

Chemical Analysis Report

NW-DIST-2019-07-30-01

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

Event Description: **PACE RUN/Milton Run**
Request ID: **RQ-2019-07-29-13**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 23-AUG-2019 09:29

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: 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 by the Florida Department of Health Environmental Laboratory Certification Program 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: Jakes Bayou upstream of Robinson Point Rd Collection Date/Time: 07/29/2019 09:30

Field ID: G4NW0394

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106757	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P368158	
	EPA 300.0	Bromide	5.9		mg Br/L	P368406	
	EPA 300.0 Rev. 2.1	Sulfate	220		mg SO4/L	P368988	
	SM 2320 B-97	Total Alkalinity	17		mg CaCO3/L	P368559	
	SM 2540 D-97	TSS	2	I	mg/L	P368355	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P368562	
2106758	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P368747	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P368287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P368297	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I	mg P/L	P368211	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P368262	
2106759	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P368221	

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: Bucket Branch end of Bucket Creek Rd

Collection Date/Time: 07/29/2019 10:30

Field ID: G4NW0059

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106748	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P368158	
	EPA 300.0 Rev. 2.1	Chloride	4.4		mg Cl/L	P368401	
		Sulfate	0.65		mg SO4/L	P368403	
	SM 2120 B	Color (true)	36		PCU	P368172	
	SM 2320 B-97	Total Alkalinity	3.5		mg CaCO3/L	P368559	
	SM 2540 C-97	TDS	23	I	mg/L	P368578	
	SM 2540 D-97	TSS	2	U	mg/L	P368352	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P368562	
2106751	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P368745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P368288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P368380	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P368212	
	SM 5310 B-00	Organic Carbon	2.5		mg C/L	P368262	
2106754	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.006	I	mg P/L	P368215	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Manning Creek upstream of Manning Creek Rd Collection Date/Time: 07/29/2019 11:15

Field ID: G4NW0435

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106745	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P368158	
	EPA 300.0 Rev. 2.1	Chloride	5.2		mg Cl/L	P368401	
		Sulfate	0.55	I	mg SO4/L	P368403	
	SM 2120 B	Color (true)	18		PCU	P368172	
	SM 2320 B-97	Total Alkalinity	2.5		mg CaCO3/L	P368559	
	SM 2540 C-97	TDS	35		mg/L	P368578	
	SM 2540 D-97	TSS	3	I	mg/L	P368352	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P368562	
2106746	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P368745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25		mg N/L	P368288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.8		mg N/L	P368380	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P368212	
	SM 5310 B-00	Organic Carbon	1.9		mg C/L	P368262	
2106747	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P368215	
2106783	EPA 8321B	Aldicarb	0.020	U	ug/L	P367831	
		Aldicarb Sulfone	0.0020	U	ug/L	P367831	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P367831	
		Carbaryl	0.0020	U	ug/L	P367831	
		Carbofuran	0.0020	U	ug/L	P367831	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P367831	
		Methiocarb	0.0020	U	ug/L	P367831	
		Methomyl	0.0020	UJ	ug/L	P367831	MS, RPD
		Oxamyl	0.0020	U	ug/L	P367831	
		Propoxur	0.0020	U	ug/L	P367831	
2106784		Acesulfame K**	0.10	U	ug/L	P368170	
		2,4-D	0.0020	U	ug/L	P368092	MS
		AMPA**	0.10	U	ug/L	P368170	
		Sucralose**	0.026	I	ug/L	P368170	
		Acetaminophen**	0.0080	U	ug/L	P368092	
		Endothall**	0.25	U	ug/L	P368170	
		Acetamiprid**	0.0020	U	ug/L	P368092	
		Glufosinate**	0.10	U	ug/L	P368170	
		Glyphosate**	0.10	U	ug/L	P368170	
		Afidopyropen**	0.0020	UJ	ug/L	P368092	
		Bentazon	8.0E-04	U	ug/L	P368092	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P368092	
		Carbamazepine**	8.0E-04	U	ug/L	P368092	
		Clothianidin**	0.0020	U	ug/L	P368092	
		Dinotefuran**	0.0020	U	ug/L	P368092	
		Diuron	0.0020	U	ug/L	P368092	
		Fenuron	0.016	U	ug/L	P368092	
		Fluridone**	8.0E-04	U	ug/L	P368092	
		Imazapyr**	0.0040	U	ug/L	P368092	

Field ID: G4NW0435

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106784	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P368092	
		Ibuprofen**	0.020	U	ug/L	P368092	
		Imidacloprid	0.0020	U	ug/L	P368092	MS
		Linuron	0.0040	U	ug/L	P368092	
		Mandestrobin**	0.0020	UJ	ug/L	P368092	
		MCP	0.0020	UJ	ug/L	P368092	LCS, MS
		Naproxen**	0.0080	U	ug/L	P368092	MS
		Primidone**	0.0040	U	ug/L	P368092	
		Pyraclostrobin**	0.0020	U	ug/L	P368092	
		Thiamethoxam**	0.0020	U	ug/L	P368092	MS
		Tolfenpyrad**	0.0020	U	ug/L	P368092	
		Triclopyr**	0.0040	U	ug/L	P368092	
2106785	EPA 8270E	Aldrin	4.5	U	ng/L	P368067	
		Alpha-BHC	2.2	U	ng/L	P368067	MS
		Alpha-Chlordane	1.1	U	ng/L	P368067	
		Beta-BHC	11	UJ	ng/L	P368067	LCS, MS
		Bifenthrin**	4.5	U	ng/L	P368067	
		Delta-BHC	8.9	U	ng/L	P368067	
		Gamma-BHC	8.9	UJ	ng/L	P368067	LCS, MS
		Carbophenothion	11	U	ng/L	P368067	
		Chlorothalonil	2.2	U	ng/L	P368067	RPD
		Cis-Nonachlor**	1.1	U	ng/L	P368067	
		Cypermethrin	22	U	ng/L	P368067	
		DDD-p,p'	6.7	U	ng/L	P368067	
		DDE-p,p'	6.7	U	ng/L	P368067	
		DDT-p,p'	7.8	U	ng/L	P368067	
		Dicofol	33	U	ng/L	P368067	
		Dieldrin	4.5	U	ng/L	P368067	
		Endosulfan I	4.5	U	ng/L	P368067	
		Endosulfan II	4.5	U	ng/L	P368067	MS
		Endosulfan Sulfate	2.2	U	ng/L	P368067	
		Endrin	2.2	U	ng/L	P368067	
		Endrin Aldehyde	2.2	U	ng/L	P368067	
		Endrin Ketone	2.2	U	ng/L	P368067	
		Ethalfuralin**	3.3	U	ng/L	P368067	
		Gamma-Chlordane	1.1	U	ng/L	P368067	
		Heptachlor	1.7	U	ng/L	P368067	
		Heptachlor Epoxide	2.2	U	ng/L	P368067	
		Hexachlorobenzene	2.2	U	ng/L	P368067	
		Methoxychlor	4.5	U	ng/L	P368067	MS
		Mirex	2.2	U	ng/L	P368067	RPD
		Permethrin	11	U	ng/L	P368067	
		Trans-Nonachlor**	1.1	U	ng/L	P368067	
		Trifluralin	2.8	U	ng/L	P368067	
	EPA 8276	Chlordane	5.6	U	ng/L	P368067	

Field ID: G4NW0435

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106785	EPA 8276	Toxaphene	33	U	ng/L	P368067	
2106786	EPA 8270E	Acetochlor	0.27	U	ng/L	P368257	
		Alachlor	0.27	U	ng/L	P368257	
		Ametryn	0.66	U	ng/L	P368257	
		Atrazine	0.27	U	ng/L	P368257	
		Atrazine Desethyl	1.6	UJ	ng/L	P368257	
		Azinphos Methyl	5.5	U	ng/L	P368257	
		Bromacil	0.55	U	ng/L	P368257	
		Butylate	0.44	UJ	ng/L	P368257	RPD
		Chlorpyrifos Ethyl	0.27	U	ng/L	P368257	
		Chlorpyrifos Methyl	0.11	U	ng/L	P368257	
		Cyanazine	3.6	UJ	ng/L	P368257	
		Demeton	7.7	U	ng/L	P368257	
		Diazinon	0.14	U	ng/L	P368257	
		Dimethenamid**	0.11	U	ng/L	P368257	
		Disulfoton	0.55	U	ng/L	P368257	
		Dithiopyr**	0.11	U	ng/L	P368257	
		EPTC	1.4	UJ	ng/L	P368257	RPD
		Ethion	0.16	UJ	ng/L	P368257	LCS, RPD
		Ethoprop	0.11	U	ng/L	P368257	
		Fenamiphos	0.55	U	ng/L	P368257	
		Fipronil	0.27	U	ng/L	P368257	
		Fipronil Desulfinyl**	0.14	U	ng/L	P368257	
		Fipronil Sulfide	0.16	U	ng/L	P368257	
		Fipronil Sulfone	0.16	U	ng/L	P368257	
		Fonofos	0.22	U	ng/L	P368257	
		Hexazinone	1.7	I	ng/L	P368257	
		Malathion	0.38	U	ng/L	P368257	
		Metalaxyl	0.33	U	ng/L	P368257	
		Metolachlor	12		ng/L	P368257	
		Metribuzin	0.82	UJ	ng/L	P368257	RPD
		Mevinphos	0.55	U	ng/L	P368257	
		Molinate	0.33	UJ	ng/L	P368257	RPD
		Norflurazon	0.55	U	ng/L	P368257	
		Oxadiazon**	0.11	U	ng/L	P368257	
		Parathion Ethyl	0.27	U	ng/L	P368257	
		Parathion Methyl	0.60	U	ng/L	P368257	
		Pendimethalin	1.1	U	ng/L	P368257	
		Phorate	0.27	UJ	ng/L	P368257	
		Prodiamine**	0.19	UJ	ng/L	P368257	LCS, RPD
		Prometon	0.99	U	ng/L	P368257	
		Prometryn	0.22	U	ng/L	P368257	
		Simazine	0.55	U	ng/L	P368257	
		Tebuconazole**	0.55	UJ	ng/L	P368257	RPD
		Terbufos	0.11	U	ng/L	P368257	

Field ID: G4NW0435

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106786	EPA 8270E	Terbutylazine	0.47	U	ng/L	P368257	
2106787	EPA 200.7 Rev. 4.4	Barium	60.8		ug/L	P368250	
		Calcium	2.12		mg/L	P368250	
		Iron	260		ug/L	P368250	
		Magnesium	1.90		mg/L	P368250	
		Potassium	1.1	I	mg/L	P368250	
		Sodium	2.2		mg/L	P368250	
		Zinc	5.0	U	ug/L	P368250	
	EPA 200.8 Rev. 5.4	Aluminum	73		ug/L	P368250	
		Antimony	0.050	U	ug/L	P368250	
		Arsenic	0.23		ug/L	P368250	
		Boron**	11.8		ug/L	P368250	
		Cadmium	0.020	U	ug/L	P368250	
		Chromium	0.40	U	ug/L	P368250	
		Copper	0.43	I	ug/L	P368250	
		Lead	0.20	U	ug/L	P368250	
		Nickel	0.61	I	ug/L	P368250	
		Selenium	0.20	U	ug/L	P368250	
		Silver	0.010	U	ug/L	P368250	
		Thallium	0.10	U	ug/L	P368250	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis. MS accuracy for acetaminophen and imazapyr could not be assessed due to high concentration of parameter in the spiked sample. Refer to the narrative for an explanation of QC Codes.

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

Sample Location: Big Coldwater Creek (east fork) upstream of Springhill Rd

Collection Date/Time: 07/29/2019 12:00

Field ID: G4NW0434

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106749	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P368158	
	EPA 300.0 Rev. 2.1	Chloride	3.1		mg Cl/L	P368401	
		Sulfate	0.78		mg SO4/L	P368403	
	SM 2120 B	Color (true)	15		PCU	P368172	
	SM 2320 B-97	Total Alkalinity	1.5	I	mg CaCO3/L	P368559	
	SM 2540 C-97	TDS	17	I	mg/L	P368578	
	SM 2540 D-97	TSS	3	I	mg/L	P368352	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P368562	
2106752	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P368745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P368288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.32		mg N/L	P368380	
	EPA 365.1 Rev. 2.0	Total-P	0.003	I	mg P/L	P368212	
	SM 5310 B-00	Organic Carbon	1.6		mg C/L	P368262	
2106755	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P368215	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Pace Mill Creek upstream of Hwy 90

Collection Date/Time: 07/29/2019 13:10

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106750	EPA 180.1 Rev. 2.0	Turbidity	2.6	A	NTU	P368158	
	EPA 300.0 Rev. 2.1	Chloride	6.4		mg Cl/L	P368401	
		Sulfate	1.2		mg SO4/L	P368403	
	SM 2120 B	Color (true)	50		PCU	P368172	
	SM 2320 B-97	Total Alkalinity	11		mg CaCO3/L	P368559	
	SM 2540 C-97	TDS	39		mg/L	P368578	
	SM 2540 D-97	TSS	2	U	mg/L	P368352	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P368562	
2106753	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P368745	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		mg N/L	P368288	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.43		mg N/L	P368380	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P368212	
	SM 5310 B-00	Organic Carbon	2.9		mg C/L	P368262	
2106756	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P368216	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P368158

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P368250

Component	Result	Code	Units
Barium	1.0	U	ug/L
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: P368250

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0
Batch ID: P368406

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368401

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368403

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368988

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368745

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368747

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368287

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368297

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368380

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368211

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368212

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368215

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368216

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368221

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

Reference Method: EPA 8270E
Batch ID: P368067

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	10	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	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
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P368257

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	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	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	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	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P368067

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P367831

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

Reference Method: EPA 8321B
Batch ID: P368092

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P368170

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B
Batch ID: P368172

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P368559

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

Reference Method: SM 2540 C-97
Batch ID: P368578

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P368352

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P368355

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P368562

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P368262

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: P368250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.3		P	85 - 115
Calcium	105		P	85 - 115
Iron	103		P	85 - 115
Magnesium	110		P	85 - 115
Potassium	107		P	85 - 115
Sodium	107		P	85 - 115
Zinc	97.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P368250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	95.8		P	85 - 115
Arsenic	99.7		P	85 - 115
Boron	103		P	85 - 115
Cadmium	98.8		P	85 - 115
Chromium	94.4		P	85 - 115
Copper	97.1		P	85 - 115
Lead	94.5		P	85 - 115
Nickel	96.4		P	85 - 115
Selenium	100		P	85 - 115
Silver	96.3		P	85 - 115
Thallium	97.3		P	85 - 115

Reference Method: EPA 300.0
Batch ID: P368406

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368401

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	96.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368403

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368745

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368747

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368287

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368288

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368297

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368380

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368211

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368212

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.3		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368215

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P368216

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P368221

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.5		P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P368067

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	38.4	44.0	P/P	20 - 93.0
Alpha-BHC	102	113	P/P	57 - 119
Alpha-Chlordane	78.0	86.7	P/P	58 - 112
Beta-BHC	116	150	P/F	56 - 149
Bifenthrin	59.5	67.2	P/P	30 - 134
Carbophenothion	70.7	64.3	P/P	26 - 147
Chlorothalonil	131	133	P/P	20 - 155
Cis-Nonachlor	77.2	86.8	P/P	54 - 115
Cypermethrin	69.6	74.5	P/P	40 - 137
DDD-p,p'	91.0	100	P/P	65 - 129
DDE-p,p'	74.8	82.6	P/P	57 - 116
DDT-p,p'	100	106	P/P	53 - 133
Delta-BHC	133	152	P/P	59 - 163
Dicofol	94.4	99.0	P/P	24 - 138
Dieldrin	90.3	97.5	P/P	60 - 120
Endosulfan I	93.4	98.0	P/P	64 - 118
Endosulfan II	103	124	P/P	58 - 142
Endosulfan Sulfate	84.2	100	P/P	60 - 127
Endrin	116	92.7	P/P	59 - 122
Endrin Aldehyde	98.1	113	P/P	49 - 132
Endrin Ketone	82.5	95.5	P/P	64 - 121
Ethalfuralin	85.7	86.0	P/P	60 - 126
Gamma-BHC	137	146	P/F	56 - 141
Gamma-Chlordane	73.2	81.9	P/P	56 - 110
Heptachlor	62.8	73.5	P/P	46 - 96.0
Heptachlor Epoxide	87.4	95.8	P/P	61 - 112
Hexachlorobenzene	68.5	75.9	P/P	44 - 98.0
Methoxychlor	125	130	P/P	63 - 134
Mirex	45.9	51.6	P/P	45 - 100
Permethrin	55.5	60.2	P/P	53 - 115
Trans-Nonachlor	70.7	78.8	P/P	47 - 110
Trifluralin	91.0	96.4	P/P	39 - 142

Reference Method: EPA 8270E
 Batch ID: P368257

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	82.1	96.6	P/P	69 - 122
Alachlor	79.3	96.2	P/P	71 - 120
Ametryn	91.3	96.5	P/P	47 - 138

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P368257

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine	94.6	97.6	P/P	74 - 124
Atrazine Desethyl	73.6	67.2	P/P	38 - 138
Azinphos Methyl	102	112	P/P	69 - 154
Bromacil	84.4	77.1	P/P	39 - 121
Butylate	65.1	69.2	P/P	27 - 87.0
Chlorpyrifos Ethyl	84.3	97.6	P/P	69 - 118
Chlorpyrifos Methyl	90.4	94.7	P/P	70 - 120
Cyanazine	90.2	87.6	P/P	20 - 250
Demeton	83.0	67.5	P/P	39 - 118
Diazinon	95.0	94.9	P/P	68 - 127
Dimethenamid	84.0	93.9	P/P	66 - 125
Disulfoton	82.2	61.1	P/P	52 - 126
Dithiopyr	82.5	99.0	P/P	67 - 127
EPTC	60.9	73.0	P/P	24 - 88.0
Ethion	49.6	98.8	F/P	51 - 132
Ethoprop	93.2	81.4	P/P	58 - 117
Fenamiphos	78.1	83.9	P/P	38 - 139
Fipronil	82.8	90.1	P/P	61 - 124
Fipronil Desulfinyl	74.0	83.2	P/P	47 - 120
Fipronil Sulfide	82.2	84.8	P/P	56 - 119
Fipronil Sulfone	70.7	76.2	P/P	50 - 117
Fonofos	102	88.6	P/P	60 - 121
Hexazinone	84.4	102	P/P	55 - 137
Malathion	88.7	97.4	P/P	66 - 126
Metaxyl	84.8	92.6	P/P	33 - 140
Metolachlor	79.0	96.5	P/P	69 - 119
Metribuzin	127	87.2	P/P	31 - 238
Mevinphos	94.2	82.0	P/P	42 - 113
Molinate	68.2	81.1	P/P	32 - 96.0
Norflurazon	80.1	89.6	P/P	54 - 123
Oxadiazon	79.9	96.4	P/P	63 - 128
Parathion Ethyl	86.5	91.1	P/P	72 - 111
Parathion Methyl	99.5	97.2	P/P	74 - 126
Pendimethalin	75.0	83.4	P/P	61 - 131
Phorate	84.1	69.9	P/P	51 - 115
Prodiamine	28.6	72.2	F/P	38 - 144
Prometon	72.5	89.4	P/P	54 - 119
Prometryn	79.4	89.4	P/P	63 - 120
Simazine	106	99.7	P/P	75 - 126
Tebuconazole	27.8	65.4	P/P	20 - 119
Terbufos	99.2	81.1	P/P	64 - 116
Terbutylazine	89.9	94.1	P/P	73 - 117

Reference Method: EPA 8276
Batch ID: P368067

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.6	81.0	P/P	43 - 128
Toxaphene	58.6	59.5	P/P	38 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P367831

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	104		P	40 - 160
Aldicarb	88.1		P	30 - 160
Aldicarb Sulfone	101		P	40 - 160
Aldicarb Sulfoxide	55.1		P	40 - 160
Carbaryl	89.1		P	40 - 160
Carbofuran	101		P	40 - 160
Methiocarb	81.2		P	40 - 160
Methomyl	103		P	40 - 160
Oxamyl	106		P	40 - 160
Propoxur	90.0		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P368092

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	142		P	40 - 150
Acetaminophen	99.3		P	30 - 150
Acetamiprid	101		P	40 - 150
Afidopyropen	99.1		P	40 - 150
Bentazon	130		P	30 - 150
Benzovindiflupyr	98.3		P	40 - 150
Carbamazepine	102		P	40 - 150
Clothianidin	106		P	40 - 150
Dinotefuran	99.7		P	40 - 150
Diuron	106		P	40 - 150
Fenuron	111		P	40 - 150
Fluridone	105		P	40 - 150
Hydrocodone	105		P	40 - 150
Ibuprofen	100		P	30 - 150
Imazapyr	98.9		P	40 - 150
Imidacloprid	103		P	40 - 150
Linuron	70.1		P	40 - 150
Mandestrobin	102		P	40 - 150
MCPP	151		F	40 - 150
Naproxen	119		P	40 - 150
Primidone	100		P	40 - 150
Pyraclostrobin	87.5		P	30 - 150
Thiamethoxam	107		P	40 - 150
Tolfenpyrad	53.7		P	40 - 150
Triclopyr	121		P	30 - 150

Reference Method: EPA 8321B
Batch ID: P368170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	87.9		P	40 - 150
AMPA	83.4		P	40 - 150
Endothall	91.4		P	40 - 150
Glufosinate	70.1		P	40 - 150
Glyphosate	83.1		P	40 - 140
Sucralose	93.9		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P368172

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

Reference Method: SM 2320 B-97
Batch ID: P368559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P368562

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.4		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P368262

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P368250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106787	Barium	99.7	100	P/P	80 - 120
2106787	Calcium	104	104	P/P	80 - 120
2106787	Iron	103	103	P/P	80 - 120
2106787	Magnesium	108	108	P/P	80 - 120
2106787	Potassium	107	106	P/P	80 - 120
2106787	Sodium	101	102	P/P	80 - 120
2106787	Zinc	97.8	98.6	P/P	80 - 120
2107130	Barium	96.4		P	80 - 120
2107130	Calcium	99.0		P	80 - 120
2107130	Iron	101		P	80 - 120
2107130	Magnesium	103		P	80 - 120
2107130	Potassium	107		P	80 - 120
2107130	Sodium	107		P	80 - 120
2107130	Zinc	96.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P368250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106787	Aluminum	99.3	99.1	P/P	80 - 120
2106787	Antimony	96.1	94.8	P/P	80 - 120
2106787	Arsenic	101	100	P/P	80 - 120
2106787	Boron	102	101	P/P	80 - 120
2106787	Cadmium	100	99.6	P/P	80 - 120
2106787	Chromium	95.3	93.9	P/P	80 - 120
2106787	Copper	97.3	96.7	P/P	80 - 120
2106787	Lead	96.0	95.7	P/P	80 - 120
2106787	Nickel	96.0	96.5	P/P	80 - 120
2106787	Selenium	100	99.8	P/P	80 - 120
2106787	Silver	95.6	95.1	P/P	80 - 120
2106787	Thallium	99.7	100	P/P	80 - 120
2107130	Aluminum	101		P	80 - 120
2107130	Antimony	96.8		P	80 - 120
2107130	Arsenic	101		P	80 - 120
2107130	Boron	106		P	80 - 120
2107130	Cadmium	101		P	80 - 120
2107130	Chromium	93.4		P	80 - 120
2107130	Copper	96.7		P	80 - 120
2107130	Lead	94.6		P	80 - 120
2107130	Nickel	93.9		P	80 - 120
2107130	Selenium	102		P	80 - 120
2107130	Silver	96.2		P	80 - 120
2107130	Thallium	98.8		P	80 - 120

Reference Method: EPA 300.0
Batch ID: P368406

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106270	Bromide	96.8	96.6	P/P	90 - 110
2106631	Bromide	98.1		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368401

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106563	Chloride	98.2		P	90 - 110
2106794	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106563	Sulfate	103		P	90 - 110
2106794	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2108507	Sulfate	98.5	101	P/P	90 - 110
2108772	Sulfate	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368745

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106746	Ammonia-N	99.0	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368747

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106758	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106716	Kjeldahl Nitrogen	97.6	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368297

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106758	NO2NO3-N	96.8	96.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368380

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106670	NO2NO3-N	98.0	98.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368211

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106758	Total-P	98.6	98.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106670	Total-P	102	97.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368215

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106755	O-Phosphate-P	96.4	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106818	O-Phosphate-P	98.1	98.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106723	O-Phosphate-P	96.7	98.0	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P368067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106474	Aldrin	68.7	51.3	P/P	25 - 92.0
2106474	Alpha-BHC	147	129	F/P	49 - 130
2106474	Alpha-Chlordane	90.1	77.5	P/P	50 - 115
2106474	Beta-BHC	160	181	F/F	43 - 157
2106474	Bifenthrin	93.7	70.7	P/P	46 - 116
2106474	Carbophenothion	109	84.0	P/P	27 - 180
2106474	Chlorothalonil	117	70.5	P/P	10 - 216
2106474	Cis-Nonachlor	90.5	76.1	P/P	55 - 112
2106474	Cypermethrin	96.4	75.9	P/P	40 - 153
2106474	DDD-p,p'	104	96.7	P/P	53 - 128
2106474	DDE-p,p'	90.8	75.2	P/P	48 - 116
2106474	DDT-p,p'	126	107	P/P	47 - 128
2106474	Delta-BHC	193	181	P/P	51 - 196
2106474	Dicofol	101	109	P/P	10 - 147
2106474	Dieldrin	102	90.9	P/P	48 - 128
2106474	Endosulfan I	122	107	P/P	58 - 126
2106474	Endosulfan II	173	149	F/P	50 - 150
2106474	Endosulfan Sulfate	91.2	94.1	P/P	56 - 130
2106474	Endrin	122	110	P/P	50 - 126
2106474	Endrin Aldehyde	93.7	101	P/P	12 - 145
2106474	Endrin Ketone	94.7	96.3	P/P	59 - 132
2106474	Ethalfuralin	114	99.4	P/P	65 - 122
2106474	Gamma-BHC	152	174	P/F	50 - 155
2106474	Gamma-Chlordane	87.9	71.9	P/P	50 - 112
2106474	Heptachlor	79.0	62.0	P/P	41 - 98.0
2106474	Heptachlor Epoxide	95.9	88.4	P/P	55 - 117
2106474	Hexachlorobenzene	83.0	71.0	P/P	47 - 91.0
2106474	Methoxychlor	137	132	F/P	55 - 133

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P368067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106474	Mirex	70.6	50.8	P/P	44 - 101
2106474	Permethrin	78.5	59.4	P/P	52 - 124
2106474	Trans-Nonachlor	84.7	69.5	P/P	53 - 99.0
2106474	Trifluralin	109	93.7	P/P	10 - 201

Reference Method: EPA 8270E
Batch ID: P368257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106786	Acetochlor	89.3	82.8	P/P	63 - 129
2106786	Alachlor	92.4	85.2	P/P	65 - 127
2106786	Ametryn	91.1	93.7	P/P	40 - 164
2106786	Atrazine	96.4	92.4	P/P	66 - 135
2106786	Atrazine Desethyl	64.2	80.2	P/P	14 - 157
2106786	Azinphos Methyl	91.8	89.8	P/P	49 - 180
2106786	Bromacil	67.1	78.9	P/P	48 - 130
2106786	Butylate	49.3	76.1	P/P	10 - 94.0
2106786	Chlorpyrifos Ethyl	87.5	93.0	P/P	58 - 123
2106786	Chlorpyrifos Methyl	89.9	101	P/P	58 - 125
2106786	Cyanazine	115	140	P/P	24 - 253
2106786	Demeton	71.1	89.6	P/P	25 - 149
2106786	Diazinon	89.6	97.0	P/P	59 - 144
2106786	Dimethenamid	86.9	74.8	P/P	46 - 139
2106786	Disulfoton	76.8	90.2	P/P	54 - 132
2106786	Dithiopyr	90.9	82.4	P/P	64 - 130
2106786	EPTC	48.2	75.4	P/P	10 - 92.0
2106786	Ethion	93.2	57.0	P/P	30 - 148
2106786	Ethoprop	81.1	102	P/P	50 - 130
2106786	Fenamiphos	82.9	82.1	P/P	49 - 142
2106786	Fipronil	86.1	77.6	P/P	46 - 140
2106786	Fipronil Desulfinyl	78.4	70.2	P/P	30 - 121
2106786	Fipronil Sulfide	81.5	83.9	P/P	31 - 136
2106786	Fipronil Sulfone	79.6	73.5	P/P	16 - 136
2106786	Fonofos	84.8	108	P/P	55 - 129
2106786	Hexazinone	103	88.8	P/P	56 - 141
2106786	Malathion	89.0	95.5	P/P	56 - 135
2106786	Metaxyl	88.8	83.4	P/P	54 - 135
2106786	Metolachlor	93.3	79.7	P/P	51 - 140
2106786	Metribuzin	120	246	P/P	45 - 254
2106786	Mevinphos	78.3	97.3	P/P	33 - 131
2106786	Molinate	66.8	95.0	P/P	14 - 98.0
2106786	Norflurazon	86.8	78.9	P/P	34 - 136
2106786	Oxadiazon	85.6	81.8	P/P	67 - 116
2106786	Parathion Ethyl	86.5	88.7	P/P	66 - 118
2106786	Parathion Methyl	90.9	101	P/P	64 - 136
2106786	Pendimethalin	89.8	88.0	P/P	59 - 144
2106786	Phorate	78.2	86.4	P/P	42 - 130
2106786	Prodiamine	66.1	49.6	P/P	42 - 148
2106786	Prometon	81.2	78.4	P/P	59 - 134
2106786	Prometryn	86.8	81.8	P/P	54 - 135
2106786	Simazine	91.6	103	P/P	53 - 156
2106786	Tebuconazole	58.7	28.6	P/P	10 - 131

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P368257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106786	Terbufos	85.7	105	P/P	57 - 131
2106786	Terbutylazine	86.7	89.8	P/P	68 - 125

Reference Method: EPA 8276
 Batch ID: P368067

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106785	Chlordane	69.5	57.8	P/P	34 - 136
2106785	Toxaphene	47.0	42.1	P/P	22 - 152

Reference Method: EPA 8321B
 Batch ID: P367831

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106783	3-Hydroxycarbofuran	98.2	95.1	P/P	40 - 160
2106783	Aldicarb	66.4	75.9	P/P	30 - 160
2106783	Aldicarb Sulfone	85.5	90.3	P/P	40 - 160
2106783	Aldicarb Sulfoxide	44.6	41.9	P/P	40 - 160
2106783	Carbaryl	76.6	77.7	P/P	40 - 160
2106783	Carbofuran	87.3	82.7	P/P	40 - 160
2106783	Methiocarb	73.7	73.6	P/P	40 - 160
2106783	Methomyl	39.9	83.0	F/P	40 - 160
2106783	Oxamyl	67.8	90.1	P/P	40 - 160
2106783	Propoxur	80.9	75.3	P/P	40 - 160

Reference Method: EPA 8321B
 Batch ID: P368092

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106899	2,4-D	157	166	F/F	40 - 150
2106899	Acetamiprid	110	116	P/P	40 - 150
2106899	Afidopyropen	119	113	P/P	40 - 150
2106899	Bentazon	86.2	96.4	P/P	30 - 150
2106899	Benzovindiflupyr	105	100	P/P	40 - 150
2106899	Carbamazepine	98.7	99.8	P/P	40 - 150
2106899	Clothianidin	113	111	P/P	40 - 150
2106899	Dinotefuran	109	103	P/P	40 - 150
2106899	Diuron	89.1	87.8	P/P	40 - 150
2106899	Fenuron	97.8	95.7	P/P	40 - 150
2106899	Fluridone	100	96.2	P/P	40 - 150
2106899	Hydrocodone	110	109	P/P	40 - 150
2106899	Ibuprofen	90.6	92.1	P/P	30 - 150
2106899	Imidacloprid	177	172	F/F	40 - 150
2106899	Linuron	68.3	67.6	P/P	40 - 150
2106899	Mandestrobin	98.5	96.4	P/P	40 - 150
2106899	MCP	169	171	F/F	40 - 150
2106899	Naproxen	152	104	F/P	40 - 150
2106899	Primidone	109	105	P/P	40 - 150
2106899	Pyraclostrobin	96.9	92.5	P/P	30 - 150
2106899	Thiamethoxam	153	147	F/P	40 - 150
2106899	Tolfenpyrad	67.6	66.4	P/P	40 - 150
2106899	Triclopyr	134	137	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P368170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106299	Acesulfame K	117	96.4	P/P	40 - 150
2106299	AMPA	45.2	44.3	P/P	40 - 150
2106299	Endothall	81.6	83.0	P/P	40 - 150
2106299	Glufosinate	65.8	54.0	P/P	40 - 150
2106299	Glyphosate	61.9	63.2	P/P	40 - 140
2106299	Sucralose	104	94.9	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P368562

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106837	Fluoride	98.1	97.4	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P368262

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2106624	Organic Carbon	98.2	94.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P368158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106750	Turbidity	3.04	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P368250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106787	Barium	0.235	Spike	P	0 - 20
2106787	Calcium	0.241	Spike	P	0 - 20
2106787	Iron	0.178	Spike	P	0 - 20
2106787	Magnesium	0.315	Spike	P	0 - 20
2106787	Potassium	0.786	Spike	P	0 - 20
2106787	Sodium	0.547	Spike	P	0 - 20
2106787	Zinc	0.796	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P368250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106787	Aluminum	0.257	Spike	P	0 - 20
2106787	Antimony	1.38	Spike	P	0 - 20
2106787	Arsenic	0.771	Spike	P	0 - 20
2106787	Boron	0.695	Spike	P	0 - 20
2106787	Cadmium	0.439	Spike	P	0 - 20
2106787	Chromium	1.43	Spike	P	0 - 20
2106787	Copper	0.612	Spike	P	0 - 20
2106787	Lead	0.234	Spike	P	0 - 20
2106787	Nickel	0.494	Spike	P	0 - 20
2106787	Selenium	0.382	Spike	P	0 - 20
2106787	Silver	0.567	Spike	P	0 - 20
2106787	Thallium	0.434	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P368406

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106270	Bromide	0.0964	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368401

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106563	Chloride	0.162	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106563	Sulfate	0.380	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P368988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2108507	Sulfate	2.22	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368745

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106746	Ammonia-N	0.639	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P368747

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106758	Ammonia-N	1.03	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106716	Kjeldahl Nitrogen	4.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P368288

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106679	Kjeldahl Nitrogen	2.62	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368297

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106758	NO2NO3-N	0.518	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P368380

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106670	NO2NO3-N	0.267	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368211

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106758	Total-P	0.375	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P368212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106670	Total-P	4.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106755	O-Phosphate-P	0.396	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106818	O-Phosphate-P	0.102	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P368221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106723	O-Phosphate-P	1.34	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P368067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106474	Aldrin	28.9	Spike	P	0 - 30
2106474	Alpha-BHC	12.9	Spike	P	0 - 30
2106474	Alpha-Chlordane	15.0	Spike	P	0 - 30
2106474	Beta-BHC	12.4	Spike	P	0 - 30
2106474	Bifenthrin	27.9	Spike	P	0 - 30
2106474	Carbophenothion	26.1	Spike	P	0 - 30
2106474	Chlorothalonil	49.8	Spike	F	0 - 30
2106474	Cis-Nonachlor	17.3	Spike	P	0 - 30
2106474	Cypermethrin	23.8	Spike	P	0 - 30
2106474	DDD-p,p'	7.39	Spike	P	0 - 30
2106474	DDE-p,p'	18.8	Spike	P	0 - 30
2106474	DDT-p,p'	16.8	Spike	P	0 - 30
2106474	Delta-BHC	5.94	Spike	P	0 - 30
2106474	Dicofol	8.30	Spike	P	0 - 30
2106474	Dieldrin	11.6	Spike	P	0 - 30
2106474	Endosulfan I	13.2	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P368067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106474	Endosulfan II	14.8	Spike	P	0 - 30
2106474	Endosulfan Sulfate	3.21	Spike	P	0 - 30
2106474	Endrin	11.0	Spike	P	0 - 30
2106474	Endrin Aldehyde	7.40	Spike	P	0 - 30
2106474	Endrin Ketone	1.65	Spike	P	0 - 30
2106474	Ethalfuralin	14.1	Spike	P	0 - 30
2106474	Gamma-BHC	13.4	Spike	P	0 - 30
2106474	Gamma-Chlordane	20.0	Spike	P	0 - 30
2106474	Heptachlor	24.1	Spike	P	0 - 30
2106474	Heptachlor Epoxide	8.17	Spike	P	0 - 30
2106474	Hexachlorobenzene	15.6	Spike	P	0 - 30
2106474	Methoxychlor	3.58	Spike	P	0 - 30
2106474	Mirex	32.6	Spike	F	0 - 30
2106474	Permethrin	27.8	Spike	P	0 - 30
2106474	Trans-Nonachlor	19.6	Spike	P	0 - 30
2106474	Trifluralin	15.3	Spike	P	0 - 30
LFB	Aldrin	13.6	LCS	P	0 - 30
LFB	Alpha-BHC	10.1	LCS	P	0 - 30
LFB	Alpha-Chlordane	10.6	LCS	P	0 - 30
LFB	Beta-BHC	26.1	LCS	P	0 - 30
LFB	Bifenthrin	12.2	LCS	P	0 - 30
LFB	Carbophenothion	9.52	LCS	P	0 - 30
LFB	Chlorothalonil	1.13	LCS	P	0 - 30
LFB	Cis-Nonachlor	11.8	LCS	P	0 - 30
LFB	Cypermethrin	6.78	LCS	P	0 - 30
LFB	DDD-p,p'	9.44	LCS	P	0 - 30
LFB	DDE-p,p'	9.92	LCS	P	0 - 30
LFB	DDT-p,p'	5.82	LCS	P	0 - 30
LFB	Delta-BHC	13.7	LCS	P	0 - 30
LFB	Dicofol	4.82	LCS	P	0 - 30
LFB	Dieldrin	7.75	LCS	P	0 - 30
LFB	Endosulfan I	4.81	LCS	P	0 - 30
LFB	Endosulfan II	18.5	LCS	P	0 - 30
LFB	Endosulfan Sulfate	17.3	LCS	P	0 - 30
LFB	Endrin	22.5	LCS	P	0 - 30
LFB	Endrin Aldehyde	13.8	LCS	P	0 - 30
LFB	Endrin Ketone	14.5	LCS	P	0 - 30
LFB	Ethalfuralin	0.329	LCS	P	0 - 30
LFB	Gamma-BHC	5.95	LCS	P	0 - 30
LFB	Gamma-Chlordane	11.2	LCS	P	0 - 30
LFB	Heptachlor	15.7	LCS	P	0 - 30
LFB	Heptachlor Epoxide	9.20	LCS	P	0 - 30
LFB	Hexachlorobenzene	10.4	LCS	P	0 - 30
LFB	Methoxychlor	3.65	LCS	P	0 - 30
LFB	Mirex	11.9	LCS	P	0 - 30
LFB	Permethrin	8.08	LCS	P	0 - 30
LFB	Trans-Nonachlor	10.8	LCS	P	0 - 30
LFB	Trifluralin	5.81	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P368257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106786	Acetochlor	7.63	Spike	P	0 - 30
2106786	Alachlor	8.09	Spike	P	0 - 30
2106786	Ametryn	2.76	Spike	P	0 - 30
2106786	Atrazine	4.16	Spike	P	0 - 30
2106786	Atrazine Desethyl	22.2	Spike	P	0 - 30
2106786	Azinphos Methyl	2.18	Spike	P	0 - 30
2106786	Bromacil	16.3	Spike	P	0 - 30
2106786	Butylate	42.7	Spike	F	0 - 30
2106786	Chlorpyrifos Ethyl	6.12	Spike	P	0 - 30
2106786	Chlorpyrifos Methyl	11.7	Spike	P	0 - 30
2106786	Cyanazine	19.5	Spike	P	0 - 30
2106786	Demeton	23.0	Spike	P	0 - 30
2106786	Diazinon	7.94	Spike	P	0 - 30
2106786	Dimethenamid	15.0	Spike	P	0 - 30
2106786	Disulfoton	16.1	Spike	P	0 - 30
2106786	Dithiopyr	9.76	Spike	P	0 - 30
2106786	EPTC	44.0	Spike	F	0 - 30
2106786	Ethion	48.2	Spike	F	0 - 30
2106786	Ethoprop	22.6	Spike	P	0 - 30
2106786	Fenamiphos	1.01	Spike	P	0 - 30
2106786	Fipronil	10.4	Spike	P	0 - 30
2106786	Fipronil Desulfinyl	11.0	Spike	P	0 - 30
2106786	Fipronil Sulfide	2.87	Spike	P	0 - 30
2106786	Fipronil Sulfone	8.02	Spike	P	0 - 30
2106786	Fonofos	23.7	Spike	P	0 - 30
2106786	Hexazinone	13.3	Spike	P	0 - 30
2106786	Malathion	6.99	Spike	P	0 - 30
2106786	Metalaxyl	6.19	Spike	P	0 - 30
2106786	Metolachlor	7.47	Spike	P	0 - 30
2106786	Metribuzin	69.0	Spike	F	0 - 30
2106786	Mevinphos	21.6	Spike	P	0 - 30
2106786	Molinate	34.9	Spike	F	0 - 30
2106786	Norflurazon	9.55	Spike	P	0 - 30
2106786	Oxadiazon	4.56	Spike	P	0 - 30
2106786	Parathion Ethyl	2.46	Spike	P	0 - 30
2106786	Parathion Methyl	10.4	Spike	P	0 - 30
2106786	Pendimethalin	1.98	Spike	P	0 - 30
2106786	Phorate	10.0	Spike	P	0 - 30
2106786	Prodiamine	28.5	Spike	P	0 - 30
2106786	Prometon	3.58	Spike	P	0 - 30
2106786	Prometryn	5.95	Spike	P	0 - 30
2106786	Simazine	11.5	Spike	P	0 - 30
2106786	Tebuconazole	68.8	Spike	F	0 - 30
2106786	Terbufos	20.4	Spike	P	0 - 30
2106786	Terbutylazine	3.52	Spike	P	0 - 30
LFB	Acetochlor	16.3	LCS	P	0 - 30
LFB	Alachlor	19.2	LCS	P	0 - 30
LFB	Ametryn	5.61	LCS	P	0 - 30
LFB	Atrazine	3.12	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.05	LCS	P	0 - 30
LFB	Azinphos Methyl	8.94	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P368257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Bromacil	8.94	LCS	P	0 - 30
LFB	Butylate	6.13	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	14.6	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.63	LCS	P	0 - 30
LFB	Cyanazine	2.90	LCS	P	0 - 30
LFB	Demeton	20.6	LCS	P	0 - 30
LFB	Diazinon	0.126	LCS	P	0 - 30
LFB	Dimethenamid	11.1	LCS	P	0 - 30
LFB	Disulfoton	29.5	LCS	P	0 - 30
LFB	Dithiopyr	18.1	LCS	P	0 - 30
LFB	EPTC	18.2	LCS	P	0 - 30
LFB	Ethion	66.3	LCS	F	0 - 30
LFB	Ethoprop	13.5	LCS	P	0 - 30
LFB	Fenamiphos	7.26	LCS	P	0 - 30
LFB	Fipronil	8.45	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	11.6	LCS	P	0 - 30
LFB	Fipronil Sulfide	3.13	LCS	P	0 - 30
LFB	Fipronil Sulfone	7.37	LCS	P	0 - 30
LFB	Fonofos	14.1	LCS	P	0 - 30
LFB	Hexazinone	18.6	LCS	P	0 - 30
LFB	Malathion	9.39	LCS	P	0 - 30
LFB	Metaxyl	8.72	LCS	P	0 - 30
LFB	Metolachlor	20.0	LCS	P	0 - 30
LFB	Metribuzin	37.3	LCS	F	0 - 30
LFB	Mevinphos	13.9	LCS	P	0 - 30
LFB	Molinate	17.2	LCS	P	0 - 30
LFB	Norflurazon	11.1	LCS	P	0 - 30
LFB	Oxadiazon	18.7	LCS	P	0 - 30
LFB	Parathion Ethyl	5.17	LCS	P	0 - 30
LFB	Parathion Methyl	2.32	LCS	P	0 - 30
LFB	Pendimethalin	10.6	LCS	P	0 - 30
LFB	Phorate	18.5	LCS	P	0 - 30
LFB	Prodiamine	86.6	LCS	F	0 - 30
LFB	Prometon	20.9	LCS	P	0 - 30
LFB	Prometryn	11.9	LCS	P	0 - 30
LFB	Simazine	5.94	LCS	P	0 - 30
LFB	Tebuconazole	80.6	LCS	F	0 - 30
LFB	Terbufos	20.0	LCS	P	0 - 30
LFB	Terbutylazine	4.67	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P368067

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106785	Chlordane	18.3	Spike	P	0 - 30
2106785	Toxaphene	11.0	Spike	P	0 - 30
LFB	Chlordane	4.35	LCS	P	0 - 30
LFB	Toxaphene	1.51	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P367831

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106783	3-Hydroxycarbofuran	3.27	Spike	P	0 - 30
2106783	Aldicarb	13.4	Spike	P	0 - 30
2106783	Aldicarb Sulfone	5.37	Spike	P	0 - 30
2106783	Aldicarb Sulfoxide	6.25	Spike	P	0 - 30
2106783	Carbaryl	1.34	Spike	P	0 - 30
2106783	Carbofuran	5.42	Spike	P	0 - 30
2106783	Methiocarb	0.105	Spike	P	0 - 30
2106783	Methomyl	70.1	Spike	F	0 - 30
2106783	Oxamyl	28.2	Spike	P	0 - 30
2106783	Propoxur	7.23	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P368092

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106899	2,4-D	4.29	Spike	P	0 - 30
2106899	Acetaminophen	3.93	Spike	P	0 - 30
2106899	Acetamiprid	5.14	Spike	P	0 - 30
2106899	Afidopyropen	5.70	Spike	P	0 - 30
2106899	Bentazon	9.68	Spike	P	0 - 30
2106899	Benzovindiflupyr	4.33	Spike	P	0 - 30
2106899	Carbamazepine	1.09	Spike	P	0 - 30
2106899	Clothianidin	1.69	Spike	P	0 - 30
2106899	Dinotefuran	5.37	Spike	P	0 - 30
2106899	Diuron	1.17	Spike	P	0 - 30
2106899	Fenuron	2.12	Spike	P	0 - 30
2106899	Fluridone	2.74	Spike	P	0 - 30
2106899	Hydrocodone	0.561	Spike	P	0 - 30
2106899	Ibuprofen	1.43	Spike	P	0 - 30
2106899	Imazapyr	0.286	Spike	P	0 - 30
2106899	Imidacloprid	2.78	Spike	P	0 - 30
2106899	Linuron	0.969	Spike	P	0 - 30
2106899	Mandestrobin	2.19	Spike	P	0 - 30
2106899	MCPP	0.649	Spike	P	0 - 30
2106899	Naproxen	26.9	Spike	P	0 - 30
2106899	Primidone	4.14	Spike	P	0 - 30
2106899	Pyraclostrobin	4.59	Spike	P	0 - 30
2106899	Thiamethoxam	3.76	Spike	P	0 - 30
2106899	Tolfenpyrad	1.79	Spike	P	0 - 30
2106899	Triclopyr	1.84	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P368170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106299	Acesulfame K	19.1	Spike	P	0 - 30
2106299	AMPA	1.29	Spike	P	0 - 30
2106299	Endothall	1.76	Spike	P	0 - 30
2106299	Glufosinate	19.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P368170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106299	Glyphosate	1.36	Spike	P	0 - 30
2106299	Sucralose	9.13	Spike	P	0 - 30

Reference Method: SM 2120 B
 Batch ID: P368172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106794	Color (true)	1.12	Sample	P	0 - 20

Reference Method: SM 2320 B-97
 Batch ID: P368559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106837	Total Alkalinity	0.515	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
 Batch ID: P368578

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106794	TDS	1.83	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
 Batch ID: P368562

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106837	Fluoride	0.473	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
 Batch ID: P368262

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106624	Organic Carbon	3.81	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: 2106783
Field Sample ID: G4NW0435

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	77.5	P	30 - 160

Lab Sample ID: 2106784
Field Sample ID: G4NW0435

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	134	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	96.5	P	30 - 160
EPA 8321B	Diuron-d6	94.8	P	30 - 160
EPA 8321B	Endothall-d6	88.3	P	30 - 160
EPA 8321B	Endothall-d6	88.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	91.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.8	P	30 - 160
EPA 8321B	Primidone-d5	81.5	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	30 - 160
EPA 8321B	Sucralose-d6	122	P	30 - 160

Lab Sample ID: 2106785
Field Sample ID: G4NW0435

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	61.5	P	39 - 109
EPA 8270E	Tetrachloro-m-xylene	58.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	42.0	P	30 - 103
EPA 8276	PCNB	81.8	P	37 - 143

Lab Sample ID: 2106786
Field Sample ID: G4NW0435

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	111	P	68 - 130
EPA 8270E	Terbufos-d10	106	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A93137

Included Lab Sample IDs: 2106745, 2106748, 2106749, 2106750, 2106757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	100	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A93142

Included Lab Sample IDs: 2106745, 2106748, 2106749, 2106750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A93147

Included Lab Sample IDs: 2106745, 2106748, 2106749, 2106750

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.0	97.6	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A93165

Included Lab Sample IDs: 2106747, 2106754, 2106755, 2106756, 2106759

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	100	P/P	90 - 110
O-Phosphate-P	101	99.7	P/P	90 - 110
O-Phosphate-P	99.1	100	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A93180

Included Lab Sample IDs: 2106746, 2106751, 2106752, 2106753, 2106758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.4	96.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A93190

Included Lab Sample IDs: 2106746, 2106751, 2106752, 2106753, 2106758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.2	P/P	90 - 110
Total-P	99.8	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A93194

Included Lab Sample IDs: 2106758

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A93226
Included Lab Sample IDs: 2106784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	104	78.8	P/P	60 - 160
Endothall	79.4	95.6	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A93229
Included Lab Sample IDs: 2106784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	76.9	61.0	P/P	60 - 160
Glufosinate	74.9	69.0	P/P	60 - 160
Glyphosate	77.4	71.0	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A93231
Included Lab Sample IDs: 2106746, 2106751, 2106752, 2106753

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	100	P/P	90 - 110
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 300.0
Run ID: A93239
Included Lab Sample IDs: 2106757

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A93244
Included Lab Sample IDs: 2106746, 2106751, 2106752, 2106753, 2106758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.7	P/P	90 - 110
Kjeldahl Nitrogen	101	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A93246
Included Lab Sample IDs: 2106787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	101	P/P	90 - 110
Calcium	101	99.9	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	103	102	P/P	90 - 110
Potassium	100	102	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
 Run ID: A93264
 Included Lab Sample IDs: 2106784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	105	101	P/P	50 - 150
Acetaminophen	112	108	P/P	60 - 160
Acetamiprid	105	102	P/P	50 - 150
Afidopyropen	101	105	P/P	50 - 150
Bentazon	121	115	P/P	50 - 160
Benzovindiflupyr	117	110	P/P	50 - 150
Carbamazepine	111	107	P/P	60 - 150
Clothianidin	115	108	P/P	60 - 150
Dinotefuran	111	97.5	P/P	50 - 150
Diuron	116	112	P/P	60 - 150
Fenuron	104	108	P/P	60 - 150
Fluridone	118	114	P/P	60 - 160
Hydrocodone	105	102	P/P	60 - 150
Ibuprofen	87.7	108	P/P	50 - 160
Imazapyr	119	89.0	P/P	50 - 150
Imidacloprid	104	94.7	P/P	60 - 150
Linuron	108	105	P/P	60 - 150
Mandestrobin	111	110	P/P	50 - 150
MCPP	90.8	88.8	P/P	50 - 150
Naproxen	107	98.4	P/P	50 - 160
Primidone	107	99.6	P/P	60 - 150
Pyraclostrobin	110	109	P/P	60 - 150
Thiamethoxam	112	107	P/P	50 - 150
Tolfenpyrad	108	102	P/P	60 - 150
Triclopyr	100	88.8	P/P	50 - 150

Reference Method: EPA 8270E
 Run ID: A93286
 Included Lab Sample IDs: 2106785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	90.3		P	80 - 120
Alpha-BHC	93.1		P	80 - 120
Alpha-Chlordane	91.1		P	80 - 120
Beta-BHC	99.9		P	80 - 120
Bifenthrin	89.4		P	80 - 120
Carbophenothion	92.5		P	80 - 120
Chlorothalonil	100		P	80 - 120
Cis-Nonachlor	90.3		P	80 - 120
Cypermethrin	95.8		P	80 - 120
DDD-p,p'	92.4		P	80 - 120
DDE-p,p'	90.9		P	80 - 120
DDT-p,p'	99.1		P	80 - 120
Delta-BHC	100		P	80 - 120
Dicofol	96.6		P	80 - 120
Dieldrin	96.8		P	80 - 120
Endosulfan I	92.1		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	93.0		P	80 - 120
Endrin Aldehyde	88.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A93286
Included Lab Sample IDs: 2106785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Ketone	94.6		P	80 - 120
Ethalfuralin	94.6		P	80 - 120
Gamma-BHC	94.2		P	80 - 120
Gamma-Chlordane	90.6		P	80 - 120
Heptachlor	90.3		P	80 - 120
Heptachlor Epoxide	90.3		P	80 - 120
Hexachlorobenzene	97.4		P	80 - 120
Methoxychlor	99.0		P	80 - 120
Mirex	95.6		P	80 - 120
Permethrin	85.5		P	80 - 120
Trans-Nonachlor	91.5		P	80 - 120
Trifluralin	94.7		P	80 - 120

Reference Method: EPA 8321B
Run ID: A93291
Included Lab Sample IDs: 2106783

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	117	114	P/P	60 - 150
Aldicarb	91.1	105	P/P	60 - 150
Aldicarb Sulfone	107	104	P/P	50 - 150
Aldicarb Sulfoxide	102	98.0	P/P	50 - 150
Carbaryl	109	102	P/P	60 - 150
Carbofuran	111	114	P/P	50 - 150
Methiocarb	103	106	P/P	50 - 150
Methomyl	104	107	P/P	50 - 150
Oxamyl	105	107	P/P	50 - 150
Propoxur	105	106	P/P	50 - 150

Reference Method: SM 2320 B-97
Run ID: A93315
Included Lab Sample IDs: 2106745, 2106748, 2106749, 2106750, 2106757

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

Reference Method: SM 4500 F-C-97
Run ID: A93315
Included Lab Sample IDs: 2106745, 2106748, 2106749, 2106750, 2106757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.6	98.5	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A93327
Included Lab Sample IDs: 2106785

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	94.8		P	80 - 120
Toxaphene	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A93374

Included Lab Sample IDs: 2106746, 2106751, 2106752, 2106753, 2106758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	103	P/P	90 - 110
Ammonia-N	103	104	P/P	90 - 110
Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A93385

Included Lab Sample IDs: 2106787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	103	P/P	90 - 110
Antimony	94.0	92.9	P/P	90 - 110
Arsenic	99.3	99.4	P/P	90 - 110
Boron	101	104	P/P	90 - 110
Cadmium	99.4	98.3	P/P	90 - 110
Chromium	95.3	94.3	P/P	90 - 110
Lead	96.2	96.5	P/P	90 - 110
Nickel	97.4	96.3	P/P	90 - 110
Selenium	99.9	100	P/P	90 - 110
Silver	94.3	94.4	P/P	90 - 110
Thallium	93.8	93.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A93447

Included Lab Sample IDs: 2106784

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	107	91.1	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A93486

Included Lab Sample IDs: 2106757

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

Reference Method: EPA 8270E

Run ID: A93499

Included Lab Sample IDs: 2106786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	103		P	80 - 120
Atrazine	99.1		P	80 - 120
Atrazine Desethyl	93.1		P	80 - 120
Azinphos Methyl	99.0		P	80 - 120
Bromacil	98.0		P	80 - 120
Butylate	102		P	80 - 120
Chlorpyrifos Ethyl	97.0		P	80 - 120
Chlorpyrifos Methyl	97.8		P	80 - 120
Cyanazine	88.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A93499
 Included Lab Sample IDs: 2106786

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Demeton	100		P	80 - 120
Diazinon	103		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	92.8		P	80 - 120
Dithiopyr	105		P	80 - 120
EPTC	99.5		P	80 - 120
Ethion	96.2		P	80 - 120
Ethoprop	97.2		P	80 - 120
Fenamiphos	96.4		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	98.6		P	80 - 120
Fipronil Sulfone	97.2		P	80 - 120
Fonofos	103		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	94.1		P	80 - 120
Metalaxyl	105		P	80 - 120
Metolachlor	107		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	99.0		P	80 - 120
Molinate	112		P	80 - 120
Norflurazon	99.7		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	98.1		P	80 - 120
Parathion Methyl	95.5		P	80 - 120
Pendimethalin	99.3		P	80 - 120
Phorate	95.2		P	80 - 120
Prodiamine	100		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	98.3		P	80 - 120
Tebuconazole	102		P	80 - 120
Terbufos	97.7		P	80 - 120
Terbuthylazine	98.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Run ID: A93703
 Included Lab Sample IDs: 2106787

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	98.6	98.7	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							3.04	
EPA 200.7 Rev. 4.4	Barium	99.3		99.7	100	96.4			0.235
	Calcium	105		104	104	99.0			0.241
	Iron	103		103	103	101			0.178
	Magnesium	110		108	108	103			0.315
	Potassium	107		107	106	107			0.786
	Sodium	107		101	102	107			0.547
	Zinc	97.3		97.8	98.6	96.1			0.796
EPA 200.8 Rev. 5.4	Aluminum	100		99.3	99.1	101			0.257
	Antimony	95.8		96.1	94.8	96.8			1.38
	Arsenic	99.7		101	100	101			0.771
	Boron	103		102	101	106			0.695
	Cadmium	98.8		100	99.6	101			0.439
	Chromium	94.4		95.3	93.9	93.4			1.43
	Copper	97.1		97.3	96.7	96.7			0.612
	Lead	94.5		96.0	95.7	94.6			0.234
	Nickel	96.4		96.0	96.5	93.9			0.494
	Selenium	100		100	99.8	102			0.382
	Silver	96.3		95.6	95.1	96.2			0.567
	Thallium	97.3		99.7	100	98.8			0.434
EPA 300.0	Bromide	100		96.8	96.6	98.1			0.0964
EPA 300.0 Rev. 2.1	Chloride	96.6		98.2	99.0			0.162	
	Sulfate	101		103	101			0.380	
	Sulfate	99.3		98.5	101	99.9			2.22
EPA 350.1 Rev. 2.0	Ammonia-N	99.8		99.0	99.8				0.639
	Ammonia-N	101		101	102				1.03
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.6		97.6	103				4.74
	Kjeldahl Nitrogen	104							2.62
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	100		96.8	96.3				0.518
	NO ₂ NO ₃ -N	99.0		98.0	98.5				0.267
EPA 365.1 Rev. 2.0	Total-P	98.6		98.6	98.9				0.375
	Total-P	99.3		102	97.7				4.43
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5		96.4	96.8				0.396
	O-Phosphate-P	99.3		98.1	98.2				0.102
	O-Phosphate-P	99.5		96.7	98.0				1.34
EPA 8270E	Acetochlor	82.1	96.6	89.3	82.8	16.3			7.63
	Alachlor	79.3	96.2	92.4	85.2	19.2			8.09
	Aldrin	38.4	44.0	68.7	51.3	13.6			28.9
	Alpha-BHC	102	113	147	129	10.1			12.9
	Alpha-Chlordane	78.0	86.7	90.1	77.5	10.6			15.0
	Ametryn	91.3	96.5	91.1	93.7	5.61			2.76
	Atrazine	94.6	97.6	96.4	92.4	3.12			4.16
	Atrazine Desethyl	73.6	67.2	64.2	80.2	9.05			22.2
	Azinphos Methyl	102	112	91.8	89.8	8.94			2.18
	Beta-BHC	116	150	160	181	26.1			12.4
	Bifenthrin	59.5	67.2	93.7	70.7	12.2			27.9
	Bromacil	84.4	77.1	67.1	78.9	8.94			16.3
	Butylate	65.1	69.2	49.3	76.1	6.13			42.7
	Carbophenothion	70.7	64.3	109	84.0	9.52			26.1
	Chlorothalonil	131	133	117	70.5	1.13			49.8
	Chlorpyrifos Ethyl	84.3	97.6	87.5	93.0	14.6			6.12
	Chlorpyrifos Methyl	90.4	94.7	89.9	101	4.63			11.7
	Cis-Nonachlor	77.2	86.8	90.5	76.1	11.8			17.3
	Cyanazine	90.2	87.6	115	140	2.90			19.5

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Cypermethrin	69.6	74.5	96.4	75.9	6.78	23.8
	DDD-p,p'	91.0	100	104	96.7	9.44	7.39
	DDE-p,p'	74.8	82.6	90.8	75.2	9.92	18.8
	DDT-p,p'	100	106	126	107	5.82	16.8
	Delta-BHC	133	152	193	181	13.7	5.94
	Demeton	83.0	67.5	71.1	89.6	20.6	23.0
	Diazinon	95.0	94.9	89.6	97.0	0.126	7.94
	Dicofol	94.4	99.0	101	109	4.82	8.30
	Dieldrin	90.3	97.5	102	90.9	7.75	11.6
	Dimethenamid	84.0	93.9	86.9	74.8	11.1	15.0
	Disulfoton	82.2	61.1	76.8	90.2	29.5	16.1
	Dithiopyr	82.5	99.0	90.9	82.4	18.1	9.76
	Endosulfan I	93.4	98.0	122	107	4.81	13.2
	Endosulfan II	103	124	173	149	18.5	14.8
	Endosulfan Sulfate	84.2	100	91.2	94.1	17.3	3.21
	Endrin	116	92.7	122	110	22.5	11.0
	Endrin Aldehyde	98.1	113	93.7	101	13.8	7.40
	Endrin Ketone	82.5	95.5	94.7	96.3	14.5	1.65
	EPTC	60.9	73.0	48.2	75.4	18.2	44.0
	Ethalfuralin	85.7	86.0	114	99.4	0.329	14.1
	Ethion	49.6	98.8	93.2	57.0	66.3	48.2
	Ethoprop	93.2	81.4	81.1	102	13.5	22.6
	Fenamiphos	78.1	83.9	82.9	82.1	7.26	1.01
	Fipronil	82.8	90.1	86.1	77.6	8.45	10.4
	Fipronil Desulfinyl	74.0	83.2	78.4	70.2	11.6	11.0
	Fipronil Sulfide	82.2	84.8	81.5	83.9	3.13	2.87
	Fipronil Sulfone	70.7	76.2	79.6	73.5	7.37	8.02
	Fonofos	102	88.6	84.8	108	14.1	23.7
	Gamma-BHC	137	146	152	174	5.95	13.4
	Gamma-Chlordane	73.2	81.9	87.9	71.9	11.2	20.0
	Heptachlor	62.8	73.5	79.0	62.0	15.7	24.1
	Heptachlor Epoxide	87.4	95.8	95.9	88.4	9.20	8.17
	Hexachlorobenzene	68.5	75.9	83.0	71.0	10.4	15.6
	Hexazinone	84.4	102	103	88.8	18.6	13.3
	Malathion	88.7	97.4	89.0	95.5	9.39	6.99
	Metalaxyl	84.8	92.6	88.8	83.4	8.72	6.19
	Methoxychlor	125	130	137	132	3.65	3.58
	Metolachlor	79.0	96.5	93.3	79.7	20.0	7.47
	Metribuzin	127	87.2	120	246	37.3	69.0
	Mevinphos	94.2	82.0	78.3	97.3	13.9	21.6
	Mirex	45.9	51.6	70.6	50.8	11.9	32.6
	Molinate	68.2	81.1	66.8	95.0	17.2	34.9
	Norflurazon	80.1	89.6	86.8	78.9	11.1	9.55
	Oxadiazon	79.9	96.4	85.6	81.8	18.7	4.56
	Parathion Ethyl	86.5	91.1	86.5	88.7	5.17	2.46
	Parathion Methyl	99.5	97.2	90.9	101	2.32	10.4
	Pendimethalin	75.0	83.4	89.8	88.0	10.6	1.98
	Permethrin	55.5	60.2	78.5	59.4	8.08	27.8
	Phorate	84.1	69.9	78.2	86.4	18.5	10.0
	Prodiamine	28.6	72.2	66.1	49.6	86.6	28.5
	Prometon	72.5	89.4	81.2	78.4	20.9	3.58
	Prometryn	79.4	89.4	86.8	81.8	11.9	5.95
	Simazine	106	99.7	91.6	103	5.94	11.5
	Tebuconazole	27.8	65.4	58.7	28.6	80.6	68.8

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Terbufos	99.2	81.1	85.7	105	20.0		20.4
	Terbutylazine	89.9	94.1	86.7	89.8	4.67		3.52
	Trans-Nonachlor	70.7	78.8	84.7	69.5	10.8		19.6
	Trifluralin	91.0	96.4	109	93.7	5.81		15.3
EPA 8276	Chlordane	77.6	81.0	69.5	57.8	4.35		18.3
	Toxaphene	58.6	59.5	47.0	42.1	1.51		11.0
EPA 8321B	2,4-D	142		157	166			4.29
	3-Hydroxycarbofuran	104		98.2	95.1			3.27
	Acesulfame K	87.9		117	96.4			19.1
	Acetaminophen	99.3						3.93
	Acetamiprid	101		110	116			5.14
	Afidopyropen	99.1		119	113			5.70
	Aldicarb	88.1		66.4	75.9			13.4
	Aldicarb Sulfone	101		85.5	90.3			5.37
	Aldicarb Sulfoxide	55.1		44.6	41.9			6.25
	AMPA	83.4		45.2	44.3			1.29
	Bentazon	130		86.2	96.4			9.68
	Benzovindiflupyr	98.3		105	100			4.33
	Carbamazepine	102		98.7	99.8			1.09
	Carbaryl	89.1		76.6	77.7			1.34
	Carbofuran	101		87.3	82.7			5.42
	Clothianidin	106		113	111			1.69
	Dinotefuran	99.7		109	103			5.37
	Diuron	106		89.1	87.8			1.17
	Endothall	91.4		81.6	83.0			1.76
	Fenuron	111		97.8	95.7			2.12
	Fluridone	105		100	96.2			2.74
	Glufosinate	70.1		65.8	54.0			19.6
	Glyphosate	83.1		61.9	63.2			1.36
	Hydrocodone	105		110	109			0.561
	Ibuprofen	100		90.6	92.1			1.43
	Imazapyr	98.9						0.286
	Imidacloprid	103		177	172			2.78
	Linuron	70.1		68.3	67.6			0.969
	Mandestrobin	102		98.5	96.4			2.19
	MCPP	151		171	169			0.649
	Methiocarb	81.2		73.7	73.6			0.105
	Methomyl	103		39.9	83.0			70.1
	Naproxen	119		152	104			26.9
	Oxamyl	106		67.8	90.1			28.2
	Primidone	100		109	105			4.14
	Propoxur	90.0		80.9	75.3			7.23
	Pyraclostrobin	87.5		96.9	92.5			4.59
	Sucralose	93.9		104	94.9			9.13
	Thiamethoxam	107		153	147			3.76
	Tolfenpyrad	53.7		67.6	66.4			1.79
	Triclopyr	121		134	137			1.84
SM 2120 B	Color (true)	101					1.12	
SM 2320 B-97	Total Alkalinity	104					0.515	
SM 2540 C-97	TDS						1.83	
SM 4500 F-C-97	Fluoride	96.4		98.1	97.4			0.473
SM 5310 B-00	Organic Carbon	97.8		98.2	94.0			3.81

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2106745, 2106748, 2106749, 2106750, 2106757
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2106787
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2106787
EPA 300.0 / E31780	Bromide in aqueous matrices	2106757
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2106745, 2106748, 2106749, 2106750
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2106745, 2106748, 2106749, 2106750, 2106757
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2106746, 2106751, 2106752, 2106753, 2106758
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2106746, 2106751, 2106752, 2106753, 2106758
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2106746, 2106751, 2106752, 2106753, 2106758
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2106746, 2106751, 2106752, 2106753, 2106758
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2106747, 2106754, 2106755, 2106756, 2106759
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2106785
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2106786
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2106785
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2106783
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2106784
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2106784
SM 2120 B / E31780	True Color measured at 450 nm	2106745, 2106748, 2106749, 2106750
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2106745, 2106748, 2106749, 2106750, 2106757
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2106745, 2106748, 2106749, 2106750
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2106745, 2106748, 2106749, 2106750, 2106757
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2106745, 2106748, 2106749, 2106750, 2106757
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2106746, 2106751, 2106752, 2106753, 2106758

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	07/30/2019			07/30/2019 17:05	Adrian Shelby	2106745, 2106748, 2106749, 2106750, 2106757
EPA 200.7 Rev. 4.4	07/30/2019	07/31/2019 18:00	Elliott D. Healy	08/02/2019 14:20	Betina Topolski	2106787
EPA 200.8 Rev. 5.4	07/30/2019	07/31/2019 18:00	Elliott D. Healy	08/09/2019 00:27	Robert K Palmer	2106787
	07/30/2019	07/31/2019 18:00	Elliott D. Healy	08/21/2019 19:59	Martin Acosta	2106787
EPA 300.0	07/30/2019			08/02/2019 02:26	Jhamieka S. Greenwood	2106757
EPA 300.0 Rev. 2.1	07/30/2019			07/31/2019 20:52	Jhamieka S. Greenwood	2106745
	07/30/2019			07/31/2019 21:04	Jhamieka S. Greenwood	2106748
	07/30/2019			07/31/2019 21:16	Jhamieka S. Greenwood	2106749
	07/30/2019			07/31/2019 21:29	Jhamieka S. Greenwood	2106750
	07/30/2019			08/13/2019 18:58	Jhamieka S. Greenwood	2106757
EPA 350.1 Rev. 2.0	07/30/2019			08/08/2019 11:16	Ping Hua	2106746
	07/30/2019			08/08/2019 11:28	Ping Hua	2106751
	07/30/2019			08/08/2019 11:29	Ping Hua	2106752
	07/30/2019			08/08/2019 11:31	Ping Hua	2106753
	07/30/2019			08/08/2019 12:16	Ping Hua	2106758
EPA 351.2 Rev. 2.0	07/30/2019	08/01/2019 11:45	Adrian Shelby	08/02/2019 16:16	Joseph Suarez	2106758
	07/30/2019	08/01/2019 18:00	Adrian Shelby	08/02/2019 16:39	Joseph Suarez	2106746
	07/30/2019	08/01/2019 18:00	Adrian Shelby	08/02/2019 16:41	Joseph Suarez	2106751
	07/30/2019	08/01/2019 18:00	Adrian Shelby	08/02/2019 16:42	Joseph Suarez	2106752
	07/30/2019	08/01/2019 18:00	Adrian Shelby	08/02/2019 16:44	Joseph Suarez	2106753
EPA 353.2 Rev. 2.0	07/30/2019			08/01/2019 09:36	Beverly Y. Sanders	2106758
	07/30/2019			08/02/2019 10:36	Beverly Y. Sanders	2106752
	07/30/2019			08/02/2019 10:37	Beverly Y. Sanders	2106753
	07/30/2019			08/02/2019 13:14	Beverly Y. Sanders	2106746
	07/30/2019			08/02/2019 13:15	Beverly Y. Sanders	2106751
EPA 365.1 Rev. 2.0	07/30/2019	07/31/2019 12:24	Vijayalakshmi Reddy	08/01/2019 11:59	Lipi Saha	2106758
	07/30/2019	07/31/2019 12:24	Vijayalakshmi Reddy	08/01/2019 12:16	Lipi Saha	2106746
	07/30/2019	07/31/2019 12:24	Vijayalakshmi Reddy	08/01/2019 12:17	Lipi Saha	2106751
	07/30/2019	07/31/2019 12:24	Vijayalakshmi Reddy	08/01/2019 12:18	Lipi Saha	2106752
	07/30/2019	07/31/2019 12:24	Vijayalakshmi Reddy	08/01/2019 12:19	Lipi Saha	2106753
EPA 365.1 Rev. 2.0 dissolved	07/30/2019			07/30/2019 16:21	Jhamieka S. Greenwood	2106755
	07/30/2019			07/30/2019 17:03	Jhamieka S. Greenwood	2106747
	07/30/2019			07/30/2019 17:04	Jhamieka S. Greenwood	2106754
	07/30/2019			07/30/2019 17:05	Jhamieka S. Greenwood	2106756
	07/30/2019			07/30/2019 17:30	Jhamieka S. Greenwood	2106759
EPA 8270E	07/30/2019	07/31/2019 09:00	Fe-Val Siddell	08/04/2019 23:20	Vandana T. Nagar	2106785
	07/30/2019	08/02/2019 12:30	Fe-Val Siddell	08/05/2019 17:34	Vandana T. Nagar	2106786
EPA 8276	07/30/2019	07/31/2019 09:00	Fe-Val Siddell	08/06/2019 05:08	Luis Flores	2106785
EPA 8321B	07/30/2019	07/31/2019 10:15	Rebecca Ware	07/31/2019 14:39	Rebecca Ware	2106784

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/30/2019	07/31/2019 10:15	Rebecca Ware	08/01/2019 09:55	Rebecca Ware	2106784
	07/30/2019	07/31/2019 10:15	Rebecca Ware	08/12/2019 13:55	Rebecca Ware	2106784
	07/30/2019	08/01/2019 10:00	Hoor Shaik	08/02/2019 03:48	Juyoung Kim	2106784
	07/30/2019	08/05/2019 10:00	Hoor Shaik	08/05/2019 19:29	Juyoung Kim	2106783
SM 2120 B	07/30/2019			07/30/2019 17:37	Madeline Funaro	2106745
	07/30/2019			07/30/2019 17:38	Madeline Funaro	2106748
	07/30/2019			07/30/2019 17:39	Madeline Funaro	2106749
	07/30/2019			07/30/2019 17:40	Madeline Funaro	2106750
SM 2320 B-97	07/30/2019			08/06/2019 01:27	Dale L. Simmons	2106745
	07/30/2019			08/06/2019 01:42	Dale L. Simmons	2106748
	07/30/2019			08/06/2019 01:55	Dale L. Simmons	2106749
	07/30/2019			08/06/2019 02:08	Dale L. Simmons	2106750
SM 2540 C-97	07/30/2019			08/06/2019 04:32	Dale L. Simmons	2106757
SM 2540 D-97	07/30/2019			07/31/2019 17:30	Blanca Fach	2106745, 2106748, 2106749, 2106750
				07/31/2019 16:50	Blanca Fach	2106745, 2106748, 2106749, 2106750, 2106757
SM 4500 F-C-97	07/30/2019			08/06/2019 01:27	Dale L. Simmons	2106745
	07/30/2019			08/06/2019 01:42	Dale L. Simmons	2106748
	07/30/2019			08/06/2019 01:55	Dale L. Simmons	2106749
	07/30/2019			08/06/2019 02:08	Dale L. Simmons	2106750
	07/30/2019			08/06/2019 04:32	Dale L. Simmons	2106757
SM 5310 B-00	07/30/2019			07/31/2019 16:16	Lauren Lees	2106746
	07/30/2019			07/31/2019 16:30	Lauren Lees	2106751
	07/30/2019			07/31/2019 16:42	Lauren Lees	2106752
	07/30/2019			07/31/2019 16:54	Lauren Lees	2106753
	07/30/2019			07/31/2019 17:06	Lauren Lees	2106758