

Chemical Analysis Report

SE-DIST-2018-06-21-01

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

Event Description: **SMP- Okeechobee Run**

Request ID: **RQ-2018-06-11-24**

Customer: **SE-DIST**

Project ID: **SMP**

Send Reports to:

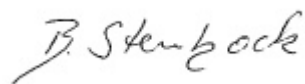
FL Dept. of Environmental Protection
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Fort Pierce, FL 34945
Attn: Matthew Sewell

For additional information please contact

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 18-JUL-2018 16:53



Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Otter Creek @ 441

Collection Date/Time: 06/20/2018 10:20

Field ID: G1SE0007

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002647	EPA 8321B	2,4-D	0.0057	I	ug/L	P346981	
		Bentazon	8.0E-04	U	ug/L	P346981	
		MCP	0.0020	U	ug/L	P346981	
		Triclopyr**	0.0040	U	ug/L	P346981	
		Imidacloprid	0.0020	U	ug/L	P346981	
		Diuron	0.0020	U	ug/L	P346981	
		Pyraclostrobin**	0.0020	U	ug/L	P346981	
		Primidone**	0.0040	U	ug/L	P346981	
		Linuron	0.0040	U	ug/L	P346981	
		Acetaminophen**	0.0080	U	ug/L	P346981	
		Fenuron	0.016	U	ug/L	P346981	
		Imazapyr**	0.0040	U	ug/L	P346981	
		Carbamazepine**	4.0E-04	U	ug/L	P346981	
		Fluridone**	4.0E-04	U	ug/L	P346981	
		Hydrocodone**	8.0E-04	U	ug/L	P346981	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

EPA 8321B: Insufficient sample to perform matrix spikes.

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: Otter Creek @ 68

Collection Date/Time: 06/20/2018 10:30

Field ID: G1SE0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002648	EPA 8321B	2,4-D	0.0022	I	ug/L	P346981	
		Bentazon	8.0E-04	U	ug/L	P346981	
		MCP	0.0020	U	ug/L	P346981	
		Triclopyr**	0.0040	U	ug/L	P346981	
		Imidacloprid	0.0020	U	ug/L	P346981	
		Diuron	0.0020	U	ug/L	P346981	
		Pyraclostrobin**	0.0020	U	ug/L	P346981	
		Primidone**	0.0040	U	ug/L	P346981	
		Linuron	0.0040	U	ug/L	P346981	
		Acetaminophen**	0.0080	U	ug/L	P346981	
		Fenuron	0.016	U	ug/L	P346981	
		Imazapyr**	0.0040	U	ug/L	P346981	
		Carbamazepine**	4.6E-04	I	ug/L	P346981	
		Fluridone**	4.0E-04	U	ug/L	P346981	
		Hydrocodone**	8.0E-04	U	ug/L	P346981	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

EPA 8321B: Insufficient sample to perform matrix spikes.

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: Taylor Creek @ 441

Collection Date/Time: 06/20/2018 10:45

Field ID: G1SE0001

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002608	EPA 180.1 Rev. 2.0	Turbidity	3.9		NTU	P347295	
	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P347633	
		Sulfate	30		mg SO4/L	P347636	
	SM 2120 B	Color (true)	280		PCU	P347280	
	SM 2320 B-97	Total Alkalinity	74		mg CaCO3/L	P347843	
	SM 2540 C-97	TDS	268		mg/L	P347649	
	SM 2540 D-97	TSS	7	I	mg/L	P347563	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P347847	
2002610	EPA 350.1 Rev. 2.0	Ammonia-N	0.17		mg N/L	P347762	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.9		mg N/L	P348017	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.18		mg N/L	P347517	
	EPA 365.1 Rev. 2.0	Total-P	0.44		mg P/L	P347561	
	SM 5310 B-00	Organic Carbon	28		mg C/L	P347794	
2002612	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.36		mg P/L	P347288	
2002649	EPA 8321B	2,4-D	0.11		ug/L	P347238	
		Bentazon	0.0042		ug/L	P347238	
		MCP	0.0020	U	ug/L	P347238	
		Triclopyr**	0.0040	U	ug/L	P347238	
		Imidacloprid	0.0037	I	ug/L	P347238	
		Diuron	0.0020	U	ug/L	P347238	
		Pyraclostrobin**	0.0020	U	ug/L	P347238	
		Primidone**	0.0040	U	ug/L	P347238	
		Linuron	0.0040	U	ug/L	P347238	
		Acetaminophen**	0.0080	U	ug/L	P347238	
		Fenuron	0.016	U	ug/L	P347238	
		Imazapyr**	0.0041	I	ug/L	P347238	
		Carbamazepine**	4.0E-04	U	ug/L	P347238	
		Fluridone**	4.0E-04	U	ug/L	P347238	
		Hydrocodone**	8.0E-04	U	ug/L	P347238	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

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

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: Popash @ 70

Collection Date/Time: 06/20/2018 11:20

Field ID: G1SE0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002614	EPA 180.1 Rev. 2.0	Turbidity	8.9		NTU	P347295	
	EPA 300.0 Rev. 2.1	Chloride	80		mg Cl/L	P347633	
		Sulfate	14		mg SO4/L	P347636	
	SM 2120 B	Color (true)	810		PCU	P347280	
	SM 2320 B-97	Total Alkalinity	44		mg CaCO3/L	P347843	
	SM 2540 C-97	TDS	322		mg/L	P347650	
	SM 2540 D-97	TSS	15		mg/L	P347563	
	SM 4500 F-C-97	Fluoride	0.089	I	mg F/L	P347847	
2002615	EPA 350.1 Rev. 2.0	Ammonia-N	0.072		mg N/L	P347762	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	3.4		mg N/L	P348017	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P347517	
	EPA 365.1 Rev. 2.0	Total-P	1.5		mg P/L	P347712	
	SM 5310 B-00	Organic Carbon	52		mg C/L	P347794	
2002616	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	1.3		mg P/L	P347289	

Ref. Method and Comment:

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

Sample Location: Taylor Creek @ 70

Collection Date/Time: 06/20/2018 11:30

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002609	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P347295	
	EPA 300.0 Rev. 2.1	Chloride	50		mg Cl/L	P347633	
		Sulfate	24		mg SO4/L	P347636	
	SM 2120 B	Color (true)	230		PCU	P347280	
	SM 2320 B-97	Total Alkalinity	153		mg CaCO3/L	P347843	
	SM 2540 C-97	TDS	346	A	mg/L	P347650	
	SM 2540 D-97	TSS	6	IA	mg/L	P347563	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P347847	
2002611	EPA 350.1 Rev. 2.0	Ammonia-N	0.44		mg N/L	P347762	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.2		mg N/L	P348017	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.41		mg N/L	P347517	
	EPA 365.1 Rev. 2.0	Total-P	0.36		mg P/L	P347712	
	SM 5310 B-00	Organic Carbon	30		mg C/L	P347794	
2002613	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.27		mg P/L	P347288	
2002650	EPA 8321B	2,4-D	0.034		ug/L	P347238	
		Bentazon	0.0039		ug/L	P347238	
		MCP	0.0020	U	ug/L	P347238	
		Triclopyr**	0.0040	U	ug/L	P347238	
		Imidacloprid	0.0041	I	ug/L	P347238	
		Diuron	0.0020	U	ug/L	P347238	
		Pyraclostrobin**	0.0020	U	ug/L	P347238	
		Primidone**	0.0040	U	ug/L	P347238	
		Linuron	0.0040	U	ug/L	P347238	
		Acetaminophen**	0.0080	U	ug/L	P347238	
		Fenuron	0.016	U	ug/L	P347238	
		Imazapyr**	0.042		ug/L	P347238	
		Carbamazepine**	0.0011	I	ug/L	P347238	
		Fluridone**	4.0E-04	U	ug/L	P347238	
		Hydrocodone**	8.0E-04	U	ug/L	P347238	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

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

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: Mosquito Creek @ 70

Collection Date/Time: 06/20/2018 12:25

Field ID: G1SE0006

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002651	EPA 8321B	2,4-D	0.0030	I	ug/L	P347238	
		Bentazon	0.0037		ug/L	P347238	
		MCP	0.0020	U	ug/L	P347238	
		Triclopyr**	0.0040	U	ug/L	P347238	
		Imidacloprid	0.0025	I	ug/L	P347238	
		Diuron	0.0020	U	ug/L	P347238	
		Pyraclostrobin**	0.0020	U	ug/L	P347238	
		Primidone**	0.0040	U	ug/L	P347238	
		Linuron	0.0040	U	ug/L	P347238	
		Acetaminophen**	0.0080	U	ug/L	P347238	
		Fenuron	0.016	U	ug/L	P347238	
		Imazapyr**	0.0082	I	ug/L	P347238	
		Carbamazepine**	4.0E-04	U	ug/L	P347238	
		Fluridone**	4.0E-04	U	ug/L	P347238	
		Hydrocodone**	8.0E-04	U	ug/L	P347238	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: Mosquito Creek @ 710

Collection Date/Time: 06/20/2018 12:45

Field ID: G1SE0014

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002652	EPA 8321B	2,4-D	0.0062	I	ug/L	P347238	
		Bentazon	0.0033		ug/L	P347238	
		MCP	0.0020	U	ug/L	P347238	
		Triclopyr**	0.0040	U	ug/L	P347238	
		Imidacloprid	0.0023	I	ug/L	P347238	
		Diuron	0.0020	U	ug/L	P347238	
		Pyraclostrobin**	0.0020	U	ug/L	P347238	
		Primidone**	0.0040	U	ug/L	P347238	
		Linuron	0.0040	U	ug/L	P347238	
		Acetaminophen**	0.0080	U	ug/L	P347238	
		Fenuron	0.016	U	ug/L	P347238	
		Imazapyr**	0.0099	I	ug/L	P347238	
		Carbamazepine**	4.0E-04	U	ug/L	P347238	
		Fluridone**	4.0E-04	U	ug/L	P347238	
		Hydrocodone**	8.0E-04	U	ug/L	P347238	
		Sucralose**	0.010	U	ug/L	P347114	

Ref. Method and Comment:

EPA 8321B: MS recoveries are not available due to high concentration in the spiked sample.

Sample Location: Nubbin Slough Upstream of STA

Collection Date/Time: 06/20/2018 12:55

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002617	EPA 180.1 Rev. 2.0	Turbidity	4.5		NTU	P347295	
	EPA 300.0 Rev. 2.1	Chloride	32		mg Cl/L	P347633	
		Sulfate	5.0		mg SO4/L	P347636	
	SM 2120 B	Color (true)	460		PCU	P347280	
	SM 2320 B-97	Total Alkalinity	48		mg CaCO3/L	P347843	
	SM 2540 C-97	TDS	222		mg/L	P347650	
	SM 2540 D-97	TSS	5	I	mg/L	P347563	
	SM 4500 F-C-97	Fluoride	0.098	I	mg F/L	P347847	
2002618	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P347762	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	2.4		mg N/L	P348017	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012		mg N/L	P347517	
	EPA 365.1 Rev. 2.0	Total-P	0.95		mg P/L	P347712	
	SM 5310 B-00	Organic Carbon	41		mg C/L	P347794	
2002619	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.87		mg P/L	P347289	
2002653	EPA 8321B	Aldicarb	0.020	U	ug/L	P347238	
		Aldicarb Sulfone	0.0020	U	ug/L	P347238	
		Aldicarb Sulfoxide	0.0020	UJ	ug/L	P347238	MS, RPD
		Carbaryl	0.0020	UJ	ug/L	P347238	MS
		Carbofuran	0.0020	UJ	ug/L	P347238	MS
		3-Hydroxycarbofuran	0.0020	U	ug/L	P347238	
		Methiocarb	0.0020	U	ug/L	P347238	
		Methomyl	0.0020	U	ug/L	P347238	
		Oxamyl	0.0020	U	ug/L	P347238	
		Propoxur	0.0020	UJ	ug/L	P347238	MS
2002654		2,4-D	0.0073	I	ug/L	P347238	
		Bentazon	8.0E-04	U	ug/L	P347238	
		MCP	0.0020	U	ug/L	P347238	
		Triclopyr**	0.0040	U	ug/L	P347238	
		Imidacloprid	0.0020	U	ug/L	P347238	
		Diuron	0.0020	U	ug/L	P347238	
		Pyraclostrobin**	0.0020	U	ug/L	P347238	
		Primidone**	0.0040	U	ug/L	P347238	
		Linuron	0.0040	U	ug/L	P347238	
		Acetaminophen**	0.0080	U	ug/L	P347238	
		Fenuron	0.016	U	ug/L	P347238	
		Imazapyr**	0.059		ug/L	P347238	
		Carbamazepine**	4.0E-04	U	ug/L	P347238	
		Fluridone**	4.0E-04	U	ug/L	P347238	
		Hydrocodone**	8.0E-04	U	ug/L	P347238	
		Sucralose**	0.010	U	ug/L	P347344	
		Glyphosate**	0.21	I	ug/L	P347344	
		AMPA**	0.10	U	ug/L	P347344	
		Endothall**	0.10	U	ug/L	P347344	

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002654	EPA 8321B	Glufosinate**	0.10	U	ug/L	P347344	
		Acesulfame K**	0.10	UJ	ug/L	P347344	MS
2002655		Glyphosate**	0.22	I	ug/L	P347344	
		AMPA**	0.10	U	ug/L	P347344	
2002656	EPA 8270D	Aldrin	4.4	U	ng/L	P347237	
		Alpha-BHC	2.2	U	ng/L	P347237	
		Beta-BHC	4.4	U	ng/L	P347237	
		Delta-BHC	4.4	U	ng/L	P347237	
		Gamma-BHC	4.4	U	ng/L	P347237	
		Carbophenothion	4.4	U	ng/L	P347237	
		Chlorothalonil	2.2	UJ	ng/L	P347237	RPD
		Cypermethrin	22	U	ng/L	P347237	
		DDD-p,p'	3.3	U	ng/L	P347237	
		DDE-p,p'	3.3	U	ng/L	P347237	
		DDT-p,p'	3.3	U	ng/L	P347237	
		Dieldrin	4.4	U	ng/L	P347237	
		Endosulfan I	4.4	U	ng/L	P347237	
		Endosulfan II	4.4	U	ng/L	P347237	
		Endosulfan Sulfate	2.2	U	ng/L	P347237	
		Endrin	2.2	U	ng/L	P347237	
		Endrin Aldehyde	2.2	UJ	ng/L	P347237	CCV
		Heptachlor	1.6	U	ng/L	P347237	
		Heptachlor Epoxide	2.2	U	ng/L	P347237	
		Methoxychlor	4.4	U	ng/L	P347237	
		Mirex	2.2	U	ng/L	P347237	
		Permethrin	11	U	ng/L	P347237	
		Trifluralin	1.1	U	ng/L	P347237	
		Alpha-Chlordane	1.1	U	ng/L	P347237	
		Gamma-Chlordane	1.1	U	ng/L	P347237	
		Endrin Ketone	2.2	U	ng/L	P347237	
		Dicofol	33	U	ng/L	P347237	
	EPA 8276	Chlordane	2.7	U	ng/L	P347237	
		Toxaphene	33	U	ng/L	P347237	
2002657	EPA 8270D	Alachlor	0.28	U	ng/L	P347579	
		Ametryn	0.36	U	ng/L	P347579	
		Atrazine	3.5		ng/L	P347579	
		Atrazine Desethyl	1.7	U	ng/L	P347579	
		Azinphos Methyl	2.5	U	ng/L	P347579	
		Bromacil	1.1	I	ng/L	P347579	
		Butylate	0.45	UJ	ng/L	P347579	MS, RPD
		Chlorpyrifos Ethyl	0.28	U	ng/L	P347579	
		Chlorpyrifos Methyl	0.11	U	ng/L	P347579	
		Demeton	2.2	U	ng/L	P347579	
		Diazinon	0.14	UJ	ng/L	P347579	MS
		Disulfoton	0.56	U	ng/L	P347579	

Field ID: G1SE0004

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2002657	EPA 8270D	EPTC	1.4	U	ng/L	P347579	
		Ethion	0.17	UJ	ng/L	P347579	MS
		Ethoprop	0.11	U	ng/L	P347579	
		Fenamiphos	0.28	UJ	ng/L	P347579	MS
		Fipronil	0.28	U	ng/L	P347579	
		Fipronil Sulfide	0.17	UJ	ng/L	P347579	LCS, MS, RPD
		Fipronil Sulfone	0.17	U	ng/L	P347579	
		Hexazinone	0.56	U	ng/L	P347579	
		Malathion	0.39	UJ	ng/L	P347579	MS
		Metribuzin	0.22	UJ	ng/L	P347579	RPD
		Mevinphos	0.56	U	ng/L	P347579	
		Molinate	0.34	U	ng/L	P347579	
		Norflurazon	0.56	UJ	ng/L	P347579	MS
		Pendimethalin	1.1	U	ng/L	P347579	
		Phorate	0.28	U	ng/L	P347579	
		Prometon	1.0	U	ng/L	P347579	
		Prometryn	0.22	UJ	ng/L	P347579	MS
		Simazine	0.56	U	ng/L	P347579	
		Terbufos	0.11	U	ng/L	P347579	
		Terbutylazine	0.48	UJ	ng/L	P347579	MS
		Fonofos	0.22	U	ng/L	P347579	
		Metalaxyl	0.28	U	ng/L	P347579	
		Metolachlor	0.28	U	ng/L	P347579	
		Acetochlor	0.28	U	ng/L	P347579	
		Cyanazine	0.56	UJ	ng/L	P347579	RPD
		Parathion Ethyl	0.28	U	ng/L	P347579	
		Parathion Methyl	0.28	U	ng/L	P347579	
2002658	EPA 200.7 Rev. 4.4	Calcium	14.7		mg/L	P347444	
		Iron	770		ug/L	P347444	
		Magnesium	5.70		mg/L	P347444	
		Potassium	13.8		mg/L	P347444	
		Sodium	19.3		mg/L	P347444	
		Zinc	5.4	I	ug/L	P347444	
	EPA 200.8 Rev. 5.4	Arsenic	0.93		ug/L	P347444	
		Cadmium	0.020	U	ug/L	P347444	
		Chromium	0.90	I	ug/L	P347444	
		Copper	0.71	I	ug/L	P347444	
		Lead	0.12	I	ug/L	P347444	
		Nickel	0.26	I	ug/L	P347444	
		Silver	0.010	U	ug/L	P347444	

Ref. Method and Comment:

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

EPA 8321B: Refer to the narrative for an explanation of QC Codes.

EPA 8270D: Refer to the narrative for an explanation of QC Codes. MS accuracies for Heptachlor Epoxide and Dieldrin not assessed due to high content of these parameters in the sample spiked.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P347295

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P347444

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P347444

Component	Result	Code	Units
Arsenic	0.050	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.20	U	ug/L
Lead	0.050	U	ug/L
Nickel	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347633

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347636

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347762

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348017

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347517

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347561

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347712

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347288

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347289

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

Reference Method: EPA 8270D
Batch ID: P347237

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D

Batch ID: P347237

Component	Result	Code	Units
Heptachlor Epoxide	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trifluralin	1.0	U	ng/L

Reference Method: EPA 8270D

Batch ID: P347579

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.32	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	2.2	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	0.50	U	ng/L
Demeton	2.0	U	ng/L
Diazinon	0.12	U	ng/L
Disulfoton	0.50	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.25	U	ng/L
Metolachlor	0.25	U	ng/L
Metribuzin	0.20	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.25	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbuthylazine	0.42	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P347237

Component	Result	Code	Units
Chlordane	2.6	I	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P346981

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P347114

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P347238

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCP	0.0020	U	ug/L
Methiocarb	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P347238

Component	Result	Code	Units
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P347344

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.10	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B
Batch ID: P347280

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P347843

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

Reference Method: SM 2540 C-97
Batch ID: P347649

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P347650

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P347563

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P347847

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 4500 F-C-97
Batch ID: P347847

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P347794

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P347444

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P347444

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	101		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	99.1		P	85 - 115
Copper	98.6		P	85 - 115
Lead	98.4		P	85 - 115
Nickel	100		P	85 - 115
Silver	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347633

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347636

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347762

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.1		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348017

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347517

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	94.9		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347288

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347289

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

Reference Method: EPA 8270D
Batch ID: P347237

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.4	43.2	P/P	24 - 89.0
Alpha-BHC	81.8	89.9	P/P	58 - 117
Alpha-Chlordane	78.0	74.1	P/P	56 - 115
Beta-BHC	96.1	105	P/P	55 - 137
Carbophenothion	84.0	94.5	P/P	37 - 145
Chlorothalonil	54.4	86.3	P/P	26 - 163
Cypermethrin	68.9	87.3	P/P	42 - 156
DDD-p,p'	94.9	91.2	P/P	59 - 129
DDE-p,p'	79.6	74.6	P/P	52 - 117
DDT-p,p'	85.7	110	P/P	48 - 128
Delta-BHC	112	110	P/P	59 - 158
Dicofol	83.1	78.1	P/P	19 - 124
Dieldrin	87.2	78.3	P/P	57 - 126
Endosulfan I	87.2	90.8	P/P	59 - 133
Endosulfan II	91.5	87.1	P/P	58 - 148
Endosulfan Sulfate	87.3	101	P/P	56 - 135
Endrin	96.6	94.1	P/P	50 - 140
Endrin Aldehyde	84.4	80.0	P/P	47 - 141
Endrin Ketone	83.6	92.9	P/P	63 - 123
Gamma-BHC	95.9	83.7	P/P	59 - 132
Gamma-Chlordane	75.6	71.5	P/P	55 - 112
Heptachlor	61.7	64.7	P/P	45 - 102
Heptachlor Epoxide	82.3	79.5	P/P	61 - 116
Methoxychlor	80.9	83.0	P/P	60 - 133
Mirex	56.8	64.2	P/P	40 - 98.0
Permethrin	75.4	95.2	P/P	45 - 131
Trifluralin	68.8	70.5	P/P	38 - 179

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P347579

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	76.2	86.4	P/P	74 - 119
Alachlor	75.7	83.4	P/P	75 - 118
Ametryn	68.8	91.9	P/P	59 - 137
Atrazine	79.2	87.2	P/P	73 - 120
Atrazine Desethyl	81.1	87.8	P/P	19 - 129
Azinphos Methyl	94.2	103	P/P	65 - 181
Bromacil	72.1	82.0	P/P	43 - 123
Butylate	43.6	53.0	P/P	28 - 85.0
Chlorpyrifos Ethyl	80.0	93.3	P/P	55 - 112
Chlorpyrifos Methyl	83.8	96.8	P/P	35 - 124
Cyanazine	151	148	P/P	26 - 262
Demeton	71.7	82.1	P/P	43 - 122
Diazinon	86.0	95.1	P/P	72 - 120
Disulfoton	92.0	96.2	P/P	45 - 137
EPTC	45.8	55.5	P/P	28 - 95.0
Ethion	76.6	92.0	P/P	63 - 127
Ethoprop	83.3	81.5	P/P	63 - 109
Fenamiphos	74.9	94.2	P/P	66 - 136
Fipronil	65.6	77.4	P/P	63 - 126
Fipronil Sulfide	55.9	65.6	F/P	59 - 123
Fipronil Sulfone	56.2	70.1	P/P	56 - 122
Fonofos	86.5	93.4	P/P	64 - 114
Hexazinone	90.5	104	P/P	49 - 144
Malathion	79.1	92.4	P/P	68 - 131
Metaxyl	72.3	82.4	P/P	57 - 126
Metolachlor	75.0	83.8	P/P	75 - 118
Metribuzin	105	115	P/P	46 - 169
Mevinphos	67.4	78.5	P/P	34 - 126
Molinate	54.6	62.2	P/P	37 - 101
Norflurazon	67.5	83.7	P/P	63 - 127
Parathion Ethyl	84.0	98.0	P/P	78 - 109
Parathion Methyl	87.0	100	P/P	74 - 123
Pendimethalin	97.5	112	P/P	51 - 130
Phorate	82.1	86.2	P/P	53 - 116
Prometon	68.0	78.6	P/P	66 - 124
Prometryn	75.3	85.0	P/P	66 - 124
Simazine	75.3	85.8	P/P	62 - 134
Terbufos	87.9	96.0	P/P	59 - 115
Terbutylazine	78.3	87.2	P/P	76 - 113

Reference Method: EPA 8276
Batch ID: P347237

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	102	85.7	P/P	47 - 125
Toxaphene	74.9	75.0	P/P	46 - 147

Reference Method: EPA 8321B
Batch ID: P346981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	76.0	87.4	P/P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P346981

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	93.2	95.3	P/P	30 - 150
Bentazon	83.3	88.9	P/P	30 - 150
Carbamazepine	90.2	93.1	P/P	40 - 150
Diuron	85.2	85.4	P/P	40 - 150
Fenuron	102	106	P/P	40 - 150
Fluridone	88.7	89.4	P/P	40 - 150
Hydrocodone	93.5	93.8	P/P	40 - 150
Imazapyr	87.9	90.6	P/P	40 - 150
Imidacloprid	98.6	101	P/P	40 - 160
Linuron	66.0	66.3	P/P	40 - 150
MCP	101	107	P/P	40 - 150
Primidone	90.8	95.4	P/P	40 - 150
Pyraclorobin	80.3	82.8	P/P	40 - 150
Triclopyr	95.0	101	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P347114

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	79.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P347238

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	104		P	40 - 150
3-Hydroxycarbofuran	94.2		P	40 - 150
Acetaminophen	108		P	30 - 150
Aldicarb	76.9		P	30 - 150
Aldicarb Sulfone	95.8		P	40 - 150
Aldicarb Sulfoxide	89.3		P	40 - 150
Bentazon	111		P	30 - 150
Carbamazepine	92.3		P	40 - 150
Carbaryl	76.0		P	40 - 150
Carbofuran	83.7		P	40 - 150
Diuron	85.7		P	40 - 150
Fenuron	106		P	40 - 150
Fluridone	89.0		P	40 - 150
Hydrocodone	101		P	40 - 150
Imazapyr	90.5		P	40 - 150
Imidacloprid	97.2		P	40 - 160
Linuron	63.6		P	40 - 150
MCP	118		P	40 - 150
Methiocarb	65.0		P	40 - 150
Methomyl	90.1		P	40 - 150
Oxamyl	98.9		P	40 - 150
Primidone	91.4		P	40 - 150
Propoxur	87.2		P	40 - 150
Pyraclorobin	87.4		P	40 - 150
Triclopyr	113		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P347344

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	46.7		P	40 - 140
AMPA	104		P	40 - 140
Endothall	131		P	40 - 140
Glufosinate	108		P	40 - 140
Glyphosate	111		P	40 - 140
Sucralose	71.0		P	40 - 150

Reference Method: SM 2320 B-97
Batch ID: P347843

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P347847

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P347794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P347444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002397	Calcium	103		P	80 - 120
2002397	Iron	105		P	80 - 120
2002397	Magnesium	109		P	80 - 120
2002397	Potassium	105		P	80 - 120
2002397	Sodium	108		P	80 - 120
2002397	Zinc	99.6		P	80 - 120
2002399	Calcium	101		P	80 - 120
2002399	Iron	105	104	P/P	80 - 120
2002399	Magnesium	109	105	P/P	80 - 120
2002399	Potassium	103	102	P/P	80 - 120
2002399	Sodium	107	104	P/P	80 - 120
2002399	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P347444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002397	Arsenic	101		P	80 - 120
2002397	Cadmium	102		P	80 - 120
2002397	Chromium	96.3		P	80 - 120
2002397	Copper	93.6		P	80 - 120
2002397	Lead	98.1		P	80 - 120
2002397	Nickel	96.2		P	80 - 120
2002397	Silver	102		P	80 - 120
2002399	Arsenic	101	100	P/P	80 - 120
2002399	Cadmium	103	101	P/P	80 - 120
2002399	Chromium	97.4	95.7	P/P	80 - 120
2002399	Copper	94.2	93.3	P/P	80 - 120
2002399	Lead	98.0	97.5	P/P	80 - 120
2002399	Nickel	97.1	95.8	P/P	80 - 120
2002399	Silver	101	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002586	Chloride	102		P	90 - 110
2002678	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347636

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002586	Sulfate	102		P	90 - 110
2002678	Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347762

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002680	Ammonia-N	98.1	96.6	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348017

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002589	Kjeldahl Nitrogen	91.9	94.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002589	NO2NO3-N	99.0	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002588	Total-P	93.1	90.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347712

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002682	Total-P	91.3	91.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347288

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002434	O-Phosphate-P	98.4	99.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347289

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002472	O-Phosphate-P	94.0	95.6	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P347237

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002188	Aldrin	55.9	61.0	P/P	26 - 96.0
2002188	Alpha-BHC	77.3	94.2	P/P	51 - 123
2002188	Alpha-Chlordane	67.1	81.8	P/P	45 - 120
2002188	Beta-BHC	79.0	101	P/P	43 - 146
2002188	Carbophenothion	77.8	97.3	P/P	26 - 179
2002188	Chlorothalonil	66.9	70.2	P/P	10 - 215
2002188	Cypermethrin	77.5	87.5	P/P	35 - 169
2002188	DDD-p,p'	74.3	89.5	P/P	49 - 131
2002188	DDE-p,p'	59.5	72.7	P/P	39 - 127
2002188	DDT-p,p'	76.6	91.9	P/P	49 - 120
2002188	Delta-BHC	89.0	114	P/P	49 - 187
2002188	Dicofol	70.7	83.3	P/P	10 - 129
2002188	Endosulfan I	79.1	89.4	P/P	57 - 130
2002188	Endosulfan II	95.2	109	P/P	52 - 148
2002188	Endosulfan Sulfate	72.2	86.2	P/P	55 - 129
2002188	Endrin	67.6	89.6	P/P	45 - 133

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P347237

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002188	Endrin Aldehyde	50.6	58.0	P/P	26 - 140
2002188	Endrin Ketone	79.8	97.0	P/P	60 - 125
2002188	Gamma-BHC	83.7	105	P/P	50 - 145
2002188	Gamma-Chlordane	64.3	79.1	P/P	44 - 118
2002188	Heptachlor	62.7	68.6	P/P	35 - 106
2002188	Methoxychlor	70.8	80.1	P/P	54 - 132
2002188	Mirex	56.4	62.4	P/P	36 - 107
2002188	Permethrin	76.3	89.8	P/P	47 - 135
2002188	Trifluralin	64.5	76.8	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P347579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002657	Acetochlor	105	108	P/P	67 - 125
2002657	Alachlor	87.8	98.8	P/P	69 - 123
2002657	Ametryn	71.1	88.3	P/P	52 - 151
2002657	Atrazine	114	106	P/P	71 - 125
2002657	Atrazine Desethyl	14.5	14.6	P/P	10 - 129
2002657	Azinphos Methyl	102	98.5	P/P	48 - 200
2002657	Bromacil	51.5	73.0	P/P	46 - 130
2002657	Butylate	68.8	95.4	P/F	10 - 85.0
2002657	Chlorpyrifos Ethyl	84.3	84.2	P/P	54 - 115
2002657	Chlorpyrifos Methyl	73.8	66.0	P/P	44 - 117
2002657	Cyanazine	86.1	118	P/P	10 - 262
2002657	Demeton	80.9	90.0	P/P	24 - 145
2002657	Diazinon	130	136	F/F	66 - 129
2002657	Disulfoton	81.8	74.5	P/P	45 - 139
2002657	EPTC	66.2	69.4	P/P	10 - 86.0
2002657	Ethion	57.7	53.3	F/F	59 - 133
2002657	Ethoprop	63.8	68.1	P/P	54 - 116
2002657	Fenamiphos	46.8	49.5	F/F	55 - 140
2002657	Fipronil	40.6	46.3	P/P	37 - 142
2002657	Fipronil Sulfide	15.0	20.3	F/F	37 - 130
2002657	Fipronil Sulfone	20.1	20.6	P/P	18 - 143
2002657	Fonofos	98.4	91.5	P/P	55 - 118
2002657	Hexazinone	98.3	111	P/P	62 - 140
2002657	Malathion	40.1	45.5	F/F	64 - 132
2002657	Metalaxyl	88.5	104	P/P	55 - 129
2002657	Metolachlor	105	116	P/P	56 - 137
2002657	Metribuzin	35.5	75.1	P/P	16 - 218
2002657	Mevinphos	79.3	94.0	P/P	34 - 129
2002657	Molinate	64.8	80.0	P/P	16 - 99.0
2002657	Norflurazon	26.0	32.0	F/F	43 - 135
2002657	Parathion Ethyl	82.2	93.6	P/P	71 - 112
2002657	Parathion Methyl	83.2	77.0	P/P	65 - 127
2002657	Pendimethalin	99.5	106	P/P	35 - 159
2002657	Phorate	94.3	118	P/P	41 - 129
2002657	Prometon	87.5	78.8	P/P	56 - 140
2002657	Prometryn	29.0	30.2	F/F	65 - 130
2002657	Simazine	85.2	101	P/P	54 - 148
2002657	Terbufos	110	105	P/P	53 - 126

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P347579

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002657	Terbutylazine	111	115	P/F	73 - 114

Reference Method: EPA 8276
Batch ID: P347237

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002223	Chlordane	110	68.2	P/P	41 - 134
2002223	Toxaphene	74.0	60.8	P/P	39 - 158

Reference Method: EPA 8321B
Batch ID: P347238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002653	3-Hydroxycarbofuran	48.5	49.6	P/P	40 - 150
2002653	Aldicarb	34.4	31.9	P/P	30 - 150
2002653	Aldicarb Sulfone	55.9	58.0	P/P	40 - 150
2002653	Aldicarb Sulfoxide	23.9	41.7	F/P	40 - 150
2002653	Carbaryl	39.6	40.7	F/P	40 - 150
2002653	Carbofuran	38.0	41.0	F/P	40 - 150
2002653	Methiocarb	45.1	40.2	P/P	40 - 150
2002653	Methomyl	42.7	50.5	P/P	40 - 150
2002653	Oxamyl	53.3	58.6	P/P	40 - 150
2002653	Propoxur	38.3	42.5	F/P	40 - 150
2003323	2,4-D	109	108	P/P	40 - 150
2003323	Acetaminophen	80.3	82.9	P/P	30 - 150
2003323	Bentazon	39.3	40.8	P/P	30 - 150
2003323	Carbamazepine	62.4	65.7	P/P	40 - 150
2003323	Diuron	59.4	62.2	P/P	40 - 150
2003323	Fenuron	70.3	71.6	P/P	40 - 150
2003323	Fluridone	79.7	77.6	P/P	40 - 150
2003323	Hydrocodone	80.5	80.8	P/P	40 - 150
2003323	Imazapyr	99.3	113	P/P	40 - 150
2003323	Imidacloprid	129	141	P/P	40 - 160
2003323	Linuron	57.2	51.2	P/P	40 - 150
2003323	MCPP	128	132	P/P	40 - 150
2003323	Primidone	79.5	74.8	P/P	40 - 150
2003323	Pyraclostrobin	77.7	82.2	P/P	40 - 150
2003323	Triclopyr	117	132	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P347344

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002654	Acesulfame K	35.0	35.2	F/F	40 - 140
2002654	AMPA	120	117	P/P	40 - 140
2002654	Endothall	109	121	P/P	40 - 140
2002654	Glufosinate	114	115	P/P	40 - 140
2002654	Glyphosate	113	118	P/P	40 - 140
2002654	Sucralose	44.2	45.2	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P347847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002468	Fluoride	96.8	97.3	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P347794

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2002588	Organic Carbon	98.3	99.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P347295

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002586	Turbidity	5.95	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P347444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002399	Calcium	1.34	Spike	P	0 - 20
2002399	Iron	1.21	Spike	P	0 - 20
2002399	Magnesium	2.10	Spike	P	0 - 20
2002399	Potassium	0.862	Spike	P	0 - 20
2002399	Sodium	1.38	Spike	P	0 - 20
2002399	Zinc	0.310	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P347444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002399	Arsenic	0.480	Spike	P	0 - 20
2002399	Cadmium	1.31	Spike	P	0 - 20
2002399	Chromium	1.70	Spike	P	0 - 20
2002399	Copper	0.927	Spike	P	0 - 20
2002399	Lead	0.538	Spike	P	0 - 20
2002399	Nickel	1.41	Spike	P	0 - 20
2002399	Silver	0.671	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002586	Chloride	2.15	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P347636

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002586	Sulfate	1.33	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P347762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002680	Ammonia-N	1.05	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P348017

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002589	Kjeldahl Nitrogen	1.80	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P347517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002589	NO2NO3-N	0.576	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002588	Total-P	2.23	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P347712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002682	Total-P	0.0267	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002434	O-Phosphate-P	0.667	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P347289

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002472	O-Phosphate-P	1.69	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P347237

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002188	Aldrin	8.70	Spike	P	0 - 30
2002188	Alpha-BHC	19.8	Spike	P	0 - 30
2002188	Alpha-Chlordane	15.0	Spike	P	0 - 30
2002188	Beta-BHC	24.5	Spike	P	0 - 30
2002188	Carbophenothion	22.2	Spike	P	0 - 30
2002188	Chlorothalonil	4.85	Spike	P	0 - 30
2002188	Cypermethrin	12.0	Spike	P	0 - 30
2002188	DDD-p,p'	18.6	Spike	P	0 - 30
2002188	DDE-p,p'	19.9	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P347237

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002188	DDT-p,p'	18.2	Spike	P	0 - 30
2002188	Delta-BHC	24.6	Spike	P	0 - 30
2002188	Dicofol	16.3	Spike	P	0 - 30
2002188	Dieldrin	16.8	Spike	P	0 - 30
2002188	Endosulfan I	12.2	Spike	P	0 - 30
2002188	Endosulfan II	13.2	Spike	P	0 - 30
2002188	Endosulfan Sulfate	17.6	Spike	P	0 - 30
2002188	Endrin	28.0	Spike	P	0 - 30
2002188	Endrin Aldehyde	13.6	Spike	P	0 - 30
2002188	Endrin Ketone	15.5	Spike	P	0 - 30
2002188	Gamma-BHC	22.5	Spike	P	0 - 30
2002188	Gamma-Chlordane	16.5	Spike	P	0 - 30
2002188	Heptachlor	9.12	Spike	P	0 - 30
2002188	Heptachlor Epoxide	16.5	Spike	P	0 - 30
2002188	Methoxychlor	12.4	Spike	P	0 - 30
2002188	Mirex	10.1	Spike	P	0 - 30
2002188	Permethrin	16.2	Spike	P	0 - 30
2002188	Trifluralin	17.4	Spike	P	0 - 30
LFB	Aldrin	7.18	LCS	P	0 - 30
LFB	Alpha-BHC	9.38	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.10	LCS	P	0 - 30
LFB	Beta-BHC	8.73	LCS	P	0 - 30
LFB	Carbophenothion	11.8	LCS	P	0 - 30
LFB	Chlorothalonil	45.4	LCS	F	0 - 30
LFB	Cypermethrin	23.6	LCS	P	0 - 30
LFB	DDD-p,p'	3.94	LCS	P	0 - 30
LFB	DDE-p,p'	6.54	LCS	P	0 - 30
LFB	DDT-p,p'	24.5	LCS	P	0 - 30
LFB	Delta-BHC	1.93	LCS	P	0 - 30
LFB	Dicofol	6.31	LCS	P	0 - 30
LFB	Dieldrin	10.7	LCS	P	0 - 30
LFB	Endosulfan I	4.11	LCS	P	0 - 30
LFB	Endosulfan II	5.00	LCS	P	0 - 30
LFB	Endosulfan Sulfate	14.8	LCS	P	0 - 30
LFB	Endrin	2.64	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.36	LCS	P	0 - 30
LFB	Endrin Ketone	10.6	LCS	P	0 - 30
LFB	Gamma-BHC	13.6	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.63	LCS	P	0 - 30
LFB	Heptachlor	4.71	LCS	P	0 - 30
LFB	Heptachlor Epoxide	3.54	LCS	P	0 - 30
LFB	Methoxychlor	2.52	LCS	P	0 - 30
LFB	Mirex	12.3	LCS	P	0 - 30
LFB	Permethrin	23.2	LCS	P	0 - 30
LFB	Trifluralin	2.43	LCS	P	0 - 30

Reference Method: EPA 8270D
Batch ID: P347579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P347579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002657	Acetochlor	3.33	Spike	P	0 - 30
2002657	Alachlor	11.8	Spike	P	0 - 30
2002657	Ametryn	21.6	Spike	P	0 - 30
2002657	Atrazine	3.83	Spike	P	0 - 30
2002657	Atrazine Desethyl	0.738	Spike	P	0 - 30
2002657	Azinphos Methyl	3.71	Spike	P	0 - 30
2002657	Bromacil	28.9	Spike	P	0 - 30
2002657	Butylate	32.3	Spike	F	0 - 30
2002657	Chlorpyrifos Ethyl	0.0994	Spike	P	0 - 30
2002657	Chlorpyrifos Methyl	11.2	Spike	P	0 - 30
2002657	Cyanazine	30.9	Spike	F	0 - 30
2002657	Demeton	10.6	Spike	P	0 - 30
2002657	Diazinon	4.06	Spike	P	0 - 30
2002657	Disulfoton	9.43	Spike	P	0 - 30
2002657	EPTC	4.78	Spike	P	0 - 30
2002657	Ethion	7.89	Spike	P	0 - 30
2002657	Ethoprop	6.54	Spike	P	0 - 30
2002657	Fenamiphos	5.65	Spike	P	0 - 30
2002657	Fipronil	13.0	Spike	P	0 - 30
2002657	Fipronil Sulfide	30.2	Spike	F	0 - 30
2002657	Fipronil Sulfone	2.09	Spike	P	0 - 30
2002657	Fonofos	7.36	Spike	P	0 - 30
2002657	Hexazinone	11.9	Spike	P	0 - 30
2002657	Malathion	12.8	Spike	P	0 - 30
2002657	Metalaxyl	16.4	Spike	P	0 - 30
2002657	Metolachlor	9.77	Spike	P	0 - 30
2002657	Metribuzin	71.7	Spike	F	0 - 30
2002657	Mevinphos	16.9	Spike	P	0 - 30
2002657	Molinate	21.0	Spike	P	0 - 30
2002657	Norflurazon	20.6	Spike	P	0 - 30
2002657	Parathion Ethyl	13.0	Spike	P	0 - 30
2002657	Parathion Methyl	7.75	Spike	P	0 - 30
2002657	Pendimethalin	6.37	Spike	P	0 - 30
2002657	Phorate	22.4	Spike	P	0 - 30
2002657	Prometon	10.5	Spike	P	0 - 30
2002657	Prometryn	4.27	Spike	P	0 - 30
2002657	Simazine	16.9	Spike	P	0 - 30
2002657	Terbufos	4.40	Spike	P	0 - 30
2002657	Terbuthylazine	3.35	Spike	P	0 - 30
LFB	Acetochlor	12.5	LCS	P	0 - 30
LFB	Alachlor	9.77	LCS	P	0 - 30
LFB	Ametryn	28.7	LCS	P	0 - 30
LFB	Atrazine	9.61	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.86	LCS	P	0 - 30
LFB	Azinphos Methyl	8.61	LCS	P	0 - 30
LFB	Bromacil	12.8	LCS	P	0 - 30
LFB	Butylate	19.4	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	15.3	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	14.3	LCS	P	0 - 30
LFB	Cyanazine	2.25	LCS	P	0 - 30
LFB	Demeton	13.5	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P347579

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Diazinon	10.0	LCS	P	0 - 30
LFB	Disulfoton	4.49	LCS	P	0 - 30
LFB	EPTC	19.3	LCS	P	0 - 30
LFB	Ethion	18.2	LCS	P	0 - 30
LFB	Ethoprop	2.21	LCS	P	0 - 30
LFB	Fenamiphos	22.8	LCS	P	0 - 30
LFB	Fipronil	16.5	LCS	P	0 - 30
LFB	Fipronil Sulfide	16.0	LCS	P	0 - 30
LFB	Fipronil Sulfone	21.9	LCS	P	0 - 30
LFB	Fonofos	7.61	LCS	P	0 - 30
LFB	Hexazinone	14.2	LCS	P	0 - 30
LFB	Malathion	15.5	LCS	P	0 - 30
LFB	Metaxyl	13.0	LCS	P	0 - 30
LFB	Metolachlor	11.1	LCS	P	0 - 30
LFB	Metribuzin	9.04	LCS	P	0 - 30
LFB	Mevinphos	15.1	LCS	P	0 - 30
LFB	Molinate	13.0	LCS	P	0 - 30
LFB	Norflurazon	21.5	LCS	P	0 - 30
LFB	Parathion Ethyl	15.5	LCS	P	0 - 30
LFB	Parathion Methyl	14.3	LCS	P	0 - 30
LFB	Pendimethalin	13.6	LCS	P	0 - 30
LFB	Phorate	4.94	LCS	P	0 - 30
LFB	Prometon	14.4	LCS	P	0 - 30
LFB	Prometryn	12.1	LCS	P	0 - 30
LFB	Simazine	13.0	LCS	P	0 - 30
LFB	Terbufos	8.87	LCS	P	0 - 30
LFB	Terbutylazine	10.7	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P347237

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002223	Chlordane	29.9	Spike	P	0 - 30
2002223	Toxaphene	19.6	Spike	P	0 - 30
LFB	Chlordane	17.0	LCS	P	0 - 30
LFB	Toxaphene	0.133	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P346981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	2,4-D	14.0	LCS	P	0 - 30
LFB	Acetaminophen	2.14	LCS	P	0 - 30
LFB	Bentazon	6.49	LCS	P	0 - 30
LFB	Carbamazepine	3.18	LCS	P	0 - 30
LFB	Diuron	0.178	LCS	P	0 - 30
LFB	Fenuron	3.12	LCS	P	0 - 30
LFB	Fluridone	0.762	LCS	P	0 - 30
LFB	Hydrocodone	0.316	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P346981

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Imazapyr	3.12	LCS	P	0 - 30
LFB	Imidacloprid	1.94	LCS	P	0 - 30
LFB	Linuron	0.344	LCS	P	0 - 30
LFB	MCPP	5.82	LCS	P	0 - 30
LFB	Primidone	4.95	LCS	P	0 - 30
LFB	Pyraclostrobin	3.03	LCS	P	0 - 30
LFB	Triclopyr	5.70	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P347114

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2001676	Sucralose	19.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P347238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002653	3-Hydroxycarbofuran	2.22	Spike	P	0 - 30
2002653	Aldicarb	7.38	Spike	P	0 - 30
2002653	Aldicarb Sulfone	3.73	Spike	P	0 - 30
2002653	Aldicarb Sulfoxide	54.2	Spike	F	0 - 30
2002653	Carbaryl	2.81	Spike	P	0 - 30
2002653	Carbofuran	7.81	Spike	P	0 - 30
2002653	Methiocarb	11.4	Spike	P	0 - 30
2002653	Methomyl	16.8	Spike	P	0 - 30
2002653	Oxamyl	9.54	Spike	P	0 - 30
2002653	Propoxur	10.4	Spike	P	0 - 30
2003323	2,4-D	0.495	Spike	P	0 - 30
2003323	Acetaminophen	3.25	Spike	P	0 - 30
2003323	Bentazon	2.66	Spike	P	0 - 30
2003323	Carbamazepine	4.22	Spike	P	0 - 30
2003323	Diuron	4.60	Spike	P	0 - 30
2003323	Fenuron	1.74	Spike	P	0 - 30
2003323	Fluridone	2.55	Spike	P	0 - 30
2003323	Hydrocodone	0.333	Spike	P	0 - 30
2003323	Imazapyr	2.32	Spike	P	0 - 30
2003323	Imidacloprid	7.45	Spike	P	0 - 30
2003323	Linuron	11.1	Spike	P	0 - 30
2003323	MCPP	2.77	Spike	P	0 - 30
2003323	Primidone	5.66	Spike	P	0 - 30
2003323	Pyraclostrobin	5.60	Spike	P	0 - 30
2003323	Triclopyr	11.9	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P347344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P347344

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002654	Acesulfame K	0.781	Spike	P	0 - 30
2002654	AMPA	2.84	Spike	P	0 - 30
2002654	Endothall	10.5	Spike	P	0 - 30
2002654	Glufosinate	0.965	Spike	P	0 - 30
2002654	Glyphosate	3.10	Spike	P	0 - 30
2002654	Sucralose	2.16	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P347280

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002587	Color (true)	0.750	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P347843

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002468	Total Alkalinity	1.01	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P347649

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002468	TDS	1.85	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P347650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002609	TDS	0.289	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P347847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002468	Fluoride	0.472	Spike	P	0 - 3.5

Reference Method: SM 5310 B-00
Batch ID: P347794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2002588	Organic Carbon	0.673	Spike	P	0 - 20

* 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: 2002647
Field Sample ID: G1SE0007

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	48.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	49.3	P	30 - 160
EPA 8321B	Diuron-d6	41.0	P	30 - 160
EPA 8321B	Primidone-d5	56.6	P	30 - 160
EPA 8321B	Sucralose-d6	48.3	P	40 - 160

Lab Sample ID: 2002648
Field Sample ID: G1SE0003

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	65.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	52.4	P	30 - 160
EPA 8321B	Diuron-d6	46.9	P	30 - 160
EPA 8321B	Primidone-d5	57.9	P	30 - 160
EPA 8321B	Sucralose-d6	60.6	P	40 - 160

Lab Sample ID: 2002649
Field Sample ID: G1SE0001

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	100	P	30 - 160
EPA 8321B	Acetaminophen-d4	67.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.9	P	30 - 160
EPA 8321B	Diuron-d6	46.6	P	30 - 160
EPA 8321B	Primidone-d5	56.8	P	30 - 160
EPA 8321B	Sucralose-d6	60.1	P	40 - 160

Lab Sample ID: 2002650
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	91.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	65.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.1	P	30 - 160
EPA 8321B	Diuron-d6	48.0	P	30 - 160
EPA 8321B	Primidone-d5	60.7	P	30 - 160
EPA 8321B	Sucralose-d6	67.9	P	40 - 160

Lab Sample ID: 2002651
Field Sample ID: G1SE0006

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	64.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.5	P	30 - 160
EPA 8321B	Diuron-d6	47.4	P	30 - 160
EPA 8321B	Primidone-d5	60.5	P	30 - 160
EPA 8321B	Sucralose-d6	50.9	P	40 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2002652
Field Sample ID: G1SE0014

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	62.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.0	P	30 - 160
EPA 8321B	Diuron-d6	49.0	P	30 - 160
EPA 8321B	Primidone-d5	56.3	P	30 - 160
EPA 8321B	Sucralose-d6	53.1	P	40 - 160

Lab Sample ID: 2002653
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	38.6	P	30 - 160

Lab Sample ID: 2002654
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	97.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	42.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	41.0	P	30 - 160
EPA 8321B	Diuron-d6	33.5	P	30 - 160
EPA 8321B	Endothall-d6	56.8	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	124	P	40 - 160
EPA 8321B	Primidone-d5	47.8	P	30 - 160
EPA 8321B	Sucralose-d6	53.6	P	40 - 160

Lab Sample ID: 2002655
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Glyphosate 13C 15N	116	P	40 - 160

Lab Sample ID: 2002656
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	71.4	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	59.0	P	34 - 101
EPA 8276	Decachlorobiphenyl	61.2	P	31 - 108
EPA 8276	PCNB	95.0	P	62 - 142

Lab Sample ID: 2002657
Field Sample ID: G1SE0004

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	117	P	71 - 126
EPA 8270D	Terbufos-d10	100	P	59 - 149

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A84757

Included Lab Sample IDs: 2002608, 2002609, 2002614, 2002617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	103	102	P/P	90 - 115
Color (true)	103	103	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84758

Included Lab Sample IDs: 2002612, 2002616, 2002619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	100	P/P	90 - 110
O-Phosphate-P	99.0	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A84759

Included Lab Sample IDs: 2002613

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	98.0	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A84760

Included Lab Sample IDs: 2002608, 2002609, 2002614, 2002617

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

Reference Method: EPA 8321B

Run ID: A84808

Included Lab Sample IDs: 2002654, 2002655

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	120	P/P	60 - 160
Glufosinate	99.1	119	P/P	60 - 160
Glyphosate	90.3	117	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A84826

Included Lab Sample IDs: 2002647, 2002648, 2002649, 2002650, 2002651, 2002652, 2002654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	84.4	97.9	P/P	60 - 160
Endothall	121	107	P/P	60 - 160
Sucralose	68.3	71.2	P/P	60 - 160
Sucralose	71.2	70.3	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A84842

Included Lab Sample IDs: 2002610, 2002611, 2002615, 2002618

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84847

Included Lab Sample IDs: 2002608, 2002609, 2002614, 2002617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	99.9	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	102	101	P/P	90 - 110
Sulfate	103	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84850

Included Lab Sample IDs: 2002658

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	104	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	104	104	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Sodium	102	104	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84937

Included Lab Sample IDs: 2002610, 2002611, 2002615, 2002618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	101	P/P	90 - 110
Ammonia-N	104	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84947

Included Lab Sample IDs: 2002658

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	96.8	94.4	P/P	90 - 110
Cadmium	96.3	94.8	P/P	90 - 110
Chromium	96.2	93.9	P/P	90 - 110
Copper	95.8	93.4	P/P	90 - 110
Lead	95.4	94.6	P/P	90 - 110
Nickel	94.8	92.5	P/P	90 - 110
Silver	97.4	95.9	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A84954

Included Lab Sample IDs: 2002610, 2002611, 2002615, 2002618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	96.4	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A84967

Included Lab Sample IDs: 2002656

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A84967

Included Lab Sample IDs: 2002656

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Toxaphene	95.3		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84968

Included Lab Sample IDs: 2002611, 2002615, 2002618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	99.8	P/P	90 - 110
Total-P	99.7	98.4	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84969

Included Lab Sample IDs: 2002608, 2002609, 2002614, 2002617

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: A84969

Included Lab Sample IDs: 2002608, 2002609, 2002614, 2002617

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84976

Included Lab Sample IDs: 2002610

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.0	96.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84988

Included Lab Sample IDs: 2002647, 2002648, 2002649, 2002650, 2002651, 2002652, 2002654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	103	P/P	50 - 150
2,4-D	113	121	P/P	50 - 150
2,4-D	121	108	P/P	50 - 150
3-Hydroxycarbofuran	107	104	P/P	50 - 150
Acetaminophen	119	103	P/P	60 - 160
Acetaminophen	122	124	P/P	60 - 160
Acetaminophen	122	119	P/P	60 - 160
Aldicarb	108	103	P/P	60 - 150
Aldicarb Sulfone	107	106	P/P	50 - 150
Aldicarb Sulfoxide	104	105	P/P	50 - 150
Bentazon	134	135	P/P	50 - 150
Bentazon	140	141	P/P	50 - 150
Bentazon	141	142	P/P	50 - 150
Carbamazepine	106	111	P/P	60 - 160
Carbamazepine	110	109	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84988

Included Lab Sample IDs: 2002647, 2002648, 2002649, 2002650, 2002651, 2002652, 2002654

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	111	99.4	P/P	60 - 160
Carbaryl	107	104	P/P	60 - 150
Carbofuran	108	103	P/P	50 - 150
Diuron	109	111	P/P	60 - 150
Diuron	111	98.1	P/P	60 - 150
Diuron	113	109	P/P	60 - 150
Fenuron	104	105	P/P	60 - 150
Fenuron	105	96.6	P/P	60 - 150
Fenuron	106	108	P/P	60 - 150
Fluridone	102	106	P/P	60 - 160
Fluridone	105	106	P/P	60 - 160
Fluridone	106	100	P/P	60 - 160
Hydrocodone	105	106	P/P	60 - 150
Hydrocodone	105	107	P/P	60 - 150
Hydrocodone	106	97.7	P/P	60 - 150
Imazapyr	100	93.5	P/P	50 - 150
Imazapyr	92.8	89.1	P/P	50 - 150
Imazapyr	98.7	92.8	P/P	50 - 150
Imidacloprid	93.3	96.7	P/P	60 - 150
Imidacloprid	94.1	93.3	P/P	60 - 150
Imidacloprid	98.4	102	P/P	60 - 150
Linuron	104	100	P/P	60 - 150
Linuron	95.8	80.8	P/P	60 - 150
Linuron	98.6	95.8	P/P	60 - 150
MCPP	118	124	P/P	50 - 150
MCPP	122	124	P/P	50 - 150
MCPP	124	116	P/P	50 - 150
Methiocarb	103	103	P/P	50 - 150
Methomyl	101	103	P/P	50 - 150
Oxamyl	107	106	P/P	50 - 150
Primidone	80.1	91.1	P/P	60 - 150
Primidone	93.5	96.8	P/P	60 - 150
Primidone	96.8	86.5	P/P	60 - 150
Propoxur	107	107	P/P	50 - 150
Pyraclostrobin	106	107	P/P	60 - 150
Pyraclostrobin	107	97.6	P/P	60 - 150
Pyraclostrobin	109	106	P/P	60 - 150
Triclopyr	111	113	P/P	50 - 160
Triclopyr	113	117	P/P	50 - 160
Triclopyr	119	113	P/P	50 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A85079

Included Lab Sample IDs: 2002610, 2002611, 2002615, 2002618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.5	91.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A85095

Included Lab Sample IDs: 2002656

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.0		P	80 - 120
Alpha-BHC	105		P	80 - 120
Alpha-Chlordane	98.2		P	80 - 120
Beta-BHC	95.3		P	80 - 120
Carbophenothion	97.8		P	80 - 120
Chlorothalonil	93.7		P	80 - 120
Cypermethrin	92.3		P	80 - 120
DDD-p,p'	105		P	80 - 120
DDE-p,p'	101		P	80 - 120
DDT-p,p'	111		P	80 - 120
Delta-BHC	95.4		P	80 - 120
Dicofol	109		P	80 - 120
Dieldrin	99.8		P	80 - 120
Endosulfan I	97.4		P	80 - 120
Endosulfan II	95.2		P	80 - 120
Endosulfan Sulfate	98.5		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	34.3*		F	80 - 120
Endrin Ketone	97.2		P	80 - 120
Gamma-BHC	105		P	80 - 120
Gamma-Chlordane	98.2		P	80 - 120
Heptachlor	96.6		P	80 - 120
Heptachlor Epoxide	99.3		P	80 - 120
Methoxychlor	101		P	80 - 120
Mirex	103		P	80 - 120
Permethrin	106		P	80 - 120
Trifluralin	97.8		P	80 - 120

Reference Method: EPA 8270D

Run ID: A85209

Included Lab Sample IDs: 2002657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	95.1		P	80 - 120
Alachlor	97.5		P	80 - 120
Ametryn	95.5		P	80 - 120
Atrazine	95.5		P	80 - 120
Atrazine Desethyl	99.5		P	80 - 120
Azinphos Methyl	98.0		P	80 - 120
Bromacil	94.4		P	80 - 120
Butylate	96.7		P	80 - 120
Chlorpyrifos Ethyl	95.2		P	80 - 120
Chlorpyrifos Methyl	96.9		P	80 - 120
Cyanazine	94.4		P	80 - 120
Demeton	103		P	80 - 120
Diazinon	95.1		P	80 - 120
Disulfoton	96.8		P	80 - 120
EPTC	98.5		P	80 - 120
Ethion	95.0		P	80 - 120
Ethoprop	91.8		P	80 - 120
Fenamiphos	93.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A85209

Included Lab Sample IDs: 2002657

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil	94.0		P	80 - 120
Fipronil Sulfide	91.8		P	80 - 120
Fipronil Sulfone	95.8		P	80 - 120
Fonofos	98.5		P	80 - 120
Hexazinone	96.7		P	80 - 120
Malathion	97.2		P	80 - 120
Metalaxyl	97.1		P	80 - 120
Metolachlor	100		P	80 - 120
Metribuzin	107		P	80 - 120
Mevinphos	94.2		P	80 - 120
Molinate	103		P	80 - 120
Norflurazon	91.7		P	80 - 120
Parathion Ethyl	93.5		P	80 - 120
Parathion Methyl	94.5		P	80 - 120
Pendimethalin	100		P	80 - 120
Phorate	97.6		P	80 - 120
Prometon	97.9		P	80 - 120
Prometryn	97.1		P	80 - 120
Simazine	98.1		P	80 - 120
Terbufos	96.7		P	80 - 120
Terbutylazine	95.2		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						5.95	
EPA 200.7 Rev. 4.4	Calcium	104		103	101			1.34
	Iron	104		105	105	104		1.21
	Magnesium	109		109	109	105		2.10
	Potassium	102		105	103	102		0.862
	Sodium	104		108	107	104		1.38
	Zinc	104		99.6	101	102		0.310
EPA 200.8 Rev. 5.4	Arsenic	101		101	101	100		0.480
	Cadmium	102		102	103	101		1.31
	Chromium	99.1		96.3	97.4	95.7		1.70
	Copper	98.6		93.6	94.2	93.3		0.927
	Lead	98.4		98.1	98.0	97.5		0.538
	Nickel	100		96.2	97.1	95.8		1.41
	Silver	103		102	101	101		0.671
EPA 300.0 Rev. 2.1	Chloride	100		102	99.7		2.15	
	Sulfate	102		102	99.9		1.33	
EPA 350.1 Rev. 2.0	Ammonia-N	98.1		98.1	96.6			1.05
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.6		91.9	94.2			1.80
EPA 353.2 Rev. 2.0	NO2NO3-N	102		99.0	100			0.576
EPA 365.1 Rev. 2.0	Total-P	94.8		93.1	90.8			2.23
	Total-P	94.9		91.3	91.3			0.0267
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		98.4	99.3			0.667
	O-Phosphate-P	97.9		94.0	95.6			1.69
EPA 8270D	Acetochlor	76.2	86.4	105	108	12.5		3.33
	Alachlor	75.7	83.4	87.8	98.8	9.77		11.8
	Aldrin	46.4	43.2	55.9	61.0	7.18		8.70
	Alpha-BHC	81.8	89.9	77.3	94.2	9.38		19.8
	Alpha-Chlordane	78.0	74.1	67.1	81.8	5.10		15.0
	Ametryn	68.8	91.9	71.1	88.3	28.7		21.6
	Atrazine	79.2	87.2	114	106	9.61		3.83
	Atrazine Desethyl	81.1	87.8	14.5	14.6	7.86		0.738
	Azinphos Methyl	94.2	103	102	98.5	8.61		3.71
	Beta-BHC	96.1	105	79.0	101	8.73		24.5
	Bromacil	72.1	82.0	51.5	73.0	12.8		28.9
	Butylate	43.6	53.0	68.8	95.4	19.4		32.3
	Carbophenothion	84.0	94.5	77.8	97.3	11.8		22.2
	Chlorothalonil	54.4	86.3	66.9	70.2	45.4		4.85
	Chlorpyrifos Ethyl	80.0	93.3	84.3	84.2	15.3		0.0994
	Chlorpyrifos Methyl	83.8	96.8	73.8	66.0	14.3		11.2
	Cyanazine	151	148	86.1	118	2.25		30.9
	Cypermethrin	68.9	87.3	77.5	87.5	23.6		12.0
	DDD-p,p'	94.9	91.2	74.3	89.5	3.94		18.6
	DDE-p,p'	79.6	74.6	59.5	72.7	6.54		19.9
	DDT-p,p'	85.7	110	76.6	91.9	24.5		18.2
	Delta-BHC	112	110	89.0	114	1.93		24.6
	Demeton	71.7	82.1	80.9	90.0	13.5		10.6
	Diazinon	86.0	95.1	130	136	10.0		4.06
	Dicofol	83.1	78.1	70.7	83.3	6.31		16.3
	Dieldrin	87.2	78.3			10.7		16.8
	Disulfoton	92.0	96.2	81.8	74.5	4.49		9.43
	Endosulfan I	87.2	90.8	79.1	89.4	4.11		12.2
	Endosulfan II	91.5	87.1	95.2	109	5.00		13.2
	Endosulfan Sulfate	87.3	101	72.2	86.2	14.8		17.6
	Endrin	96.6	94.1	67.6	89.6	2.64		28.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Endrin Aldehyde	84.4	80.0	50.6	58.0	5.36	13.6
	Endrin Ketone	83.6	92.9	79.8	97.0	10.6	15.5
	EPTC	45.8	55.5	66.2	69.4	19.3	4.78
	Ethion	76.6	92.0	57.7	53.3	18.2	7.89
	Ethoprop	83.3	81.5	63.8	68.1	2.21	6.54
	Fenamiphos	74.9	94.2	46.8	49.5	22.8	5.65
	Fipronil	65.6	77.4	40.6	46.3	16.5	13.0
	Fipronil Sulfide	55.9	65.6	15.0	20.3	16.0	30.2
	Fipronil Sulfone	56.2	70.1	20.1	20.6	21.9	2.09
	Fonofos	86.5	93.4	98.4	91.5	7.61	7.36
	Gamma-BHC	95.9	83.7	83.7	105	13.6	22.5
	Gamma-Chlordane	75.6	71.5	64.3	79.1	5.63	16.5
	Heptachlor	61.7	64.7	62.7	68.6	4.71	9.12
	Heptachlor Epoxide	82.3	79.5			3.54	16.5
	Hexazinone	90.5	104	98.3	111	14.2	11.9
	Malathion	79.1	92.4	40.1	45.5	15.5	12.8
	Metalaxyl	72.3	82.4	88.5	104	13.0	16.4
	Methoxychlor	80.9	83.0	70.8	80.1	2.52	12.4
	Metolachlor	75.0	83.8	105	116	11.1	9.77
	Metribuzin	105	115	35.5	75.1	9.04	71.7
	Mevinphos	67.4	78.5	79.3	94.0	15.1	16.9
	Mirex	56.8	64.2	56.4	62.4	12.3	10.1
	Molinate	54.6	62.2	64.8	80.0	13.0	21.0
	Norflurazon	67.5	83.7	26.0	32.0	21.5	20.6
	Parathion Ethyl	84.0	98.0	82.2	93.6	15.5	13.0
	Parathion Methyl	87.0	100	83.2	77.0	14.3	7.75
	Pendimethalin	97.5	112	99.5	106	13.6	6.37
	Permethrin	75.4	95.2	76.3	89.8	23.2	16.2
	Phorate	82.1	86.2	94.3	118	4.94	22.4
	Prometon	68.0	78.6	87.5	78.8	14.4	10.5
	Prometryn	75.3	85.0	29.0	30.2	12.1	4.27
	Simazine	75.3	85.8	85.2	101	13.0	16.9
	Terbufos	87.9	96.0	110	105	8.87	4.40
	Terbutylazine	78.3	87.2	111	115	10.7	3.35
	Trifluralin	68.8	70.5	64.5	76.8	2.43	17.4
EPA 8276	Chlordane	102	85.7	110	68.2	17.0	29.9
	Toxaphene	74.9	75.0	74.0	60.8	0.133	19.6
EPA 8321B	2,4-D	76.0	87.4			14.0	
	2,4-D	104		109	108		0.495
	3-Hydroxycarbofuran	94.2		48.5	49.6		2.22
	Acesulfame K	46.7		35.0	35.2		0.781
	Acetaminophen	95.3	93.2			2.14	
	Acetaminophen	108		82.9	80.3		3.25
	Aldicarb	76.9		34.4	31.9		7.38
	Aldicarb Sulfone	95.8		55.9	58.0		3.73
	Aldicarb Sulfoxide	89.3		23.9	41.7		54.2
	AMPA	104		120	117		2.84
	Bentazon	83.3	88.9			6.49	
	Bentazon	111		39.3	40.8		2.66
	Carbamazepine	93.1	90.2			3.18	
	Carbamazepine	92.3		65.7	62.4		4.22
	Carbaryl	76.0		39.6	40.7		2.81
	Carbofuran	83.7		38.0	41.0		7.81
	Diuron	85.2	85.4			0.178	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8321B	Diuron	85.7		62.2	59.4		4.60
	Endothall	131		109	121		10.5
	Fenuron	106	102			3.12	
	Fenuron	106		71.6	70.3		1.74
	Fluridone	88.7	89.4			0.762	
	Fluridone	89.0		77.6	79.7		2.55
	Glufosinate	108		114	115		0.965
	Glyphosate	111		113	118		3.10
	Hydrocodone	93.8	93.5			0.316	
	Hydrocodone	101		80.8	80.5		0.333
	Imazapyr	87.9	90.6			3.12	
	Imazapyr	90.5		113	99.3		2.32
	Imidacloprid	101	98.6			1.94	
	Imidacloprid	97.2		141	129		7.45
	Linuron	66.0	66.3			0.344	
	Linuron	63.6		51.2	57.2		11.1
	MCPP	101	107			5.82	
	MCPP	118		128	132		2.77
	Methiocarb	65.0		45.1	40.2		11.4
	Methomyl	90.1		42.7	50.5		16.8
	Oxamyl	98.9		53.3	58.6		9.54
	Primidone	95.4	90.8			4.95	
	Primidone	91.4		74.8	79.5		5.66
	Propoxur	87.2		38.3	42.5		10.4
	Pyraclostrobin	80.3	82.8			3.03	
	Pyraclostrobin	87.4		82.2	77.7		5.60
	Sucralose	79.2					19.8
	Sucralose	71.0		44.2	45.2		2.16
	Triclopyr	95.0	101			5.70	
	Triclopyr	113		117	132		11.9
SM 2120 B	Color (true)					0.750	
SM 2320 B-97	Total Alkalinity	103				1.01	
SM 2540 C-97	TDS					1.85	
	TDS					0.289	
SM 4500 F-C-97	Fluoride	98.8		96.8	97.3		0.472
SM 5310 B-00	Organic Carbon	97.5		98.3	99.2		0.673

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2002608, 2002609, 2002614, 2002617
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2002658
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2002658
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2002608, 2002609, 2002614, 2002617
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2002608, 2002609, 2002614, 2002617
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2002610, 2002611, 2002615, 2002618
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2002610, 2002611, 2002615, 2002618

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2002610, 2002611, 2002615, 2002618
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2002610, 2002611, 2002615, 2002618
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2002612, 2002613, 2002616, 2002619
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2002656
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	2002657
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2002656
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2002653
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2002647, 2002648, 2002649, 2002650, 2002651, 2002652, 2002654
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2002647, 2002648, 2002649, 2002650, 2002651, 2002652, 2002654, 2002655
SM 2120 B / E31780	True Color measured at 450 nm	2002608, 2002609, 2002614, 2002617
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2002608, 2002609, 2002614, 2002617
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2002608, 2002609, 2002614, 2002617
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2002608, 2002609, 2002614, 2002617
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2002608, 2002609, 2002614, 2002617
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2002610, 2002611, 2002615, 2002618

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	06/21/2018			06/21/2018 17:00	William L. Brown IV	2002608, 2002609, 2002614, 2002617
EPA 200.7 Rev. 4.4	06/21/2018	06/25/2018 14:00	Elliott D. Healy	06/26/2018 18:53	Betina Topolski	2002658
EPA 200.8 Rev. 5.4	06/21/2018	06/25/2018 14:00	Elliott D. Healy	06/29/2018 14:33	Robert K Palmer	2002658
EPA 300.0 Rev. 2.1	06/21/2018			06/26/2018 19:25	Lipi Saha	2002608
	06/21/2018			06/26/2018 19:37	Lipi Saha	2002609
	06/21/2018			06/26/2018 19:49	Lipi Saha	2002614
	06/21/2018			06/26/2018 20:25	Lipi Saha	2002617
EPA 350.1 Rev. 2.0	06/21/2018			06/29/2018 10:39	Julia Storbeck	2002610
	06/21/2018			06/29/2018 10:40	Julia Storbeck	2002615
	06/21/2018			06/29/2018 13:09	Julia Storbeck	2002611
	06/21/2018			06/29/2018 13:12	Julia Storbeck	2002618
EPA 351.2 Rev. 2.0	06/21/2018	07/06/2018 11:15	Adrian Shelby	07/09/2018 11:13	Joseph Suarez	2002610
	06/21/2018	07/06/2018 11:15	Adrian Shelby	07/09/2018 11:14	Joseph Suarez	2002611
	06/21/2018	07/06/2018 11:15	Adrian Shelby	07/09/2018 11:16	Joseph Suarez	2002615
	06/21/2018	07/06/2018 11:15	Adrian Shelby	07/09/2018 11:17	Joseph Suarez	2002618
EPA 353.2 Rev. 2.0	06/21/2018			06/26/2018 14:19	Lauren Bottorf	2002610
	06/21/2018			06/26/2018 14:20	Lauren Bottorf	2002611
	06/21/2018			06/26/2018 14:21	Lauren Bottorf	2002615
	06/21/2018			06/26/2018 14:22	Lauren Bottorf	2002618
EPA 365.1 Rev. 2.0	06/21/2018	06/26/2018 12:45	Sima Feizi	06/28/2018 13:57	Beverly Y. Sanders	2002610
	06/21/2018	06/28/2018 11:45	Sima Feizi	06/29/2018 12:25	Beverly Y. Sanders	2002611
	06/21/2018	06/28/2018 11:45	Sima Feizi	06/29/2018 12:27	Beverly Y. Sanders	2002618
	06/21/2018	06/28/2018 11:45	Sima Feizi	06/29/2018 13:02	Beverly Y. Sanders	2002615
EPA 365.1 Rev. 2.0 dissolved	06/21/2018			06/21/2018 15:22	Megan Treadwell	2002616
	06/21/2018			06/21/2018 15:57	Megan Treadwell	2002612
	06/21/2018			06/21/2018 15:59	Megan Treadwell	2002619
	06/21/2018			06/21/2018 17:08	Megan Treadwell	2002613
EPA 8270D	06/21/2018	06/22/2018 08:00	Fe-Val Siddell	07/06/2018 00:26	Dinesh Mishra	2002656
	06/21/2018	06/27/2018 07:48	Dinesh Mishra	06/29/2018 13:58	Vandana T. Nagar	2002657
EPA 8276	06/21/2018	06/22/2018 08:00	Fe-Val Siddell	06/30/2018 11:59	Dinesh Mishra	2002656
EPA 8321B	06/21/2018	06/21/2018 13:00	Hoor Shaik	07/02/2018 04:39	Juyoung Kim	2002647
	06/21/2018	06/21/2018 13:00	Hoor Shaik	07/02/2018 05:14	Juyoung Kim	2002648
	06/21/2018	06/21/2018 13:00	Hoor Shaik	07/03/2018 16:28	Juyoung Kim	2002647
	06/21/2018	06/21/2018 13:00	Hoor Shaik	07/03/2018 17:03	Juyoung Kim	2002648
	06/21/2018	06/25/2018 09:15	Mohammad Ghaffari	06/25/2018 10:00	Mohammad Ghaffari	2002654
	06/21/2018	06/25/2018 09:15	Mohammad Ghaffari	06/25/2018 10:11	Mohammad Ghaffari	2002655
	06/21/2018	06/25/2018 09:15	Mohammad Ghaffari	06/26/2018 01:29	Mohammad Ghaffari	2002654
	06/21/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 22:03	Mohammad Ghaffari	2002647
	06/21/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 22:22	Mohammad Ghaffari	2002648
	06/21/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 22:41	Mohammad Ghaffari	2002649

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	06/21/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 22:59	Mohammad Ghaffari	2002650
	06/21/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 23:18	Mohammad Ghaffari	2002651
	06/21/2018	06/25/2018 10:30	Juyoung Kim	06/25/2018 23:37	Mohammad Ghaffari	2002652
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 08:42	Juyoung Kim	2002653
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 11:35	Juyoung Kim	2002649
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 12:09	Juyoung Kim	2002650
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 12:44	Juyoung Kim	2002651
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 13:18	Juyoung Kim	2002652
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 14:32	Juyoung Kim	2002654
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 23:10	Juyoung Kim	2002649
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/02/2018 23:45	Juyoung Kim	2002650
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/03/2018 00:19	Juyoung Kim	2002651
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/03/2018 00:54	Juyoung Kim	2002652
	06/21/2018	06/27/2018 08:30	Hoor Shaik	07/03/2018 02:03	Juyoung Kim	2002654
SM 2120 B	06/21/2018			06/21/2018 15:30	Tanya Welborn	2002608
	06/21/2018			06/21/2018 15:37	Tanya Welborn	2002609
	06/21/2018			06/21/2018 15:38	Tanya Welborn	2002614, 2002617
SM 2320 B-97	06/21/2018			07/02/2018 03:53	Dale L. Simmons	2002608
	06/21/2018			07/02/2018 04:03	Dale L. Simmons	2002609
	06/21/2018			07/02/2018 04:13	Dale L. Simmons	2002614
	06/21/2018			07/02/2018 04:23	Dale L. Simmons	2002617
SM 2540 C-97	06/21/2018			06/22/2018 15:16	William L. Brown IV	2002608, 2002609, 2002614, 2002617
SM 2540 D-97	06/21/2018			06/22/2018 15:16	William L. Brown IV	2002608, 2002609, 2002614, 2002617
SM 4500 F-C-97	06/21/2018			07/02/2018 03:53	Dale L. Simmons	2002608
	06/21/2018			07/02/2018 04:03	Dale L. Simmons	2002609
	06/21/2018			07/02/2018 04:13	Dale L. Simmons	2002614
	06/21/2018			07/02/2018 04:23	Dale L. Simmons	2002617
SM 5310 B-00	06/21/2018			06/29/2018 19:36	Megan Treadwell	2002610
	06/21/2018			06/29/2018 19:51	Megan Treadwell	2002611
	06/21/2018			06/29/2018 20:06	Megan Treadwell	2002615
	06/21/2018			06/29/2018 20:22	Megan Treadwell	2002618