

Chemical Analysis Report

NE-DIST-2016-05-20-02

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

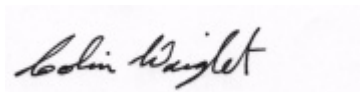
Event Description: **Gville SCI**
Request ID: **RQ-2016-05-16-26**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Jacksonville, FL 32256-7577
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Certified by: Colin Wright, Environmental Administrator

Date Certified: 15-JUN-2016 15:22

A handwritten signature in black ink, appearing to read "Colin Wright", is written over 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: 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: CELLON CR @ 400M BELOW US 441

Collection Date/Time: 05/19/2016 11:00

Field ID: CELLON CR @ 400M BELOW US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801000	EPA 180.1 Rev. 2.0	Turbidity	7.1		NTU	P304730	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P305249	
		Sulfate	35		mg SO4/L	P305251	
	SM 2120 B	Color (true)	96		PCU	P304735	
	SM 2320 B-97	Total Alkalinity	123		mg CaCO3/L	P305294	
	SM 2540 C-97	TDS	244		mg/L	P305270	
	SM 2540 D-97	TSS	18		mg/L	P305161	
	SM 4500 F-C-97	Fluoride	0.27		mg F/L	P305297	
1801001	EPA 350.1 Rev. 2.0	Ammonia-N	0.35		mg N/L	P305498	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P305244	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P304989	
	EPA 365.1 Rev. 2.0	Total-P	1.5		mg P/L	P305543	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P305513	
1801002	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	1.1		mg P/L	P304727	

Ref. Method and Comment:

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

Sample Location: CELLON CR @ 400M BELOW US 441

Collection Date/Time: 05/19/2016 11:00

Field ID: CELLON CR @ 400M BELOW US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801039	EPA 8321B	Glyphosate**	10	U	ug/L	P304694	
	USGS O-2060-01	2,4-D	0.0094		ug/L	P304693	MS
		Diuron	0.0020	U	ug/L	P304693	
		2,4-DB	0.0020	U	ug/L	P304693	
		Fenuron	0.0080	U	ug/L	P304693	
		2,4,5-T	0.0020	U	ug/L	P304693	
		Acifluorfen	0.0020	U	ug/L	P304693	
		Imidacloprid	0.0040	U	ug/L	P304693	MS
		Bentazon	0.0022	I	ug/L	P304693	MS
		Linuron	0.0040	U	ug/L	P304693	
		Dichlorprop	0.0020	U	ug/L	P304693	
		Dinoseb	0.020	U	ug/L	P304693	RPD
		MCPA	0.0040	U	ug/L	P304693	
		Acetaminophen**	0.0040	U	ug/L	P304693	
		MCPP	0.0040	U	ug/L	P304693	MS
		Picloram	0.050	U	ug/L	P304693	MS
		Carbamazepine**	4.0E-04	U	ug/L	P304693	
		Silvex	0.0020	U	ug/L	P304693	MS
		Triclopyr**	0.0053	I	ug/L	P304693	
		Primidone**	0.0080	U	ug/L	P304693	
		Fluridone**	4.0E-04	U	ug/L	P304693	
1801046	EPA 8270D	Dieldrin	0.42	UJ	ng/L	P304738	SUR
1801047		Ametryn	11		ng/L	P304685	

Field ID: CELLON CR @ 400M BELOW US 441

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801047	EPA 8270D	Atrazine	310		ng/L	P304685	
		Chlorpyrifos Ethyl	0.16	I	ng/L	P304685	
		Chlorpyrifos Methyl	0.11	U	ng/L	P304685	
		Disulfoton	0.36	U	ng/L	P304685	
		Ethion	0.16	U	ng/L	P304685	
		Ethoprop	0.11	U	ng/L	P304685	
		Hexazinone	2.5		ng/L	P304685	
		Malathion	0.38	U	ng/L	P304685	
		Metribuzin	0.22	UJ	ng/L	P304685	RPD
		Mevinphos	0.55	U	ng/L	P304685	
		Norflurazon	0.55	U	ng/L	P304685	
		Phorate	0.27	U	ng/L	P304685	
		Prometryn	0.24	I	ng/L	P304685	
		Simazine	0.55	U	ng/L	P304685	
		Atrazine Desethyl	49		ng/L	P304685	
		Prometon	2.6	I	ng/L	P304685	
		Fipronil	0.27	U	ng/L	P304685	
		Molinate	0.33	U	ng/L	P304685	
		Pendimethalin	1.6	U	ng/L	P304685	
		Terbufos	0.56		ng/L	P304685	
		EPTC	1.4	U	ng/L	P304685	MS
		Terbutylazine	0.47	U	ng/L	P304685	
		Bromacil	1.6	I	ng/L	P304685	
		Fipronil Sulfide	0.16	U	ng/L	P304685	
		Fipronil Sulfone	0.16	U	ng/L	P304685	
		Alachlor	0.27	U	ng/L	P304685	
		Azinphos Methyl	2.5	U	ng/L	P304685	
		Butylate	0.44	U	ng/L	P304685	MS
		Demeton	1.1	U	ng/L	P304685	
		Diazinon	0.14	U	ng/L	P304685	
		Fenamiphos	0.27	U	ng/L	P304685	
		Fonofos	0.22	U	ng/L	P304685	
		Metalaxyl	0.22	U	ng/L	P304685	
		Metolachlor	2.7		ng/L	P304685	
		Acetochlor	0.27	U	ng/L	P304685	
		Cyanazine	0.55	U	ng/L	P304685	
		Parathion Ethyl	0.27	U	ng/L	P304685	
		Parathion Methyl	0.27	U	ng/L	P304685	

Ref. Method and Comment:

EPA 8270D: Reported results qualified with J due to surrogate below control limits; the sample was subsequently re-analyzed (after expiration) with acceptable surrogate recovery and the same analytical result was obtained. Refer to the narrative for an explanation of QC Codes.

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

Quality Assurance Report

Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304730

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305249

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305251

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305498

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305244

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304989

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305543

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304727

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

Reference Method: EPA 8270D
Batch ID: P304685

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P304685

Component	Result	Code	Units
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
Metalaxyl	0.20	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.5	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8270D
Batch ID: P304738

Component	Result	Code	Units
Dieldrin	0.40	U	ng/L

Reference Method: EPA 8321B
Batch ID: P304694

Component	Result	Code	Units
Glyphosate	10	U	ug/L

Reference Method: SM 2120 B
Batch ID: P304735

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P304735

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P305294

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

Reference Method: SM 2540 C-97
Batch ID: P305270

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P305161

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P305297

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P305513

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

Reference Method: USGS O-2060-01
Batch ID: P304693

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
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

Quality Assurance Report Method Blank Results

Reference Method: USGS O-2060-01
Batch ID: P304693

Component	Result	Code	Units
Picloram	0.050	U	ug/L
Primidone	0.0080	U	ug/L
Silvex	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305249

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305251

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305498

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304989

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305543

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304727

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P304685

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.5	96.9	P/P	84 - 119
Alachlor	92.8	95.5	P/P	84 - 121
Ametryn	91.4	95.3	P/P	66 - 127
Atrazine	107	110	P/P	72 - 119
Atrazine Desethyl	81.4	82.6	P/P	21 - 111
Azinphos Methyl	113	117	P/P	79 - 185
Bromacil	85.2	82.1	P/P	39 - 122
Butylate	56.5	58.3	P/P	36 - 94.0
Chlorpyrifos Ethyl	87.5	89.0	P/P	54 - 101
Chlorpyrifos Methyl	85.0	86.4	P/P	28 - 114
Cyanazine	148	153	P/P	58 - 201
Demeton	74.0	80.8	P/P	57 - 130
Diazinon	91.4	94.5	P/P	79 - 124
Disulfoton	81.8	97.6	P/P	45 - 140
EPTC	54.9	55.9	P/P	43 - 95.0
Ethion	92.4	96.1	P/P	65 - 125
Ethoprop	83.4	85.5	P/P	69 - 107
Fenamiphos	95.5	101	P/P	78 - 129
Fipronil	92.4	93.2	P/P	62 - 125
Fipronil Sulfide	93.8	89.7	P/P	65 - 119
Fipronil Sulfone	88.7	91.9	P/P	64 - 122
Fonofos	86.7	86.0	P/P	70 - 112
Hexazinone	95.7	99.4	P/P	44 - 147
Malathion	102	104	P/P	72 - 125
Metaxyl	94.9	99.4	P/P	83 - 113
Metolachlor	93.0	95.7	P/P	85 - 120
Metribuzin	72.7	105	P/P	68 - 129
Mevinphos	91.9	93.5	P/P	35 - 125
Molinate	66.8	69.3	P/P	51 - 100
Norflurazon	79.8	93.2	P/P	66 - 127
Parathion Ethyl	93.3	95.0	P/P	86 - 108
Parathion Methyl	96.7	104	P/P	87 - 125
Pendimethalin	81.0	80.0	P/P	53 - 136
Phorate	79.9	85.3	P/P	52 - 113
Prometon	91.1	93.6	P/P	67 - 125
Prometryn	92.3	98.9	P/P	73 - 114
Simazine	99.7	106	P/P	66 - 123
Terbufos	83.2	88.3	P/P	58 - 116
Terbutylazine	97.7	98.2	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P304738

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dieldrin	106	104	P/P	79 - 121

Reference Method: EPA 8321B
Batch ID: P304694

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	106		P	40 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97
Batch ID: P305294

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	95 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P305297

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

Reference Method: SM 5310 B-00
Batch ID: P305513

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

Reference Method: USGS O-2060-01
Batch ID: P304693

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4,5-T	105		P	40 - 140
2,4-D	116		P	40 - 140
2,4-DB	92.4		P	40 - 140
Acetaminophen	116		P	40 - 140
Acifluorfen	112		P	40 - 140
Bentazon	123		P	40 - 140
Carbamazepine	109		P	40 - 140
Dichlorprop	115		P	40 - 140
Dinoseb	97.6		P	40 - 140
Diuron	119		P	40 - 140
Fenuron	102		P	40 - 140
Fluridone	110		P	40 - 140
Imidacloprid	106		P	40 - 160
Linuron	107		P	40 - 140
MCPA	115		P	40 - 140
MCPP	133		P	40 - 140
Picloram	106		P	40 - 140
Primidone	128		P	40 - 140
Silvex	116		P	40 - 140
Triclopyr	119		P	40 - 140

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800845	Chloride	99.4	99.1	P/P	90 - 110
1801143	Chloride	99.0		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305251

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800845	Sulfate	96.6	96.6	P/P	90 - 110
1801143	Sulfate	98.0		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305498

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801549	Ammonia-N	97.2	98.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800970	Kjeldahl Nitrogen	98.2	92.7	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304989

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800972	NO2NO3-N	97.4	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800970	Total-P	102	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800998	O-Phosphate-P	98.5	98.5	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P304685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800658	Acetochlor	98.1	97.5	P/P	84 - 119
1800658	Alachlor	95.9	94.5	P/P	84 - 121
1800658	Ametryn	97.8	104	P/P	66 - 127
1800658	Atrazine	109	111	P/P	72 - 119
1800658	Atrazine Desethyl	71.1	69.0	P/P	21 - 111
1800658	Azinphos Methyl	122	119	P/P	79 - 185
1800658	Bromacil	90.3	94.1	P/P	39 - 122
1800658	Butylate	35.0	45.3	F/P	36 - 94.0
1800658	Chlorpyrifos Ethyl	88.4	89.0	P/P	54 - 101
1800658	Chlorpyrifos Methyl	85.2	86.4	P/P	28 - 114
1800658	Cyanazine	135	154	P/P	58 - 201
1800658	Demeton	84.0	84.6	P/P	57 - 130
1800658	Diazinon	98.8	96.2	P/P	79 - 124
1800658	Disulfoton	89.9	93.6	P/P	45 - 140
1800658	EPTC	33.8	42.4	F/F	43 - 95.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P304685

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800658	Ethion	94.2	91.3	P/P	65 - 125
1800658	Ethoprop	85.0	90.4	P/P	69 - 107
1800658	Fenamiphos	95.1	97.7	P/P	78 - 129
1800658	Fipronil	93.1	95.0	P/P	62 - 125
1800658	Fipronil Sulfide	98.1	101	P/P	65 - 119
1800658	Fipronil Sulfone	92.2	97.2	P/P	64 - 122
1800658	Fonofos	87.8	91.4	P/P	70 - 112
1800658	Hexazinone	98.4	97.9	P/P	44 - 147
1800658	Malathion	105	107	P/P	72 - 125
1800658	Metalaxyl	96.9	94.6	P/P	83 - 113
1800658	Metolachlor	93.3	92.9	P/P	85 - 120
1800658	Metribuzin	102	105	P/P	68 - 129
1800658	Mevinphos	81.0	94.6	P/P	35 - 125
1800658	Molinate	52.6	61.4	P/P	51 - 100
1800658	Norflurazon	88.8	96.9	P/P	66 - 127
1800658	Parathion Ethyl	95.9	92.7	P/P	86 - 108
1800658	Parathion Methyl	101	107	P/P	87 - 125
1800658	Pendimethalin	82.0	80.5	P/P	53 - 136
1800658	Phorate	78.2	83.0	P/P	52 - 113
1800658	Prometon	96.0	93.2	P/P	67 - 125
1800658	Prometryn	98.2	98.6	P/P	73 - 114
1800658	Simazine	99.1	99.2	P/P	66 - 123
1800658	Terbufos	89.0	90.7	P/P	58 - 116
1800658	Terbutylazine	98.4	98.2	P/P	77 - 113

Reference Method: EPA 8270D
Batch ID: P304738

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801101	Dieldrin	101	109	P/P	79 - 121

Reference Method: EPA 8321B
Batch ID: P304694

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800645	Glyphosate	101	80.2	P/P	40 - 140

Reference Method: SM 4500 F-C-97
Batch ID: P305297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801212	Fluoride	96.7	96.7	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P305513

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1801001	Organic Carbon	95.4	95.2	P/P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: USGS O-2060-01
Batch ID: P304693

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1800645	2,4,5-T	111	110	P/P	40 - 140
1800645	2,4-D	192	216	F/F	40 - 140
1800645	2,4-DB	84.0	88.0	P/P	40 - 140
1800645	Acetaminophen	66.4	80.4	P/P	40 - 140
1800645	Acifluorfen	93.6	118	P/P	40 - 140
1800645	Bentazon	212	210	F/F	40 - 140
1800645	Carbamazepine	74.5	84.1	P/P	40 - 140
1800645	Dichlorprop	133	140	P/P	40 - 140
1800645	Dinoseb	92.4	128	P/P	40 - 140
1800645	Diuron	65.8	61.4	P/P	40 - 140
1800645	Fenuron	70.4	73.6	P/P	40 - 140
1800645	Fluridone	95.1	97.9	P/P	40 - 140
1800645	Imidacloprid	159	161	P/F	40 - 160
1800645	Linuron	80.8	80.4	P/P	40 - 140
1800645	MCPA	124	132	P/P	40 - 140
1800645	MCPP	149	160	F/F	40 - 140
1800645	Picloram	112	148	P/F	40 - 140
1800645	Primidone	97.2	106	P/P	40 - 140
1800645	Silvex	140	152	P/F	40 - 140
1800645	Triclopyr	128	135	P/P	40 - 140

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P304730

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800897	Turbidity	1.93	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800845	Chloride	0.235	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P305251

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800845	Sulfate	0.0227	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P305498

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801549	Ammonia-N	1.14	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P305244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800970	Kjeldahl Nitrogen	4.70	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P304989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800972	NO2NO3-N	1.81	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P305543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800970	Total-P	4.16	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P304727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800998	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P304685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800658	Acetochlor	0.649	Spike	P	0 - 30
1800658	Alachlor	1.45	Spike	P	0 - 30
1800658	Ametryn	5.76	Spike	P	0 - 30
1800658	Atrazine	2.16	Spike	P	0 - 30
1800658	Atrazine Desethyl	3.04	Spike	P	0 - 30
1800658	Azinphos Methyl	2.53	Spike	P	0 - 30
1800658	Bromacil	4.09	Spike	P	0 - 30
1800658	Butylate	25.8	Spike	P	0 - 30
1800658	Chlorpyrifos Ethyl	0.694	Spike	P	0 - 30
1800658	Chlorpyrifos Methyl	1.47	Spike	P	0 - 30
1800658	Cyanazine	12.6	Spike	P	0 - 30
1800658	Demeton	0.671	Spike	P	0 - 30
1800658	Diazinon	2.68	Spike	P	0 - 30
1800658	Disulfoton	3.97	Spike	P	0 - 30
1800658	EPTC	22.5	Spike	P	0 - 30
1800658	Ethion	3.17	Spike	P	0 - 30
1800658	Ethoprop	6.16	Spike	P	0 - 30
1800658	Fenamiphos	2.65	Spike	P	0 - 30
1800658	Fipronil	2.09	Spike	P	0 - 30
1800658	Fipronil Sulfide	2.90	Spike	P	0 - 30
1800658	Fipronil Sulfone	5.32	Spike	P	0 - 30
1800658	Fonofos	4.04	Spike	P	0 - 30
1800658	Hexazinone	0.483	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P304685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800658	Malathion	1.65	Spike	P	0 - 30
1800658	Metalaxyl	2.31	Spike	P	0 - 30
1800658	Metolachlor	0.376	Spike	P	0 - 30
1800658	Metribuzin	3.08	Spike	P	0 - 30
1800658	Mevinphos	15.5	Spike	P	0 - 30
1800658	Molinate	15.5	Spike	P	0 - 30
1800658	Norflurazon	8.72	Spike	P	0 - 30
1800658	Parathion Ethyl	3.43	Spike	P	0 - 30
1800658	Parathion Methyl	6.03	Spike	P	0 - 30
1800658	Pendimethalin	1.89	Spike	P	0 - 30
1800658	Phorate	6.03	Spike	P	0 - 30
1800658	Prometon	2.96	Spike	P	0 - 30
1800658	Prometryn	0.327	Spike	P	0 - 30
1800658	Simazine	0.150	Spike	P	0 - 30
1800658	Terbufos	1.90	Spike	P	0 - 30
1800658	Terbutylazine	0.252	Spike	P	0 - 30
LFB	Acetochlor	1.38	LCS	P	0 - 30
LFB	Alachlor	2.85	LCS	P	0 - 30
LFB	Ametryn	4.14	LCS	P	0 - 30
LFB	Atrazine	2.29	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.48	LCS	P	0 - 30
LFB	Azinphos Methyl	3.39	LCS	P	0 - 30
LFB	Bromacil	3.72	LCS	P	0 - 30
LFB	Butylate	3.25	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	1.76	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.61	LCS	P	0 - 30
LFB	Cyanazine	3.35	LCS	P	0 - 30
LFB	Demeton	8.74	LCS	P	0 - 30
LFB	Diazinon	3.32	LCS	P	0 - 30
LFB	Disulfoton	17.6	LCS	P	0 - 30
LFB	EPTC	1.86	LCS	P	0 - 30
LFB	Ethion	3.92	LCS	P	0 - 30
LFB	Ethoprop	2.52	LCS	P	0 - 30
LFB	Fenamiphos	5.28	LCS	P	0 - 30
LFB	Fipronil	0.822	LCS	P	0 - 30
LFB	Fipronil Sulfide	4.49	LCS	P	0 - 30
LFB	Fipronil Sulfone	3.52	LCS	P	0 - 30
LFB	Fonofos	0.834	LCS	P	0 - 30
LFB	Hexazinone	3.72	LCS	P	0 - 30
LFB	Malathion	2.12	LCS	P	0 - 30
LFB	Metalaxyl	4.59	LCS	P	0 - 30
LFB	Metolachlor	2.96	LCS	P	0 - 30
LFB	Metribuzin	36.3	LCS	F	0 - 30
LFB	Mevinphos	1.69	LCS	P	0 - 30
LFB	Molinate	3.79	LCS	P	0 - 30
LFB	Norflurazon	15.4	LCS	P	0 - 30
LFB	Parathion Ethyl	1.77	LCS	P	0 - 30
LFB	Parathion Methyl	7.55	LCS	P	0 - 30
LFB	Pendimethalin	1.29	LCS	P	0 - 30
LFB	Phorate	6.52	LCS	P	0 - 30
LFB	Prometon	2.72	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P304685

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prometryn	6.90	LCS	P	0 - 30
LFB	Simazine	5.98	LCS	P	0 - 30
LFB	Terbufos	6.04	LCS	P	0 - 30
LFB	Terbuthylazine	0.502	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P304738

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801101	Dieldrin	5.90	Spike	P	0 - 30
LFB	Dieldrin	1.54	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P304694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800645	Glyphosate	22.8	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P304735

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800966	Color (true)	0.754	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P305294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801212	Total Alkalinity	0.969	Sample	P	0 - 4.8

Reference Method: SM 2540 C-97
Batch ID: P305270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800848	TDS	9.63	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P305297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801212	Fluoride	0.0	Spike	P	0 - 3.0

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P305513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1801001	Organic Carbon	0.0587	Spike	P	0 - 20

Reference Method: USGS O-2060-01
Batch ID: P304693

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1800645	2,4,5-T	1.45	Spike	P	0 - 30
1800645	2,4-D	3.80	Spike	P	0 - 30
1800645	2,4-DB	4.65	Spike	P	0 - 30
1800645	Acetaminophen	19.1	Spike	P	0 - 30
1800645	Acifluorfen	23.1	Spike	P	0 - 30
1800645	Bentazon	1.09	Spike	P	0 - 30
1800645	Carbamazepine	11.9	Spike	P	0 - 30
1800645	Dichlorprop	4.69	Spike	P	0 - 30
1800645	Dinoseb	32.0	Spike	F	0 - 30
1800645	Diuron	5.90	Spike	P	0 - 30
1800645	Fenuron	4.44	Spike	P	0 - 30
1800645	Fluridone	2.89	Spike	P	0 - 30
1800645	Imidacloprid	0.959	Spike	P	0 - 30
1800645	Linuron	0.496	Spike	P	0 - 30
1800645	MCPA	6.27	Spike	P	0 - 30
1800645	MCPP	7.25	Spike	P	0 - 30
1800645	Picloram	27.3	Spike	P	0 - 30
1800645	Primidone	8.66	Spike	P	0 - 30
1800645	Silvex	8.50	Spike	P	0 - 30
1800645	Triclopyr	4.92	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: 1801039
Field Sample ID: CELLON CR @ 400M BELOW US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	63.0	P	50 - 150
USGS O-2060-01	2,4-D-d3	120	P	40 - 150
USGS O-2060-01	Acetaminophen-d4	63.2	P	30 - 150
USGS O-2060-01	Carbamazepine-d10	75.0	P	40 - 160
USGS O-2060-01	Diuron-d6	55.8	P	40 - 150
USGS O-2060-01	Primidone-d5	79.8	P	40 - 150

Lab Sample ID: 1801046
Field Sample ID: CELLON CR @ 400M BELOW US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	103	P	58 - 128

Quality Assurance Report Surrogates

Lab Sample ID: 1801046

Field Sample ID: CELLON CR @ 400M BELOW US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Tetrachloro-m-xylene	41.9	F	51 - 93.0

Lab Sample ID: 1801047

Field Sample ID: CELLON CR @ 400M BELOW US 441

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Malathion-d7	93.7	P	67 - 131
EPA 8270D	Simazine-d10	102	P	75 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A69604

Included Lab Sample IDs: 1801002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.7	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A69605

Included Lab Sample IDs: 1801000

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

Reference Method: SM 2120 B

Run ID: A69606

Included Lab Sample IDs: 1801000

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	98.9	P/P	90 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A69676

Included Lab Sample IDs: 1801000

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Sulfate	99.7	97.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A69682

Included Lab Sample IDs: 1801039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glyphosate	109	112	P/P	70 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A69684

Included Lab Sample IDs: 1801001

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

Reference Method: USGS O-2060-01

Run ID: A69699

Included Lab Sample IDs: 1801039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	121	129	P/P	60 - 150
Carbamazepine	104	105	P/P	60 - 150
Diuron	116	126	P/P	60 - 150
Fenuron	106	109	P/P	60 - 150
Fluridone	102	106	P/P	60 - 150
Imidacloprid	112	119	P/P	60 - 150
Linuron	122	118	P/P	60 - 150
Primidone	128	142	P/P	60 - 150

Reference Method: USGS O-2060-01

Run ID: A69713

Included Lab Sample IDs: 1801039

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	106	99.8	P/P	50 - 150
2,4-D	117	119	P/P	50 - 150
2,4-DB	109	113	P/P	50 - 150
Acifluorfen	141	136	P/P	50 - 150
Bentazon	113	110	P/P	50 - 150
Dichlorprop	111	117	P/P	50 - 150
Dinoseb	119	110	P/P	50 - 150
MCPA	135	137	P/P	50 - 150
MCPP	142	145	P/P	50 - 150
Picloram	144	106	P/P	50 - 150
Silvex	137	137	P/P	50 - 150
Triclopyr	127	123	P/P	50 - 150

Reference Method: SM 2320 B-97

Run ID: A69766

Included Lab Sample IDs: 1801000

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	103	100	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A69766

Included Lab Sample IDs: 1801000

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A69820

Included Lab Sample IDs: 1801001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A69823

Included Lab Sample IDs: 1801001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.6	101	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A69826

Included Lab Sample IDs: 1801001

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	97.0	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A69829

Included Lab Sample IDs: 1801046

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A69889

Included Lab Sample IDs: 1801001

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

Reference Method: EPA 8270D

Run ID: A69944

Included Lab Sample IDs: 1801047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	100		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	97.9		P	80 - 120
Atrazine Desethyl	96.5		P	80 - 120
Azinphos Methyl	105		P	80 - 120
Bromacil	96.8		P	80 - 120
Butylate	99.6		P	80 - 120
Chlorpyrifos Ethyl	94.6		P	80 - 120
Chlorpyrifos Methyl	96.3		P	80 - 120
Cyanazine	106		P	80 - 120
Demeton	99.4		P	80 - 120
Diazinon	96.7		P	80 - 120
Disulfoton	97.8		P	80 - 120
EPTC	100		P	80 - 120
Ethion	90.0		P	80 - 120
Ethoprop	95.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A69944
Included Lab Sample IDs: 1801047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenamiphos	94.4		P	80 - 120
Fipronil	92.9		P	80 - 120
Fipronil Sulfide	96.2		P	80 - 120
Fipronil Sulfone	95.4		P	80 - 120
Fonofos	102		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	96.6		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	93.7		P	80 - 120
Mevinphos	106		P	80 - 120
Molinate	99.0		P	80 - 120
Norflurazon	99.1		P	80 - 120
Parathion Ethyl	95.3		P	80 - 120
Parathion Methyl	94.2		P	80 - 120
Pendimethalin	87.5		P	80 - 120
Phorate	90.8		P	80 - 120
Prometon	104		P	80 - 120
Prometryn	98.6		P	80 - 120
Simazine	96.7		P	80 - 120
Terbufos	94.7		P	80 - 120
Terbuthylazine	100		P	80 - 120

Reference Method: EPA 8270D
Run ID: A69946
Included Lab Sample IDs: 1801047

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	92.0		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.93	
EPA 300.0 Rev. 2.1	Chloride	100		99.4	99.1	99.0			0.235
	Sulfate	98.5		96.6	96.6	98.0			0.0227
EPA 350.1 Rev. 2.0	Ammonia-N	102		97.2	98.6				1.14
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0		98.2	92.7				4.70
EPA 353.2 Rev. 2.0	NO2NO3-N	100		97.4	99.4				1.81
EPA 365.1 Rev. 2.0	Total-P	105		102	107				4.16
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7		98.5	98.5				0.0
EPA 8270D	Acetochlor	95.5	96.9	98.1	97.5		1.38		0.649
	Alachlor	92.8	95.5	95.9	94.5		2.85		1.45
	Ametryn	91.4	95.3	97.8	104		4.14		5.76

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Atrazine	107	110	111	109	2.29	2.16
	Atrazine Desethyl	81.4	82.6	71.1	69.0	1.48	3.04
	Azinphos Methyl	113	117	122	119	3.39	2.53
	Bromacil	85.2	82.1	90.3	94.1	3.72	4.09
	Butylate	56.5	58.3	35.0	45.3	3.25	25.8
	Chlorpyrifos Ethyl	87.5	89.0	88.4	89.0	1.76	0.694
	Chlorpyrifos Methyl	85.0	86.4	85.2	86.4	1.61	1.47
	Cyanazine	148	153	135	154	3.35	12.6
	Demeton	74.0	80.8	84.0	84.6	8.74	0.671
	Diazinon	91.4	94.5	98.8	96.2	3.32	2.68
	Dieldrin	106	104	101	109	1.54	5.90
	Disulfoton	81.8	97.6	89.9	93.6	17.6	3.97
	EPTC	54.9	55.9	33.8	42.4	1.86	22.5
	Ethion	92.4	96.1	94.2	91.3	3.92	3.17
	Ethoprop	83.4	85.5	85.0	90.4	2.52	6.16
	Fenamiphos	95.5	101	95.1	97.7	5.28	2.65
	Fipronil	92.4	93.2	93.1	95.0	0.822	2.09
	Fipronil Sulfide	93.8	89.7	98.1	101	4.49	2.90
	Fipronil Sulfone	88.7	91.9	92.2	97.2	3.52	5.32
	Fonofos	86.7	86.0	87.8	91.4	0.834	4.04
	Hexazinone	95.7	99.4	98.4	97.9	3.72	0.483
	Malathion	102	104	105	107	2.12	1.65
	Metalaxyl	94.9	99.4	96.9	94.6	4.59	2.31
	Metolachlor	93.0	95.7	93.3	92.9	2.96	0.376
	Metribuzin	72.7	105	102	105	36.3	3.08
	Mevinphos	91.9	93.5	81.0	94.6	1.69	15.5
	Molinate	66.8	69.3	52.6	61.4	3.79	15.5
	Norflurazon	79.8	93.2	88.8	96.9	15.4	8.72
	Parathion Ethyl	93.3	95.0	95.9	92.7	1.77	3.43
	Parathion Methyl	96.7	104	101	107	7.55	6.03
	Pendimethalin	81.0	80.0	82.0	80.5	1.29	1.89
	Phorate	79.9	85.3	78.2	83.0	6.52	6.03
	Prometon	91.1	93.6	96.0	93.2	2.72	2.96
	Prometryn	92.3	98.9	98.2	98.6	6.90	0.327
	Simazine	99.7	106	99.1	99.2	5.98	0.150
	Terbufos	83.2	88.3	89.0	90.7	6.04	1.90
	Terbutylazine	97.7	98.2	98.4	98.2	0.502	0.252
EPA 8321B	Glyphosate	106		101	80.2		22.8
SM 2120 B	Color (true)					0.754	
SM 2320 B-97	Total Alkalinity	102				0.969	
SM 2540 C-97	TDS					9.63	
SM 4500 F-C-97	Fluoride	96.1		96.7	96.7		0.0
SM 5310 B-00	Organic Carbon	99.4		95.4	95.2		0.0587
USGS O-2060-01	2,4,5-T	105		111	110		1.45
	2,4-D	116		192	216		3.80
	2,4-DB	92.4		84.0	88.0		4.65
	Acetaminophen	116		66.4	80.4		19.1
	Acifluorfen	112		93.6	118		23.1
	Bentazon	123		212	210		1.09
	Carbamazepine	109		74.5	84.1		11.9
	Dichlorprop	115		133	140		4.69
	Dinoseb	97.6		92.4	128		32.0
	Diuron	119		65.8	61.4		5.90
	Fenuron	102		70.4	73.6		4.44

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
USGS O-2060-01	Fluridone	110	95.1	97.9		2.89
	Imidacloprid	106	159	161		0.959
	Linuron	107	80.8	80.4		0.496
	MCPA	115	124	132		6.27
	MCPP	133	149	160		7.25
	Picloram	106	112	148		27.3
	Primidone	128	97.2	106		8.66
	Silvex	116	140	152		8.50
	Triclopyr	119	128	135		4.92

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1801000
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1801000
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1801000
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1801001
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1801001
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1801001
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1801001
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1801002
EPA 8270D / E31780	Organochlorine pesticides (ultra low level) in water matrices by GC/MS/MS	1801046
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1801047
EPA 8321B / E31780	Glyphosate in water matrices by HPLC/MS/MS	1801039
SM 2120 B / E31780	True Color measured at 450 nm	1801000
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	1801000
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1801000
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1801000
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1801000
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1801001
USGS O-2060-01 / E31780	Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS	1801039
USGS O-2060-01 / E31780	Urea herbicides and other chemicals in water matrices by HPLC/MS/MS	1801039

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	05/20/2016			05/20/2016 15:55	Sima Feizi	1801000
EPA 300.0 Rev. 2.1	05/20/2016			05/27/2016	Ping Hua	1801000
EPA 350.1 Rev. 2.0	05/20/2016			06/02/2016	Diana M. Turner	1801001
EPA 351.2 Rev. 2.0	05/20/2016	05/31/2016	Sofia Elnemr	06/02/2016	Christopher Armour	1801001
EPA 353.2 Rev. 2.0	05/20/2016			05/25/2016	Peter D. Kaus	1801001
EPA 365.1 Rev. 2.0	05/20/2016	06/03/2016	Vijayalakshmi Reddy	06/07/2016	Rochelle Y Jackson	1801001
EPA 365.1 Rev. 2.0 dissolved	05/20/2016			05/20/2016 15:26	Ping Hua	1801002
EPA 8270D	05/20/2016	05/23/2016	Fe-Val Siddell	06/08/2016	Irina Carbone	1801047
	05/20/2016	05/23/2016	Rasheda Ghaffari	05/25/2016	Vandana T. Nagar	1801046
EPA 8321B	05/20/2016	05/25/2016	Mohammad Ghaffari	05/25/2016	Mohammad Ghaffari	1801039
SM 2120 B	05/20/2016			05/20/2016 16:09	Rochelle Y Jackson	1801000
SM 2320 B-97	05/20/2016			05/28/2016	Dale L. Simmons	1801000
SM 2540 C-97	05/20/2016			05/25/2016	Yijie Li	1801000
SM 2540 D-97	05/20/2016			05/25/2016	Yijie Li	1801000
SM 4500 F-C-97	05/20/2016			05/28/2016	Dale L. Simmons	1801000
SM 5310 B-00	05/20/2016			06/02/2016	Diana M. Turner	1801001
USGS O-2060-01	05/20/2016	05/25/2016	Hoor Shaik	05/25/2016	Juyoung Kim	1801039
	05/20/2016	05/25/2016	Hoor Shaik	05/26/2016	Juyoung Kim	1801039