
Endosulfan II	93.7	94.9	P/P	70 - 130
Endosulfan Sulfate	66.2	72.0	F/P	70 - 130
Endrin	95.6	97.1	P/P	81 - 147
Endrin Aldehyde	92.1	93.9	P/P	70 - 130
Gamma-BHC	73.4	76.7	P/P	70 - 130
Heptachlor	98.1	95.7	P/P	70 - 130
Heptachlor Epoxide	89.0	88.9	P/P	70 - 130
Methoxychlor	110	95.8	P/P	86 - 145

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300889

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300891

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301266

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301211

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P301000

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P301182

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300644

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

Reference Method: EPA 8270D
Batch ID: P300634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	86.3	88.4	P/P	84 - 119
Alachlor	86.6	88.2	P/P	84 - 121
Ametryn	97.0	108	P/P	66 - 127
Atrazine	90.5	89.8	P/P	72 - 119
Atrazine Desethyl	91.1	98.0	P/P	21 - 111
Azinphos Methyl	136	130	P/P	79 - 185
Bromacil	92.8	93.5	P/P	39 - 122
Butylate	56.0	57.6	P/P	36 - 94.0
Chlorpyrifos Ethyl	92.4	88.7	P/P	54 - 101
Chlorpyrifos Methyl	85.4	80.8	P/P	28 - 114
Cyanazine	107	144	P/P	58 - 201
Demeton	64.8	54.9	P/F	57 - 130
Diazinon	83.8	81.3	P/P	79 - 124
Disulfoton	96.2	66.3	P/P	45 - 140
EPTC	52.0	57.1	P/P	43 - 95.0
Ethion	103	103	P/P	65 - 125
Ethoprop	77.9	72.9	P/P	69 - 107
Fenamiphos	109	105	P/P	78 - 129
Fipronil	90.9	92.5	P/P	62 - 125
Fipronil Sulfide	92.3	92.9	P/P	65 - 119
Fipronil Sulfone	102	102	P/P	64 - 122
Fonofos	79.4	76.6	P/P	70 - 112

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P300634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hexazinone	124	119	P/P	44 - 147
Malathion	113	111	P/P	72 - 125
Metalaxyl	88.1	94.5	P/P	83 - 113
Metolachlor	88.1	90.5	P/P	85 - 120
Metribuzin	90.8	101	P/P	68 - 129
Mevinphos	85.6	72.9	P/P	35 - 125
Molinate	55.9	59.7	P/P	51 - 100
Norflurazon	99.6	104	P/P	66 - 127
Parathion Ethyl	92.1	87.7	P/P	86 - 108
Parathion Methyl	86.4	87.9	F/P	87 - 125
Pendimethalin	79.8	79.6	P/P	53 - 136
Phorate	82.1	76.0	P/P	52 - 113
Prometon	92.6	100	P/P	67 - 125
Prometryn	94.3	102	P/P	73 - 114
Simazine	86.5	86.0	P/P	66 - 123
Terbufos	79.7	74.5	P/P	58 - 116
Terbutylazine	89.4	95.0	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P300598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	104		P	40 - 140

Reference Method: EPA 8321B
Batch ID: P300983

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Pyraclostrobin	90.8		P	40 - 140

Reference Method: SM 2320 B-97
Batch ID: P301027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	94 - 108

Reference Method: SM 5310 B-00
Batch ID: P301064

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.4		P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P300555

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

Reference Method: USGS O-2060-01
Batch ID: P300555

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	108		P	40 - 140
2,4-D	118		P	40 - 140
2,4-DB	79.6		P	40 - 140
Acetaminophen	49.6		P	40 - 140
Acifluorfen	104		P	40 - 140
Bentazon	77.6		P	40 - 140
Carbamazepine	127		P	40 - 140
Dichlorprop	104		P	40 - 140
Dinoseb	82.4		P	40 - 140
Diuron	108		P	40 - 140
Fenuron	108		P	40 - 140
Fluridone	106		P	40 - 140
Imidacloprid	104		P	40 - 160
Linuron	116		P	40 - 140
MCPA	94.0		P	40 - 140
MCPP	111		P	40 - 140
Primidone	115		P	40 - 140
Silvex	112		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781668	Aldrin	81.5		P	70 - 130
1781668	Alpha-BHC	78.5		P	70 - 130
1781668	Beta-BHC	90.3		P	70 - 130
1781668	DDD-p,p'	77.5		P	70 - 130
1781668	DDE-p,p'	75.2		P	70 - 130
1781668	DDT-p,p'	120		P	70 - 130
1781668	Delta-BHC	74.6		P	70 - 130
1781668	Dieldrin	80.1		P	70 - 130
1781668	Endosulfan I	107		P	70 - 130
1781668	Endosulfan II	73.5		P	70 - 130
1781668	Endosulfan Sulfate	99.3		P	70 - 130
1781668	Endrin	124		P	81 - 147
1781668	Endrin Aldehyde	98.6		P	70 - 130
1781668	Gamma-BHC	101		P	70 - 130
1781668	Heptachlor	106		P	70 - 130
1781668	Heptachlor Epoxide	115		P	70 - 130
1781668	Methoxychlor	93.3		P	86 - 145
1781954	Aldrin	74.6	67.2	P/F	70 - 130
1781954	Alpha-BHC	71.1	83.8	P/P	70 - 130
1781954	Beta-BHC	87.0	122	P/P	70 - 130
1781954	DDD-p,p'	90.4	89.8	P/P	70 - 130
1781954	DDE-p,p'	89.8	87.9	P/P	70 - 130
1781954	DDT-p,p'	84.3	78.6	P/P	70 - 130
1781954	Delta-BHC	76.3	99.1	P/P	70 - 130
1781954	Dieldrin	81.1	77.1	P/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Batch ID: P300825

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781954	Endosulfan I	82.0	78.4	P/P	70 - 130
1781954	Endosulfan II	90.3	89.9	P/P	70 - 130
1781954	Endosulfan Sulfate	75.7	82.2	P/P	70 - 130
1781954	Endrin	94.2	92.9	P/P	81 - 147
1781954	Endrin Aldehyde	90.4	89.1	P/P	70 - 130
1781954	Gamma-BHC	91.8	85.0	P/P	70 - 130
1781954	Heptachlor	97.1	90.6	P/P	70 - 130
1781954	Heptachlor Epoxide	83.7	86.3	P/P	70 - 130
1781954	Methoxychlor	102	98.0	P/P	86 - 145

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P300889

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781760	Chloride	103		P	90 - 110
1781928	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P300891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781760	Sulfate	100		P	90 - 110
1781928	Sulfate	99.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P301211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781649	Kjeldahl Nitrogen	100	88.6	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P301000

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781648	NO2NO3-N	98.0	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P300644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781709	O-Phosphate-P	102	102	P/P	90 - 110

Reference Method: EPA 8270D

Batch ID: P300634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781341	Acetochlor	102	106	P/P	84 - 119
1781341	Alachlor	110	110	P/P	84 - 121
1781341	Ametryn	118	125	P/P	66 - 127
1781341	Atrazine Desethyl	67.9	72.3	P/P	21 - 111
1781341	Azinphos Methyl	167	169	P/P	79 - 185
1781341	Bromacil	109	109	P/P	39 - 122

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P300634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781341	Butylate	44.3	53.4	P/P	36 - 94.0
1781341	Chlorpyrifos Ethyl	96.1	95.3	P/P	54 - 101
1781341	Chlorpyrifos Methyl	98.1	96.8	P/P	28 - 114
1781341	Cyanazine	165	179	P/P	58 - 201
1781341	Demeton	62.3	67.7	P/P	57 - 130
1781341	Diazinon	99.8	101	P/P	79 - 124
1781341	Disulfoton	105	100	P/P	45 - 140
1781341	EPTC	46.7	53.9	P/P	43 - 95.0
1781341	Ethion	104	106	P/P	65 - 125
1781341	Ethoprop	82.0	83.2	P/P	69 - 107
1781341	Fenamiphos	129	128	F/P	78 - 129
1781341	Fipronil	111	109	P/P	62 - 125
1781341	Fipronil Sulfide	102	103	P/P	65 - 119
1781341	Fipronil Sulfone	110	110	P/P	64 - 122
1781341	Fonofos	90.3	90.6	P/P	70 - 112
1781341	Hexazinone	115	113	P/P	44 - 147
1781341	Malathion	124	122	P/P	72 - 125
1781341	Metalaxyl	95.4	97.8	P/P	83 - 113
1781341	Metolachlor	101	103	P/P	85 - 120
1781341	Metribuzin	110	113	P/P	68 - 129
1781341	Mevinphos	90.5	93.7	P/P	35 - 125
1781341	Molinate	55.0	62.9	P/P	51 - 100
1781341	Norflurazon	109	108	P/P	66 - 127
1781341	Parathion Ethyl	95.0	99.8	P/P	86 - 108
1781341	Parathion Methyl	104	99.5	P/P	87 - 125
1781341	Pendimethalin	58.1	60.5	P/P	53 - 136
1781341	Phorate	80.8	81.2	P/P	52 - 113
1781341	Prometon	109	97.8	P/P	67 - 125
1781341	Prometryn	104	108	P/P	73 - 114
1781341	Simazine	116	111	P/P	66 - 123
1781341	Terbufos	87.5	91.1	P/P	58 - 116
1781341	Terbutylazine	99.5	101	P/P	77 - 113

Reference Method: EPA 8321B
Batch ID: P300598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1779736	Glyphosate	68.4	81.2	P/P	40 - 140

Reference Method: EPA 8321B
Batch ID: P300983

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781667	Pyraclostrobin	102	94.8	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781511	Fluoride	99.1	99.1	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-00
Batch ID: P301064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1781650	Organic Carbon	96.6	97.8	P/P	85 - 115

Reference Method: USGS O-2060-01
Batch ID: P300555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1780909	2,4,5-T	114	128	P/P	40 - 140
1780909	2,4-D	144	160	F/F	40 - 140
1780909	2,4-DB	82.8	90.8	P/P	40 - 140
1780909	Acetaminophen	56.8	64.4	P/P	40 - 140
1780909	Acifluorfen	100	96.8	P/P	40 - 140
1780909	Bentazon	131	146	P/F	40 - 140
1780909	Carbamazepine	86.4	86.0	P/P	40 - 140
1780909	Dichlorprop	116	125	P/P	40 - 140
1780909	Dinoseb	72.8	82.0	P/P	40 - 140
1780909	Diuron	54.0	72.0	P/P	40 - 140
1780909	Fenuron	54.8	57.6	P/P	40 - 140
1780909	Fluridone	81.2	92.0	P/P	40 - 140
1780909	Imidacloprid	126	135	P/P	40 - 160
1780909	Linuron	97.2	86.0	P/P	40 - 140
1780909	MCPA	100	105	P/P	40 - 140
1780909	MCPP	138	148	P/F	40 - 140
1780909	Primidone	67.2	62.4	P/P	40 - 140
1780909	Silvex	134	142	P/F	40 - 140

Quality Assurance Report Precision

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781954	Aldrin	10.5	Spike	P	0 - 30
1781954	Alpha-BHC	16.4	Spike	P	0 - 30
1781954	Beta-BHC	33.4	Spike	F	0 - 30
1781954	DDD-p,p'	0.634	Spike	P	0 - 30
1781954	DDE-p,p'	2.14	Spike	P	0 - 30
1781954	DDT-p,p'	7.07	Spike	P	0 - 30
1781954	Delta-BHC	26.0	Spike	P	0 - 30
1781954	Dieldrin	5.07	Spike	P	0 - 30
1781954	Endosulfan I	4.56	Spike	P	0 - 30
1781954	Endosulfan II	0.459	Spike	P	0 - 30
1781954	Endosulfan Sulfate	8.26	Spike	P	0 - 30
1781954	Endrin	1.31	Spike	P	0 - 30
1781954	Endrin Aldehyde	1.40	Spike	P	0 - 30
1781954	Gamma-BHC	7.76	Spike	P	0 - 30
1781954	Heptachlor	6.95	Spike	P	0 - 30
1781954	Heptachlor Epoxide	3.16	Spike	P	0 - 30
1781954	Methoxychlor	4.25	Spike	P	0 - 30
LFB	Aldrin	7.07	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)
Batch ID: P300825

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Alpha-BHC	4.01	LCS	P	0 - 30
LFB	Beta-BHC	3.97	LCS	P	0 - 30
LFB	DDD-p,p'	0.642	LCS	P	0 - 30
LFB	DDE-p,p'	5.10	LCS	P	0 - 30
LFB	DDT-p,p'	14.0	LCS	P	0 - 30
LFB	Delta-BHC	0.645	LCS	P	0 - 30
LFB	Dieldrin	13.7	LCS	P	0 - 30
LFB	Endosulfan I	1.41	LCS	P	0 - 30
LFB	Endosulfan II	1.26	LCS	P	0 - 30
LFB	Endosulfan Sulfate	8.33	LCS	P	0 - 30
LFB	Endrin	1.60	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.97	LCS	P	0 - 30
LFB	Gamma-BHC	4.48	LCS	P	0 - 30
LFB	Heptachlor	2.43	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.0877	LCS	P	0 - 30
LFB	Methoxychlor	14.0	LCS	P	0 - 30

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P300670

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781661	Turbidity	4.79	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300889

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781760	Chloride	0.0985	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P300891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781760	Sulfate	0.200	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P301266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781678	Ammonia-N	0.812	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P301211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781649	Kjeldahl Nitrogen	6.91	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P301000

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781648	NO2NO3-N	1.49	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P301182

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781647	Total-P	0.285	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P300644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781709	O-Phosphate-P	0.587	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P300634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781341	Acetochlor	3.14	Spike	P	0 - 30
1781341	Alachlor	0.422	Spike	P	0 - 30
1781341	Ametryn	5.35	Spike	P	0 - 30
1781341	Atrazine	2.39	Spike	P	0 - 30
1781341	Atrazine Desethyl	5.05	Spike	P	0 - 30
1781341	Azinphos Methyl	1.51	Spike	P	0 - 30
1781341	Bromacil	0.120	Spike	P	0 - 30
1781341	Butylate	18.7	Spike	P	0 - 30
1781341	Chlorpyrifos Ethyl	0.737	Spike	P	0 - 30
1781341	Chlorpyrifos Methyl	1.30	Spike	P	0 - 30
1781341	Cyanazine	8.07	Spike	P	0 - 30
1781341	Demeton	8.44	Spike	P	0 - 30
1781341	Diazinon	1.29	Spike	P	0 - 30
1781341	Disulfoton	4.45	Spike	P	0 - 30
1781341	EPTC	14.3	Spike	P	0 - 30
1781341	Ethion	1.63	Spike	P	0 - 30
1781341	Ethoprop	1.38	Spike	P	0 - 30
1781341	Fenamiphos	0.767	Spike	P	0 - 30
1781341	Fipronil	1.86	Spike	P	0 - 30
1781341	Fipronil Sulfide	1.00	Spike	P	0 - 30
1781341	Fipronil Sulfone	0.451	Spike	P	0 - 30
1781341	Fonofos	0.383	Spike	P	0 - 30
1781341	Hexazinone	1.25	Spike	P	0 - 30
1781341	Malathion	1.61	Spike	P	0 - 30
1781341	Metalaxyl	2.45	Spike	P	0 - 30
1781341	Metolachlor	1.38	Spike	P	0 - 30
1781341	Metribuzin	2.97	Spike	P	0 - 30
1781341	Mevinphos	3.44	Spike	P	0 - 30
1781341	Molinate	13.3	Spike	P	0 - 30
1781341	Norflurazon	0.887	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P300634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781341	Parathion Ethyl	4.92	Spike	P	0 - 30
1781341	Parathion Methyl	4.70	Spike	P	0 - 30
1781341	Pendimethalin	2.93	Spike	P	0 - 30
1781341	Phorate	0.533	Spike	P	0 - 30
1781341	Prometon	10.7	Spike	P	0 - 30
1781341	Prometryn	3.49	Spike	P	0 - 30
1781341	Simazine	4.28	Spike	P	0 - 30
1781341	Terbufos	4.06	Spike	P	0 - 30
1781341	Terbuthylazine	1.13	Spike	P	0 - 30
LFB	Acetochlor	2.37	LCS	P	0 - 30
LFB	Alachlor	1.82	LCS	P	0 - 30
LFB	Ametryn	10.6	LCS	P	0 - 30
LFB	Atrazine	0.813	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.34	LCS	P	0 - 30
LFB	Azinphos Methyl	4.49	LCS	P	0 - 30
LFB	Bromacil	0.710	LCS	P	0 - 30
LFB	Butylate	2.72	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	3.99	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.61	LCS	P	0 - 30
LFB	Cyanazine	29.3	LCS	P	0 - 30
LFB	Demeton	16.5	LCS	P	0 - 30
LFB	Diazinon	3.03	LCS	P	0 - 30
LFB	Disulfoton	36.7	LCS	F	0 - 30
LFB	EPTC	9.32	LCS	P	0 - 30
LFB	Ethion	0.0112	LCS	P	0 - 30
LFB	Ethoprop	6.70	LCS	P	0 - 30
LFB	Fenamiphos	3.73	LCS	P	0 - 30
LFB	Fipronil	1.69	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.644	LCS	P	0 - 30
LFB	Fipronil Sulfone	0.402	LCS	P	0 - 30
LFB	Fonofos	3.62	LCS	P	0 - 30
LFB	Hexazinone	3.98	LCS	P	0 - 30
LFB	Malathion	1.34	LCS	P	0 - 30
LFB	Metaxyl	7.05	LCS	P	0 - 30
LFB	Metolachlor	2.72	LCS	P	0 - 30
LFB	Metribuzin	10.5	LCS	P	0 - 30
LFB	Mevinphos	16.1	LCS	P	0 - 30
LFB	Molinate	6.72	LCS	P	0 - 30
LFB	Norflurazon	3.85	LCS	P	0 - 30
LFB	Parathion Ethyl	4.90	LCS	P	0 - 30
LFB	Parathion Methyl	1.72	LCS	P	0 - 30
LFB	Pendimethalin	0.284	LCS	P	0 - 30
LFB	Phorate	7.74	LCS	P	0 - 30
LFB	Prometon	8.04	LCS	P	0 - 30
LFB	Prometryn	8.14	LCS	P	0 - 30
LFB	Simazine	0.546	LCS	P	0 - 30
LFB	Terbufos	6.66	LCS	P	0 - 30
LFB	Terbuthylazine	6.08	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P300598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1779736	Glyphosate	17.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P300983

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781667	Pyraclostrobin	6.92	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P300672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781645	Color (true)	0.661	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P301027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781511	Total Alkalinity	0.218	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P301238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781928	TDS	0.563	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P301031

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781511	Fluoride	0.0	Spike	P	0 - 3.7

Reference Method: SM 5310 B-00
Batch ID: P301064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1781650	Organic Carbon	0.783	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P300555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780909	2,4,5-T	11.3	Spike	P	0 - 30
1780909	2,4-D	10.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: USGS O-2060-01
Batch ID: P300555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1780909	2,4-DB	9.22	Spike	P	0 - 30
1780909	Acetaminophen	12.5	Spike	P	0 - 30
1780909	Acifluorfen	3.25	Spike	P	0 - 30
1780909	Bentazon	7.58	Spike	P	0 - 30
1780909	Carbamazepine	0.464	Spike	P	0 - 30
1780909	Dichlorprop	7.65	Spike	P	0 - 30
1780909	Dinoseb	11.9	Spike	P	0 - 30
1780909	Diuron	28.6	Spike	P	0 - 30
1780909	Fenuron	4.98	Spike	P	0 - 30
1780909	Fluridone	12.5	Spike	P	0 - 30
1780909	Imidacloprid	7.07	Spike	P	0 - 30
1780909	Linuron	12.2	Spike	P	0 - 30
1780909	MCPA	4.69	Spike	P	0 - 30
1780909	MCPP	7.55	Spike	P	0 - 30
1780909	Primidone	7.41	Spike	P	0 - 30
1780909	Silvex	5.50	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: 1781666
Field Sample ID: G1SE0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	51.2	P	50 - 150
USGS O-2060-01	2,4-D-d3	84.2	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	53.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	70.0	P	40 - 160
USGS O-2060-01	Diuron-d6	45.6	P	40 - 150
USGS O-2060-01	Primidone-d5	100	P	40 - 150

Lab Sample ID: 1781667
Field Sample ID: G1SE0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	60.2	P	40 - 150

Lab Sample ID: 1781668
Field Sample ID: G1SE0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Decachlorobiphenyl	86.4	P	44 - 128

Lab Sample ID: 1781669
Field Sample ID: G1SE0016

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

Lab Sample ID: 1781669
Field Sample ID: G1SE0016

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	97.4	P	67 - 131
EPA 8270D	Simazine-d10	92.4	P	75 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A68312
Included Lab Sample IDs: 1781663

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.6	97.9	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A68317
Included Lab Sample IDs: 1781666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	82.8	111	P/P	70 - 130

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A68319
Included Lab Sample IDs: 1781661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: SM 2120 B
Run ID: A68320
Included Lab Sample IDs: 1781661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	93.9	92.9	P/P	85 - 115

Reference Method: USGS O-2060-01
Run ID: A68347
Included Lab Sample IDs: 1781666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	109	101	P/P	60 - 150
Carbamazepine	126	126	P/P	60 - 150
Diuron	106	91.2	P/P	60 - 150
Fenuron	117	112	P/P	60 - 150
Fluridone	101	96.4	P/P	60 - 150
Imidacloprid	107	96.0	P/P	60 - 150
Linuron	132	123	P/P	60 - 150
Primidone	96.4	105	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: USGS O-2060-01

Run ID: A68386

Included Lab Sample IDs: 1781666

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	110	113	P/P	50 - 150
2,4-D	118	113	P/P	50 - 150
2,4-DB	104	103	P/P	50 - 150
Acifluorfen	129	123	P/P	50 - 150
Bentazon	66.2	86.0	P/P	50 - 150
Dichlorprop	111	108	P/P	50 - 150
Dinoseb	85.4	84.0	P/P	50 - 150
MCPA	109	104	P/P	50 - 150
MCPP	128	124	P/P	50 - 150
Silvex	131	128	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A68401

Included Lab Sample IDs: 1781661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	100	P/P	90 - 110
Sulfate	99.1	97.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A68424

Included Lab Sample IDs: 1781662

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

Reference Method: SM 2320 B-97

Run ID: A68432

Included Lab Sample IDs: 1781661

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	104	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A68432

Included Lab Sample IDs: 1781661

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

Reference Method: SM 5310 B-00

Run ID: A68443

Included Lab Sample IDs: 1781662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.1	97.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A68489
Included Lab Sample IDs: 1781667

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	100	104	P/P	60 - 150

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A68526
Included Lab Sample IDs: 1781662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.3	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A68534
Included Lab Sample IDs: 1781662

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

Reference Method: EPA 8270D
Run ID: A68574
Included Lab Sample IDs: 1781669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.5		P	80 - 120
Alachlor	96.0		P	80 - 120
Ametryn	85.5		P	80 - 120
Atrazine	99.4		P	80 - 120
Atrazine Desethyl	103		P	80 - 120
Azinphos Methyl	93.5		P	80 - 120
Bromacil	99.4		P	80 - 120
Butylate	87.4		P	80 - 120
Chlorpyrifos Ethyl	97.0		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	92.5		P	80 - 120
Demeton	101		P	80 - 120
Diazinon	96.3		P	80 - 120
Disulfoton	96.1		P	80 - 120
EPTC	89.6		P	80 - 120
Ethion	95.0		P	80 - 120
Ethoprop	96.2		P	80 - 120
Fenamiphos	99.8		P	80 - 120
Fipronil	96.4		P	80 - 120
Fipronil Sulfide	102		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	97.9		P	80 - 120
Hexazinone	99.2		P	80 - 120
Malathion	98.5		P	80 - 120
Metalaxyl	97.4		P	80 - 120
Metolachlor	97.0		P	80 - 120
Metribuzin	96.3		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	98.2		P	80 - 120
Norflurazon	97.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A68574

Included Lab Sample IDs: 1781669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Parathion Ethyl	106		P	80 - 120
Parathion Methyl	101		P	80 - 120
Pendimethalin	92.6		P	80 - 120
Phorate	98.8		P	80 - 120
Prometon	99.3		P	80 - 120
Prometryn	99.2		P	80 - 120
Simazine	106		P	80 - 120
Terbufos	96.3		P	80 - 120
Terbuthylazine	95.9		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A68630

Included Lab Sample IDs: 1781662

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.4	100	P/P	90 - 110

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Run ID: A68757

Included Lab Sample IDs: 1781668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	93.0	99.6	P/P	85 - 115
Alpha-BHC	91.6	98.7	P/P	85 - 115
Beta-BHC	96.8	103	P/P	85 - 115
DDD-p,p'	97.0	104	P/P	85 - 115
DDE-p,p'	94.1	101	P/P	85 - 115
DDT-p,p'	92.5	96.0	P/P	85 - 115
Delta-BHC	90.2	97.2	P/P	85 - 115
Dieldrin	93.8	101	P/P	85 - 115
Endosulfan I	94.9	102	P/P	85 - 115
Endosulfan II	95.5	102	P/P	85 - 115
Endosulfan Sulfate	94.7	101	P/P	85 - 115
Endrin	91.6	103	P/P	85 - 115
Endrin Aldehyde	96.9	102	P/P	85 - 115
Gamma-BHC	91.2	97.9	P/P	85 - 115
Heptachlor	93.6	99.4	P/P	85 - 115
Heptachlor Epoxide	95.2	102	P/P	85 - 115
Methoxychlor	96.9	102	P/P	90 - 110

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Run ID: A68772

Included Lab Sample IDs: 1781668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	101	104	P/P	90 - 110
Chlorothalonil	102	103	P/P	90 - 110
Cypermethrin	105	99.2	P/P	85 - 115
Dicofol	78.2*	86.3*	F/F	90 - 110
Mirex	99.0	99.1	P/P	90 - 110
Permethrin	98.0	94.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: GC-011-5 (based on EPA 608 and 617)

Run ID: A68772

Included Lab Sample IDs: 1781668

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

* 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 SMP	MS
						LCS			
DEP SOP: GC-011-5 (based on EPA 608 and 617)	Aldrin	70.3	75.5	74.6	67.2	81.5	7.07		10.5
	Alpha-BHC	75.9	79.0	71.1	83.8	78.5	4.01		16.4
	Beta-BHC	94.0	97.9	87.0	122	90.3	3.97		33.4
	DDD-p,p'	92.7	93.3	90.4	89.8	77.5	0.642		0.634
	DDE-p,p'	85.4	89.9	89.8	87.9	75.2	5.10		2.14
	DDT-p,p'	92.2	80.1	84.3	78.6	120	14.0		7.07
	Delta-BHC	81.6	82.1	76.3	99.1	74.6	0.645		26.0
	Dieldrin	74.7	85.7	81.1	77.1	80.1	13.7		5.07
	Endosulfan I	85.5	86.8	82.0	78.4	107	1.41		4.56
	Endosulfan II	93.7	94.9	90.3	89.9	73.5	1.26		0.459
	Endosulfan Sulfate	66.2	72.0	75.7	82.2	99.3	8.33		8.26
	Endrin	95.6	97.1	94.2	92.9	124	1.60		1.31
	Endrin Aldehyde	92.1	93.9	90.4	89.1	98.6	1.97		1.40
	Gamma-BHC	73.4	76.7	91.8	85.0	101	4.48		7.76
	Heptachlor	98.1	95.7	97.1	90.6	106	2.43		6.95
	Heptachlor Epoxide	89.0	88.9	83.7	86.3	115	0.0877		3.16
	Methoxychlor	110	95.8	102	98.0	93.3	14.0		4.25
EPA 180.1 Rev. 2.0	Turbidity							4.79	
EPA 300.0 Rev. 2.1	Chloride	102		103	103			0.0985	
	Sulfate	99.1		100	99.4			0.200	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6							0.812
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.9		100	88.6				6.91
EPA 353.2 Rev. 2.0	NO2NO3-N	102		98.0	99.5				1.49
EPA 365.1 Rev. 2.0	Total-P	101							0.285
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	105		102	102				0.587
EPA 8270D	Acetochlor	86.3	88.4	102	106		2.37		3.14
	Alachlor	86.6	88.2	110	110		1.82		0.422
	Ametryn	97.0	108	118	125		10.6		5.35
	Atrazine	90.5	89.8				0.813		2.39
	Atrazine Desethyl	91.1	98.0	67.9	72.3		7.34		5.05
	Azinphos Methyl	136	130	167	169		4.49		1.51
	Bromacil	92.8	93.5	109	109		0.710		0.120
	Butylate	56.0	57.6	44.3	53.4		2.72		18.7
	Chlorpyrifos Ethyl	92.4	88.7	96.1	95.3		3.99		0.737
	Chlorpyrifos Methyl	85.4	80.8	98.1	96.8		5.61		1.30
	Cyanazine	107	144	165	179		29.3		8.07
	Demeton	64.8	54.9	62.3	67.7		16.5		8.44
	Diazinon	83.8	81.3	99.8	101		3.03		1.29

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Disulfoton	96.2	66.3	105	100	36.7	4.45
	EPTC	52.0	57.1	46.7	53.9	9.32	14.3
	Ethion	103	103	104	106	0.0112	1.63
	Ethoprop	77.9	72.9	82.0	83.2	6.70	1.38
	Fenamiphos	109	105	129	128	3.73	0.767
	Fipronil	90.9	92.5	111	109	1.69	1.86
	Fipronil Sulfide	92.3	92.9	102	103	0.644	1.00
	Fipronil Sulfone	102	102	110	110	0.402	0.451
	Fonofos	79.4	76.6	90.3	90.6	3.62	0.383
	Hexazinone	124	119	115	113	3.98	1.25
	Malathion	113	111	124	122	1.34	1.61
	Metalaxyl	88.1	94.5	95.4	97.8	7.05	2.45
	Metolachlor	88.1	90.5	101	103	2.72	1.38
	Metribuzin	90.8	101	110	113	10.5	2.97
	Mevinphos	85.6	72.9	90.5	93.7	16.1	3.44
	Molinate	55.9	59.7	55.0	62.9	6.72	13.3
	Norflurazon	99.6	104	109	108	3.85	0.887
	Parathion Ethyl	92.1	87.7	95.0	99.8	4.90	4.92
	Parathion Methyl	86.4	87.9	104	99.5	1.72	4.70
	Pendimethalin	79.8	79.6	58.1	60.5	0.284	2.93
	Phorate	82.1	76.0	80.8	81.2	7.74	0.533
	Prometon	92.6	100	109	97.8	8.04	10.7
	Prometryn	94.3	102	104	108	8.14	3.49
	Simazine	86.5	86.0	116	111	0.546	4.28
	Terbufos	79.7	74.5	87.5	91.1	6.66	4.06
	Terbuthylazine	89.4	95.0	99.5	101	6.08	1.13
EPA 8321B	Glyphosate	104		68.4	81.2		17.1
	Pyraclostrobin	90.8		102	94.8		6.92
SM 2120 B	Color (true)					0.661	
SM 2320 B-97	Total Alkalinity	103				0.218	
SM 2540 C-97	TDS					0.563	
SM 4500 F-C-97	Fluoride	97.5		99.1	99.1		0.0
SM 5310 B-00	Organic Carbon	98.4		96.6	97.8		0.783
USGS O-2060-01	2,4,5-T	108		114	128		11.3
	2,4-D	118		144	160		10.0
	2,4-DB	79.6		82.8	90.8		9.22
	Acetaminophen	49.6		56.8	64.4		12.5
	Acifluorfen	104		100	96.8		3.25
	Bentazon	77.6		131	146		7.58
	Carbamazepine	127		86.4	86.0		0.464
	Dichlorprop	104		116	125		7.65
	Dinoseb	82.4		72.8	82.0		11.9
	Diuron	108		54.0	72.0		28.6
	Fenuron	108		54.8	57.6		4.98
	Fluridone	106		81.2	92.0		12.5
	Imidacloprid	104		126	135		7.07
	Linuron	116		97.2	86.0		12.2
	MCPA	94.0		100	105		4.69
	MCPP	111		138	148		7.55
	Primidone	115		67.2	62.4		7.41
	Silvex	112		134	142		5.50

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617) / E31780	Organochlorine pesticides (low levels) in water matrices by GC/ECD.	1781668
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1781661
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1781661
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1781661
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1781662
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1781662
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1781662
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1781662
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1781663
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1781669
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1781666
EPA 8321B / E31780	Pyraclostrobin in water matrices by HPLC/MS/MS	1781667
SM 2120 B / E31780	True Color measured at 450 nm	1781661
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1781661
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1781661
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1781661
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1781661
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1781662
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1781666
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1781666

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: GC-011-5 (based on EPA 608 and 617)	03/18/2016	03/23/2016	Rasheda Ghaffari	03/30/2016	Vandana T. Nagar	1781668
	03/18/2016	03/23/2016	Rasheda Ghaffari	04/08/2016	Vandana T. Nagar	1781668
EPA 180.1 Rev. 2.0	03/18/2016			03/18/2016 15:24	Sima Feizi	1781661
EPA 300.0 Rev. 2.1	03/18/2016			03/22/2016	Julia Storbeck	1781661
EPA 350.1 Rev. 2.0	03/18/2016			03/29/2016	Diana M. Turner	1781662
EPA 351.2 Rev. 2.0	03/18/2016	03/29/2016	Sofia Elnemr	04/04/2016	Virginia P. Brown	1781662
EPA 353.2 Rev. 2.0	03/18/2016			03/24/2016	Peter D. Kaus	1781662
EPA 365.1 Rev. 2.0	03/18/2016	03/29/2016	Christopher Armour	03/30/2016	Lipi Saha	1781662
EPA 365.1 Rev. 2.0 dissolved	03/18/2016			03/18/2016 13:14	Julia Storbeck	1781663
EPA 8270D	03/18/2016	03/18/2016	Rasheda Ghaffari	03/26/2016	Irina Carbone	1781669
EPA 8321B	03/18/2016	03/18/2016	Mohammad Ghaffari	03/18/2016	Mohammad Ghaffari	1781666
	03/18/2016	03/24/2016	Hoor Shaik	03/25/2016	Juyoung Kim	1781667
SM 2120 B	03/18/2016			03/18/2016 16:34	Rochelle Y Jackson	1781661
SM 2320 B-97	03/18/2016			03/24/2016	Dale L. Simmons	1781661
SM 2540 C-97	03/18/2016			03/22/2016	Sima Feizi	1781661
SM 2540 D-97	03/18/2016			03/22/2016	Sima Feizi	1781661
SM 4500 F-C-97	03/18/2016			03/24/2016	Dale L. Simmons	1781661
SM 5310 B-00	03/18/2016			03/25/2016	Sofia Elnemr	1781662
USGS O-2060-01	03/18/2016	03/21/2016	Hoor Shaik	03/22/2016	Juyoung Kim	1781666