

Chemical Analysis Report

NE-DIST-2019-09-11-02

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

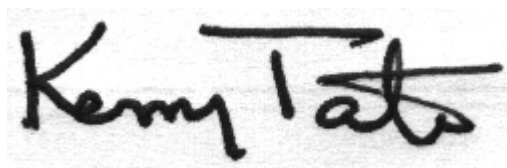
Event Description: **LSJR West Boat**
Request ID: **RQ-2019-09-09-29**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
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Suite 100
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 02-OCT-2019 10:39

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

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: ORTEGA R BR ROOSEVELT BLVD US 17

Collection Date/Time: 09/10/2019 10:25

Field ID: 20030077

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117870	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P370495	
	EPA 300.0	Bromide	10		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	75		mg CaCO3/L	P371100	
	SM 2540 D-97	TSS	7	I	mg/L	P370878	
	SM 4500 F-C-97	Fluoride	0.26		mg F/L	P371105	
2117872	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.70		mg N/L	P370598	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370710	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P370678	
2117874	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P370502	
2117902	EPA 200.7 Rev. 4.4	Iron	110	I	ug/L	P370561	
		Manganese	20.9		ug/L	P370561	
		Zinc	5.0	U	ug/L	P370561	
	EPA 200.8 Rev. 5.4	Aluminum	105		ug/L	P370561	
		Antimony	0.13	I	ug/L	P370561	
		Arsenic	1.73		ug/L	P370561	
		Cadmium	0.020	U	ug/L	P370561	
		Chromium	0.40	U	ug/L	P370561	
		Copper	2.05		ug/L	P370561	
		Lead	0.58		ug/L	P370561	
		Nickel	0.50	U	ug/L	P370561	
		Selenium	0.20	U	ug/L	P370561	
		Silver	0.010	U	ug/L	P370561	
		Thallium	0.10	U	ug/L	P370561	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: CEDAR CR BLANDING BLVD BR RT 21

Collection Date/Time: 09/10/2019 10:40

Field ID: 20030083

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117871	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P370495	
	EPA 300.0	Bromide	10		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	88		mg CaCO3/L	P371102	
	SM 2540 D-97	TSS	10		mg/L	P370878	
	SM 4500 F-C-97	Fluoride	0.25		mg F/L	P371508	
2117873	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P370598	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370710	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P370678	
2117875	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P370502	
2117903	EPA 200.7 Rev. 4.4	Iron	200		ug/L	P370727	
		Manganese	43.6		ug/L	P370727	
		Zinc	5.0	U	ug/L	P370727	
	EPA 200.8 Rev. 5.4	Aluminum	144		ug/L	P370727	
		Antimony	0.30	I	ug/L	P370727	
		Arsenic	2.98		ug/L	P370727	
		Cadmium	0.080	U	ug/L	P370727	
		Chromium	4.0	U	ug/L	P370727	
		Copper	2.7	I	ug/L	P370727	
		Lead	1.1	I	ug/L	P370727	
		Nickel	2.0	U	ug/L	P370727	
		Selenium	0.80	U	ug/L	P370727	
		Silver	0.040	U	ug/L	P370727	
		Thallium	0.40	U	ug/L	P370727	

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: FISHING CRK AT PUBLIC BOAT RAMP OFF
SEABOARD AV**

Collection Date/Time: 09/10/2019 10:55

Field ID: 20030617

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117876	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P370495	
	EPA 300.0 Rev. 2.1	Chloride	2.5E+03		mg Cl/L	P370811	
		Sulfate	360		mg SO4/L	P370814	
	SM 2120 B	Color (true)	84		PCU	P370530	
	SM 2320 B-97	Total Alkalinity	78		mg CaCO3/L	P371102	
	SM 2540 C-97	TDS	4.32E+03		mg/L	P371062	
	SM 2540 D-97	TSS	14		mg/L	P370876	
	SM 4500 F-C-97	Fluoride	0.22		mg F/L	P371508	
2117877	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P370667	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.85		mg N/L	P370598	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370710	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P370641	
	SM 5310 B-00	Organic Carbon	16		mg C/L	P370678	
2117878	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P370502	
2117904	EPA 200.7 Rev. 4.4	Barium	108		ug/L	P370727	
		Boron	558		ug/L	P370727	
		Calcium	74.7		mg/L	P370727	
		Iron	480		ug/L	P370727	
		Magnesium	158		mg/L	P370727	
		Potassium	49		mg/L	P370727	
		Sodium	1.30E+03		mg/L	P370727	
		Zinc	5.0	U	ug/L	P370727	
	EPA 200.8 Rev. 5.4	Aluminum	114		ug/L	P370727	
		Antimony	0.21	I	ug/L	P370727	
		Arsenic	2.71		ug/L	P370727	
		Cadmium	0.080	U	ug/L	P370727	
		Chromium	4.0	U	ug/L	P370727	
		Copper	2.3	I	ug/L	P370727	
		Lead	0.80	U	ug/L	P370727	
		Nickel	2.0	U	ug/L	P370727	
		Selenium	0.80	U	ug/L	P370727	
		Silver	0.040	U	ug/L	P370727	
		Thallium	0.40	U	ug/L	P370727	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.

Sample Location: GOODBYS CR @ SR-13

Collection Date/Time: 09/10/2019 12:10

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117864	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P370495	
	EPA 300.0	Bromide	3.8		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	86		mg CaCO3/L	P370694	
	SM 2540 D-97	TSS	8	I	mg/L	P370878	
	SM 4500 F-C-97	Fluoride	0.17		mg F/L	P370697	
2117865	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P370673	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.79		mg N/L	P370599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370554	
	EPA 365.1 Rev. 2.0	Total-P	0.090		mg P/L	P370566	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P370678	
2117866	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.033		mg P/L	P370500	
2117891	EPA 8321B	Aldicarb	0.020	U	ug/L	P370422	
		Aldicarb Sulfone	0.0020	U	ug/L	P370422	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P370422	
		Carbaryl	0.0020	U	ug/L	P370422	
		Carbofuran	0.0020	U	ug/L	P370422	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P370422	
		Methiocarb	0.0020	U	ug/L	P370422	
		Methomyl	0.0020	U	ug/L	P370422	
		Oxamyl	0.0020	U	ug/L	P370422	
		Propoxur	0.0020	U	ug/L	P370422	
		Acesulfame K**	1.0	U	ug/L	P370512	
		2,4-D	0.012	J	ug/L	P370469	LCS, MS
		AMPA**	0.10	U	ug/L	P370512	
2117892		Sucralose**	0.47		ug/L	P370512	MS
		Acetaminophen**	0.0080	U	ug/L	P370469	
		Endothall**	2.5	U	ug/L	P370512	
		Acetamiprid**	0.0020	U	ug/L	P370469	
		Glufosinate**	0.10	U	ug/L	P370512	
		Glyphosate**	0.10	U	ug/L	P370512	
		Afidopyropen**	0.0020	UJ	ug/L	P370469	
		Bentazon	0.080		ug/L	P370469	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370469	
		Carbamazepine**	8.0E-04	U	ug/L	P370469	
		Clothianidin**	0.0084		ug/L	P370469	
		Dinotefuran**	0.0020	U	ug/L	P370469	
		Diuron	0.046		ug/L	P370469	
		Fenuron	0.016	U	ug/L	P370469	
		Fluridone**	0.024		ug/L	P370469	
		Imazapyr**	0.39		ug/L	P370469	
		Hydrocodone**	0.0020	U	ug/L	P370469	
		Ibuprofen**	0.020	U	ug/L	P370469	
		Imidacloprid	0.043		ug/L	P370469	MS

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117892	EPA 8321B	Linuron	0.0040	U	ug/L	P370469	
		Mandestrobin**	0.0020	UJ	ug/L	P370469	
		MCP	0.0027	IJ	ug/L	P370469	LCS, MS
		Naproxen**	0.0081	I	ug/L	P370469	
		Primidone**	0.0040	U	ug/L	P370469	
		Pyraclostrobin**	0.0020	U	ug/L	P370469	
		Thiamethoxam**	0.0020	U	ug/L	P370469	MS
		Tolfenpyrad**	0.0020	U	ug/L	P370469	
		Triclopyr**	0.0040	U	ug/L	P370469	
2117894	EPA 8270E	Aldrin	4.1	U	ng/L	P370542	
		Alpha-BHC	2.1	U	ng/L	P370542	
		Alpha-Chlordane	1.0	U	ng/L	P370542	
		Beta-BHC	10	U	ng/L	P370542	
		Bifenthrin**	4.1	U	ng/L	P370542	
		Delta-BHC	8.2	U	ng/L	P370542	
		Gamma-BHC	8.2	U	ng/L	P370542	
		Carbophenothion	10	U	ng/L	P370542	
		Chlorothalonil	2.1	U	ng/L	P370542	
		Cis-Nonachlor**	1.0	U	ng/L	P370542	
		Cypermethrin	21	U	ng/L	P370542	
		DDD-p,p'	6.2	U	ng/L	P370542	
		DDE-p,p'	6.2	U	ng/L	P370542	
		DDT-p,p'	7.2	U	ng/L	P370542	
		Dicofol	31	U	ng/L	P370542	
		Dieldrin	4.1	U	ng/L	P370542	
		Endosulfan I	4.1	U	ng/L	P370542	
		Endosulfan II	4.1	U	ng/L	P370542	
		Endosulfan Sulfate	2.1	U	ng/L	P370542	
		Endrin	2.1	U	ng/L	P370542	
		Endrin Aldehyde	2.1	U	ng/L	P370542	
		Endrin Ketone	2.1	U	ng/L	P370542	
		Ethalfuralin**	3.1	U	ng/L	P370542	
		Gamma-Chlordane	1.0	U	ng/L	P370542	
		Heptachlor	1.5	U	ng/L	P370542	
		Heptachlor Epoxide	2.1	U	ng/L	P370542	
		Hexachlorobenzene	2.1	U	ng/L	P370542	MS
		Methoxychlor	4.1	U	ng/L	P370542	
		Mirex	2.1	U	ng/L	P370542	
		Permethrin	10	U	ng/L	P370542	
		Trans-Nonachlor**	1.0	U	ng/L	P370542	
		Trifluralin	2.6	U	ng/L	P370542	
		Chlordane	5.1	U	ng/L	P370542	
		Toxaphene	31	U	ng/L	P370542	
2117895	EPA 8270E	Acetochlor	0.25	U	ng/L	P370470	
		Alachlor	0.25	U	ng/L	P370470	

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117895	EPA 8270E	Ametryn	0.61	UJ	ng/L	P370470	MS
		Atrazine	50		ng/L	P370470	
		Atrazine Desethyl	15	J	ng/L	P370470	RPD
		Azinphos Methyl	5.1	U	ng/L	P370470	
		Bromacil	5.0		ng/L	P370470	
		Butylate	0.41	U	ng/L	P370470	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P370470	
		Chlorpyrifos Methyl	0.10	U	ng/L	P370470	
		Cyanazine	3.3	UJ	ng/L	P370470	RPD
		Demeton	7.1	U	ng/L	P370470	
		Diazinon	0.13	U	ng/L	P370470	
		Dimethenamid**	0.25	I	ng/L	P370470	
		Disulfoton	0.51	U	ng/L	P370470	
		Dithiopyr**	0.32	I	ng/L	P370470	
		EPTC	1.3	U	ng/L	P370470	
		Ethion	0.15	U	ng/L	P370470	
		Ethoprop	0.10	U	ng/L	P370470	
		Fenamiphos	0.51	UJ	ng/L	P370470	MS
		Fipronil	0.72	IJ	ng/L	P370470	RPD
		Fipronil Desulfinyl**	1.3	J	ng/L	P370470	RPD
		Fipronil Sulfide	2.0	J	ng/L	P370470	MS, RPD
		Fipronil Sulfone	3.8	J	ng/L	P370470	RPD
		Fonofos	0.20	U	ng/L	P370470	
		Hexazinone	14		ng/L	P370470	
		Malathion	0.35	U	ng/L	P370470	
		Metalaxyl	0.30	U	ng/L	P370470	
		Metolachlor	5.6		ng/L	P370470	
		Metribuzin	2.9	IJ	ng/L	P370470	RPD
		Mevinphos	0.51	U	ng/L	P370470	
		Molinate	0.30	U	ng/L	P370470	
		Norflurazon	0.51	UJ	ng/L	P370470	RPD
		Oxadiazon**	1.8		ng/L	P370470	
		Parathion Ethyl	0.25	U	ng/L	P370470	
		Parathion Methyl	0.56	U	ng/L	P370470	
		Pendimethalin	1.0	U	ng/L	P370470	
		Phorate	0.25	U	ng/L	P370470	
		Prodiamine**	0.18	U	ng/L	P370470	
		Prometon	2.3	I	ng/L	P370470	
		Prometryn	0.20	U	ng/L	P370470	
		Simazine	5.5		ng/L	P370470	
		Tebuconazole**	1.6	I	ng/L	P370470	
		Terbufos	0.10	U	ng/L	P370470	
		Terbutylazine	0.43	U	ng/L	P370470	
2117900	EPA 200.7 Rev. 4.4	Iron	650		ug/L	P370561	
		Manganese	30.5		ug/L	P370561	

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117900	EPA 200.7 Rev. 4.4	Zinc	5.0	U	ug/L	P370561	
	EPA 200.8 Rev. 5.4	Aluminum	74		ug/L	P370561	
		Antimony	0.14	I	ug/L	P370561	
		Arsenic	2.92		ug/L	P370561	
		Cadmium	0.020	U	ug/L	P370561	
		Chromium	0.40	U	ug/L	P370561	
		Copper	1.22		ug/L	P370561	
		Lead	0.61		ug/L	P370561	
		Nickel	0.50	U	ug/L	P370561	
		Selenium	0.20	U	ug/L	P370561	
		Silver	0.010	U	ug/L	P370561	
		Thallium	0.10	U	ug/L	P370561	

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: MDL for some parameters elevated due to matrix interference.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. Refer to the narrative for an explanation of QC Codes.

EPA 8270E: MS accuracy for simazine, atrazine, hexazinone, and fipronil sulfone not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: GOODBYS CR AT BAYMEADOWS

Collection Date/Time: 09/10/2019 11:55

Field ID: 20030593

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117867	EPA 180.1 Rev. 2.0	Turbidity	6.0		NTU	P370495	
	EPA 300.0	Bromide	2.3		mg Br/L	P370689	
	SM 2320 B-97	Total Alkalinity	102		mg CaCO3/L	P370694	
	SM 2540 D-97	TSS	5	I	mg/L	P370878	
	SM 4500 F-C-97	Fluoride	0.16		mg F/L	P370697	
2117868	EPA 350.1 Rev. 2.0	Ammonia-N	0.004	I	mg N/L	P370673	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P370599	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P370554	
	EPA 365.1 Rev. 2.0	Total-P	0.099		mg P/L	P370566	
	SM 5310 B-00	Organic Carbon	13		mg C/L	P370678	
2117869	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P370500	
2117893	EPA 8321B	Acesulfame K**	1.0	U	ug/L	P370512	
		2,4-D	0.016	J	ug/L	P370469	LCS, MS
		AMPA**	0.10	U	ug/L	P370512	
		Sucralose**	0.27		ug/L	P370512	MS
		Acetaminophen**	0.0080	U	ug/L	P370469	
		Endothall**	2.5	U	ug/L	P370512	
		Acetamiprid**	0.0020	U	ug/L	P370469	
		Glufosinate**	0.10	U	ug/L	P370512	
		Glyphosate**	0.75		ug/L	P370512	
		Afidopyropen**	0.0020	UJ	ug/L	P370469	
		Bentazon	0.42		ug/L	P370469	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P370469	
		Carbamazepine**	8.0E-04	U	ug/L	P370469	
		Clothianidin**	0.013		ug/L	P370469	
		Dinotefuran**	0.0026	I	ug/L	P370469	
		Diuron	0.13		ug/L	P370469	
		Fenuron	0.016	U	ug/L	P370469	
		Fluridone**	0.023		ug/L	P370469	
		Imazapyr**	0.88		ug/L	P370469	
		Hydrocodone**	0.0020	U	ug/L	P370469	
		Ibuprofen**	0.020	U	ug/L	P370469	
		Imidacloprid	0.059		ug/L	P370469	MS
		Linuron	0.0040	U	ug/L	P370469	
		Mandestrobin**	0.0020	UJ	ug/L	P370469	
		MCP	0.0047	IJ	ug/L	P370469	LCS, MS
		Naproxen**	0.0080	U	ug/L	P370469	
		Primidone**	0.0040	U	ug/L	P370469	
		Pyraclostrobin**	0.0020	U	ug/L	P370469	
		Thiamethoxam**	0.0020	U	ug/L	P370469	MS
		Tolfenpyrad**	0.0020	U	ug/L	P370469	
		Triclopyr**	0.0040	U	ug/L	P370469	
2117901	EPA 200.7 Rev. 4.4	Iron	1.26E+03		ug/L	P370561	

Field ID: 20030593

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2117901	EPA 200.7 Rev. 4.4	Manganese	40.1		ug/L	P370561	
		Zinc	5.0	U	ug/L	P370561	
	EPA 200.8 Rev. 5.4	Aluminum	55		ug/L	P370561	
		Antimony	0.14	I	ug/L	P370561	
		Arsenic	4.37		ug/L	P370561	
		Cadmium	0.020	U	ug/L	P370561	
		Chromium	0.40	U	ug/L	P370561	
		Copper	1.04		ug/L	P370561	
		Lead	0.38	I	ug/L	P370561	
		Nickel	0.50	U	ug/L	P370561	
		Selenium	0.20	U	ug/L	P370561	
		Silver	0.010	U	ug/L	P370561	
		Thallium	0.10	U	ug/L	P370561	

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: MDL for some parameters elevated due to matrix interference.

EPA 8321B: J - second source check standards for some analytes were not available for analysis. Refer to the narrative for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples 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: P370495

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370561

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Component	Result	Code	Units
Barium	1.0	U	ug/L
Boron	15	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/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: P370561

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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 200.8 Rev. 5.4
Batch ID: P370727

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Component	Result	Code	Units
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: P370689

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370811

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370814

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370598

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370554

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370710

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370566

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370641

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370500

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370502

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

Reference Method: EPA 8270E
Batch ID: P370470

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P370470

Component	Result	Code	Units
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	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 8270E
Batch ID: P370542

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P370542

Component	Result	Code	Units
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

Reference Method: EPA 8276
Batch ID: P370542

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

Reference Method: EPA 8321B
Batch ID: P370422

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: P370469

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P370469

Component	Result	Code	Units
Mandestrobin	0.0020	U	ug/L
MCP	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: P370512

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

Reference Method: SM 2120 B
Batch ID: P370530

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P370694

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

Reference Method: SM 2320 B-97
Batch ID: P371100

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

Reference Method: SM 2320 B-97
Batch ID: P371102

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

Reference Method: SM 2540 C-97
Batch ID: P371062

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P370876

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P370878

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P370697

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371105

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P371508

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P370678

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: P370561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	107		P	85 - 115
Manganese	101		P	85 - 115
Zinc	98.9		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.5		P	85 - 115
Boron	102		P	85 - 115
Calcium	102		P	85 - 115
Iron	101		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	100		P	85 - 115
Potassium	99.0		P	85 - 115
Sodium	95.9		P	85 - 115
Zinc	99.0		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370561

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	101		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	91.2		P	80 - 120
Copper	101		P	85 - 115
Lead	105		P	85 - 115
Nickel	102		P	85 - 115
Selenium	101		P	85 - 115
Silver	107		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	98.0		P	85 - 115
Arsenic	101		P	85 - 115
Cadmium	97.2		P	85 - 115
Chromium	91.3		P	85 - 115
Copper	98.6		P	85 - 115
Lead	98.4		P	85 - 115
Nickel	98.1		P	85 - 115
Selenium	101		P	85 - 115
Silver	98.6		P	85 - 115
Thallium	102		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
Batch ID: P370689

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370811

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370814

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370598

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370554

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	100		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P370710

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	99.5		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370566

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P370641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	96.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370500

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P370502

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

Reference Method: EPA 8270E
Batch ID: P370470

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	91.4	97.0	P/P	69 - 122
Alachlor	88.6	94.1	P/P	71 - 120
Ametryn	87.4	84.0	P/P	47 - 138
Atrazine	97.5	99.4	P/P	74 - 124
Atrazine Desethyl	103	80.1	P/P	38 - 138
Azinphos Methyl	108	108	P/P	69 - 154
Bromacil	66.7	83.1	P/P	39 - 121
Butylate	59.1	64.1	P/P	27 - 87.0
Chlorpyrifos Ethyl	93.7	103	P/P	69 - 118
Chlorpyrifos Methyl	98.8	94.0	P/P	70 - 120
Cyanazine	156	108	P/P	20 - 250
Demeton	66.3	65.2	P/P	39 - 118
Diazinon	100	91.8	P/P	68 - 127
Dimethenamid	87.7	97.1	P/P	66 - 125
Disulfoton	96.0	79.2	P/P	52 - 126
Dithiopyr	88.6	94.1	P/P	67 - 127
EPTC	58.7	67.5	P/P	24 - 88.0
Ethion	94.2	106	P/P	51 - 132
Ethoprop	90.6	85.6	P/P	58 - 117
Fenamiphos	89.6	95.7	P/P	38 - 139
Fipronil	79.7	96.3	P/P	61 - 124
Fipronil Desulfinyl	80.0	92.2	P/P	47 - 120
Fipronil Sulfide	83.0	97.2	P/P	56 - 119
Fipronil Sulfone	75.3	96.4	P/P	50 - 117
Fonofos	94.1	82.5	P/P	60 - 121
Hexazinone	99.5	107	P/P	55 - 137
Malathion	99.2	98.5	P/P	66 - 126
Metalaxyl	90.9	97.7	P/P	33 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P370470

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Metolachlor	83.3	100	P/P	69 - 119
Metribuzin	168	101	P/P	31 - 238
Mevinphos	82.7	85.5	P/P	42 - 113
Molinate	76.1	74.4	P/P	32 - 96.0
Norflurazon	84.5	96.9	P/P	54 - 123
Oxadiazon	90.3	103	P/P	63 - 128
Parathion Ethyl	91.9	94.5	P/P	72 - 111
Parathion Methyl	100	97.7	P/P	74 - 126
Pendimethalin	91.9	90.1	P/P	61 - 131
Phorate	93.9	88.6	P/P	51 - 115
Prodiamine	83.3	84.6	P/P	38 - 144
Prometon	78.5	91.2	P/P	54 - 119
Prometryn	85.1	92.7	P/P	63 - 120
Simazine	108	102	P/P	75 - 126
Tebuconazole	75.7	96.4	P/P	20 - 119
Terbufos	94.7	84.2	P/P	64 - 116
Terbutylazine	92.2	99.5	P/P	73 - 117

Reference Method: EPA 8270E
Batch ID: P370542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	42.9	42.4	P/P	20 - 93.0
Alpha-BHC	117	107	P/P	55 - 133
Alpha-Chlordane	84.4	87.6	P/P	58 - 112
Beta-BHC	129	122	P/P	54 - 168
Bifenthrin	71.6	84.5	P/P	30 - 134
Carbophenothion	52.0	49.8	P/P	26 - 147
Chlorothalonil	115	120	P/P	20 - 155
Cis-Nonachlor	84.0	88.0	P/P	54 - 115
Cypermethrin	85.2	95.1	P/P	40 - 137
DDD-p,p'	92.3	93.1	P/P	65 - 129
DDE-p,p'	83.4	87.7	P/P	57 - 116
DDT-p,p'	98.2	103	P/P	53 - 133
Delta-BHC	127	119	P/P	59 - 178
Dicofol	78.8	74.1	P/P	24 - 138
Dieldrin	87.6	91.0	P/P	60 - 120
Endosulfan I	95.7	98.4	P/P	64 - 118
Endosulfan II	97.0	103	P/P	58 - 142
Endosulfan Sulfate	110	111	P/P	60 - 127
Endrin	99.5	105	P/P	59 - 122
Endrin Aldehyde	113	110	P/P	49 - 132
Endrin Ketone	106	107	P/P	64 - 121
Ethalfuralin	90.2	91.8	P/P	60 - 126
Gamma-BHC	126	116	P/P	57 - 154
Gamma-Chlordane	74.7	78.0	P/P	56 - 110
Heptachlor	69.5	71.5	P/P	46 - 96.0
Heptachlor Epoxide	88.9	91.1	P/P	61 - 112
Hexachlorobenzene	83.7	84.9	P/P	44 - 98.0
Methoxychlor	124	124	P/P	63 - 134
Mirex	55.8	63.3	P/P	45 - 100
Permethrin	71.6	76.1	P/P	53 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P370542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Trans-Nonachlor	75.0	78.3	P/P	47 - 110
Trifluralin	91.1	93.2	P/P	39 - 142

Reference Method: EPA 8276
Batch ID: P370542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	82.3	77.6	P/P	43 - 128
Toxaphene	70.1	66.4	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P370422

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	109		P	40 - 160
Aldicarb	113		P	30 - 160
Aldicarb Sulfone	105		P	40 - 160
Aldicarb Sulfoxide	105		P	40 - 160
Carbaryl	113		P	40 - 160
Carbofuran	93.0		P	40 - 160
Methiocarb	80.4		P	40 - 160
Methomyl	90.6		P	40 - 160
Oxamyl	112		P	40 - 160
Propoxur	95.4		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P370469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	165		F	40 - 160
Acetaminophen	85.8		P	30 - 160
Acetamiprid	118		P	40 - 160
Afidopyropen	108		P	40 - 160
Bentazon	148		P	30 - 160
Benzovindiflupyr	97.0		P	40 - 160
Carbamazepine	118		P	40 - 160
Clothianidin	103		P	40 - 160
Dinotefuran	93.2		P	40 - 160
Diuron	139		P	40 - 160
Fenuron	122		P	40 - 160
Fluridone	98.7		P	40 - 160
Hydrocodone	102		P	40 - 160
Ibuprofen	87.3		P	30 - 160
Imazapyr	107		P	40 - 160
Imidacloprid	110		P	40 - 160
Linuron	78.9		P	40 - 160
Mandestrobin	98.9		P	40 - 160
MCPP	176		F	40 - 160
Naproxen	110		P	40 - 160
Primidone	91.0		P	40 - 160
Pyraclostrobin	86.8		P	30 - 160
Thiamethoxam	113		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P370469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	73.7		P	40 - 160
Triclopyr	142		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P370512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	128		P	40 - 150
AMPA	122		P	40 - 150
Endothall	94.1		P	40 - 150
Glufosinate	119		P	40 - 150
Glyphosate	123		P	40 - 140
Sucralose	146		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P370530

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.6		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P370694

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

Reference Method: SM 2320 B-97
Batch ID: P371100

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P371102

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P370697

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P371105

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-97
Batch ID: P371508

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

Reference Method: SM 5310 B-00
Batch ID: P370678

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	104		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117773	Iron	106		P	75 - 125
2117773	Zinc	97.0		P	75 - 125
2117924	Iron	109	110	P/P	80 - 120
2117924	Manganese	101	101	P/P	80 - 120
2117924	Zinc	99.2	99.0	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117903	Barium	93.2	93.9	P/P	80 - 120
2117903	Boron	97.8	100	P/P	80 - 120
2117903	Iron	95.8	95.7	P/P	80 - 120
2117903	Manganese	93.9	94.6	P/P	80 - 120
2117903	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370561

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117773	Aluminum	99.0		P	75 - 125
2117773	Antimony	103		P	75 - 125
2117773	Arsenic	104		P	75 - 125
2117773	Cadmium	103		P	75 - 125
2117773	Chromium	90.4		P	75 - 125
2117773	Copper	97.8		P	75 - 125
2117773	Lead	106		P	75 - 125
2117773	Nickel	98.2		P	75 - 125
2117773	Selenium	100		P	75 - 125
2117773	Silver	108		P	80 - 120
2117773	Thallium	104		P	75 - 125
2117924	Aluminum	109	104	P/P	80 - 120
2117924	Antimony	102	99.4	P/P	80 - 120
2117924	Arsenic	103	99.8	P/P	80 - 120
2117924	Cadmium	105	101	P/P	80 - 120
2117924	Chromium	90.0	89.4	P/P	80 - 120
2117924	Copper	97.5	94.1	P/P	80 - 120
2117924	Lead	107	105	P/P	80 - 120
2117924	Nickel	101	98.4	P/P	80 - 120
2117924	Selenium	99.8	97.3	P/P	80 - 120
2117924	Silver	106	103	P/P	80 - 120
2117924	Thallium	103	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117903	Aluminum	112	113	P/P	70 - 130
2117903	Antimony	101	103	P/P	70 - 130
2117903	Arsenic	108	109	P/P	70 - 130
2117903	Cadmium	99.1	98.4	P/P	70 - 130
2117903	Chromium	93.7	91.4	P/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117903	Copper	97.4	98.9	P/P	70 - 130
2117903	Lead	103	102	P/P	70 - 130
2117903	Nickel	95.0	96.3	P/P	70 - 130
2117903	Selenium	102	104	P/P	70 - 130
2117903	Silver	94.3	94.9	P/P	70 - 130
2117903	Thallium	105	106	P/P	70 - 130

Reference Method: EPA 300.0
Batch ID: P370689

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117129	Bromide	92.6	93.4	P/P	90 - 110
2117707	Bromide	92.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117930	Chloride	99.5		P	90 - 110
2118051	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370814

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117930	Sulfate	101		P	90 - 110
2118051	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117713	Ammonia-N	96.4	97.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117566	Ammonia-N	93.7	96.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117717	Kjeldahl Nitrogen	93.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370599

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117932	Kjeldahl Nitrogen	106	107	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P370554

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117714	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P370710

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117877	NO2NO3-N	93.4	92.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P370566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117566	Total-P	96.0	93.7	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P370641

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117710	Total-P	90.0	94.1	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P370500

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117938	O-Phosphate-P	96.4	97.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P370502

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117968	O-Phosphate-P	96.0	97.7	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P370470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117895	Acetochlor	95.1	87.3	P/P	63 - 129
2117895	Alachlor	95.4	91.4	P/P	65 - 127
2117895	Ametryn	215	198	F/F	40 - 164
2117895	Atrazine Desethyl	42.7	137	P/P	14 - 157
2117895	Azinphos Methyl	94.1	92.5	P/P	49 - 180
2117895	Bromacil	58.6	94.2	P/P	48 - 130
2117895	Butylate	61.8	71.3	P/P	10 - 94.0
2117895	Chlorpyrifos Ethyl	101	91.1	P/P	58 - 123
2117895	Chlorpyrifos Methyl	95.4	96.8	P/P	58 - 125
2117895	Cyanazine	89.8	155	P/P	24 - 253
2117895	Demeton	81.2	99.0	P/P	25 - 149
2117895	Diazinon	111	107	P/P	59 - 144
2117895	Dimethenamid	86.2	68.3	P/P	46 - 139
2117895	Disulfoton	105	109	P/P	54 - 132
2117895	Dithiopyr	90.4	83.3	P/P	64 - 130
2117895	EPTC	61.5	72.9	P/P	10 - 92.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P370470

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117895	Ethion	89.0	84.3	P/P	30 - 148
2117895	Ethoprop	99.3	120	P/P	50 - 130
2117895	Fenamiphos	30.8	34.3	F/F	49 - 142
2117895	Fipronil	46.5	85.0	P/P	46 - 140
2117895	Fipronil Desulfinyl	36.7	83.2	P/P	30 - 121
2117895	Fipronil Sulfide	13.0	88.8	F/P	31 - 136
2117895	Fonofos	101	110	P/P	55 - 129
2117895	Malathion	89.4	89.9	P/P	56 - 135
2117895	Metalaxyl	92.3	85.3	P/P	54 - 135
2117895	Metolachlor	98.6	79.6	P/P	51 - 140
2117895	Metribuzin	180	224	P/P	45 - 254
2117895	Mevinphos	90.4	97.9	P/P	33 - 131
2117895	Molinate	80.5	82.2	P/P	14 - 98.0
2117895	Norflurazon	40.1	85.2	P/P	34 - 136
2117895	Oxadiazon	95.5	72.2	P/P	67 - 116
2117895	Parathion Ethyl	91.7	98.3	P/P	66 - 118
2117895	Parathion Methyl	99.8	109	P/P	64 - 136
2117895	Pendimethalin	95.9	95.0	P/P	59 - 144
2117895	Phorate	88.5	100	P/P	42 - 130
2117895	Prodiamine	83.2	83.8	P/P	42 - 148
2117895	Prometon	81.1	77.6	P/P	59 - 134
2117895	Prometryn	87.1	83.2	P/P	54 - 135
2117895	Tebuconazole	13.8	11.1	P/P	10 - 131
2117895	Terbufos	105	116	P/P	57 - 131
2117895	Terbutylazine	97.9	99.4	P/P	68 - 125

Reference Method: EPA 8270E
Batch ID: P370542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118790	Aldrin	64.7	63.7	P/P	25 - 92.0
2118790	Alpha-BHC	135	123	P/P	48 - 150
2118790	Alpha-Chlordane	100	96.5	P/P	50 - 115
2118790	Beta-BHC	147	136	P/P	39 - 184
2118790	Bifenthrin	96.3	94.6	P/P	46 - 116
2118790	Carbophenothion	99.7	93.7	P/P	27 - 180
2118790	Chlorothalonil	160	123	P/P	10 - 216
2118790	Cis-Nonachlor	96.2	91.2	P/P	55 - 112
2118790	Cypermethrin	110	109	P/P	40 - 153
2118790	DDD-p,p'	99.8	99.2	P/P	53 - 128
2118790	DDE-p,p'	91.7	89.9	P/P	48 - 116
2118790	DDT-p,p'	121	113	P/P	47 - 128
2118790	Delta-BHC	168	163	P/P	48 - 221
2118790	Dicofol	79.8	76.3	P/P	10 - 147
2118790	Dieldrin	99.2	96.9	P/P	48 - 128
2118790	Endosulfan I	106	99.2	P/P	58 - 126
2118790	Endosulfan II	107	99.3	P/P	50 - 150
2118790	Endosulfan Sulfate	113	113	P/P	56 - 130
2118790	Endrin	115	106	P/P	50 - 126
2118790	Endrin Aldehyde	84.8	98.6	P/P	12 - 145
2118790	Endrin Ketone	111	114	P/P	59 - 132
2118790	Ethalfuralin	104	99.5	P/P	65 - 122

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P370542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118790	Gamma-BHC	136	128	P/P	40 - 190
2118790	Gamma-Chlordane	92.7	89.1	P/P	50 - 112
2118790	Heptachlor	80.5	77.4	P/P	41 - 98.0
2118790	Heptachlor Epoxide	105	103	P/P	55 - 117
2118790	Hexachlorobenzene	94.7	88.4	F/P	47 - 91.0
2118790	Methoxychlor	103	96.8	P/P	55 - 133
2118790	Mirex	76.7	73.8	P/P	44 - 101
2118790	Permethrin	88.6	86.5	P/P	52 - 124
2118790	Trans-Nonachlor	89.1	83.1	P/P	53 - 99.0
2118790	Trifluralin	106	102	P/P	10 - 201

Reference Method: EPA 8276

Batch ID: P370542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117894	Chlordane	73.5	80.3	P/P	34 - 136
2117894	Toxaphene	59.1	61.8	P/P	22 - 152

Reference Method: EPA 8321B

Batch ID: P370422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2116928	3-Hydroxycarbofuran	93.4	98.9	P/P	40 - 160
2116928	Aldicarb	78.3	93.7	P/P	30 - 160
2116928	Aldicarb Sulfone	101	110	P/P	40 - 160
2116928	Aldicarb Sulfoxide	52.3	55.4	P/P	40 - 160
2116928	Carbaryl	81.7	88.9	P/P	40 - 160
2116928	Carbofuran	65.3	68.7	P/P	40 - 160
2116928	Methiocarb	64.5	70.6	P/P	40 - 160
2116928	Methomyl	69.8	76.4	P/P	40 - 160
2116928	Oxamyl	92.4	96.4	P/P	40 - 160
2116928	Propoxur	67.0	70.5	P/P	40 - 160

Reference Method: EPA 8321B

Batch ID: P370469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117512	2,4-D	167	154	F/P	40 - 160
2117512	Acetaminophen	104	95.5	P/P	30 - 160
2117512	Acetamiprid	117	123	P/P	40 - 160
2117512	Afidopyropen	101	117	P/P	40 - 160
2117512	Bentazon	104	110	P/P	30 - 160
2117512	Benzovindiflupyr	106	92.7	P/P	40 - 160
2117512	Carbamazepine	111	111	P/P	40 - 160
2117512	Clothianidin	123	110	P/P	40 - 160
2117512	Dinotefuran	117	111	P/P	40 - 160
2117512	Diuron	125	125	P/P	40 - 160
2117512	Fenuron	117	118	P/P	40 - 160
2117512	Fluridone	102	99.5	P/P	40 - 160
2117512	Hydrocodone	118	101	P/P	40 - 160
2117512	Ibuprofen	90.5	79.4	P/P	30 - 160
2117512	Imazapyr	138	148	P/P	40 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P370469

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117512	Imidacloprid	213	180	F/F	40 - 160
2117512	Linuron	78.3	70.5	P/P	40 - 160
2117512	Mandestrobin	98.6	90.1	P/P	40 - 160
2117512	MCP	168	164	F/F	40 - 160
2117512	Naproxen	99.5	94.3	P/P	40 - 160
2117512	Primidone	99.2	96.8	P/P	40 - 160
2117512	Pyraclostrobin	105	92.3	P/P	30 - 160
2117512	Thiamethoxam	180	151	F/P	40 - 160
2117512	Tolfenpyrad	81.9	76.5	P/P	40 - 160
2117512	Triclopyr	141	131	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P370512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117252	Acesulfame K	94.2	124	P/P	40 - 150
2117252	AMPA	68.0	69.3	P/P	40 - 150
2117252	Endothall	69.5	73.0	P/P	40 - 150
2117252	Glufosinate	94.6	93.8	P/P	40 - 150
2117252	Glyphosate	123	113	P/P	40 - 140
2117252	Sucralose	165	153	F/F	40 - 150

Reference Method: SM 4500 F-C-97
 Batch ID: P370697

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117355	Fluoride	99.8	99.2	P/P	89 - 106

Reference Method: SM 4500 F-C-97
 Batch ID: P371105

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2119562	Fluoride	95.6	95.6	P/P	89 - 106

Reference Method: SM 4500 F-C-97
 Batch ID: P371508

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2118723	Fluoride	98.4	97.7	P/P	89 - 106

Reference Method: SM 5310 B-00
 Batch ID: P370678

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2117872	Organic Carbon	106	105	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P370495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117931	Turbidity	3.42	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117924	Iron	0.935	Spike	P	0 - 20
2117924	Manganese	0.225	Spike	P	0 - 20
2117924	Zinc	0.127	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P370727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117903	Barium	0.661	Spike	P	0 - 20
2117903	Boron	1.01	Spike	P	0 - 20
2117903	Calcium	1.84	Spike	P	0 - 20
2117903	Iron	0.0664	Spike	P	0 - 20
2117903	Magnesium	2.53	Spike	P	0 - 20
2117903	Manganese	0.602	Spike	P	0 - 20
2117903	Potassium	1.31	Spike	P	0 - 20
2117903	Sodium	2.31	Spike	P	0 - 20
2117903	Zinc	0.355	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370561

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117924	Aluminum	3.32	Spike	P	0 - 20
2117924	Antimony	2.93	Spike	P	0 - 20
2117924	Arsenic	3.53	Spike	P	0 - 20
2117924	Cadmium	3.15	Spike	P	0 - 20
2117924	Chromium	0.562	Spike	P	0 - 20
2117924	Copper	3.46	Spike	P	0 - 20
2117924	Lead	2.25	Spike	P	0 - 20
2117924	Nickel	2.35	Spike	P	0 - 20
2117924	Selenium	2.50	Spike	P	0 - 20
2117924	Silver	3.23	Spike	P	0 - 20
2117924	Thallium	1.19	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117903	Aluminum	0.634	Spike	P	0 - 20
2117903	Antimony	1.68	Spike	P	0 - 20
2117903	Arsenic	1.20	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P370727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117903	Cadmium	0.716	Spike	P	0 - 20
2117903	Chromium	2.50	Spike	P	0 - 20
2117903	Copper	1.42	Spike	P	0 - 20
2117903	Lead	1.16	Spike	P	0 - 20
2117903	Nickel	1.36	Spike	P	0 - 20
2117903	Selenium	1.65	Spike	P	0 - 20
2117903	Silver	0.607	Spike	P	0 - 20
2117903	Thallium	1.26	Spike	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P370689

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117129	Bromide	0.738	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117930	Chloride	1.48	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P370814

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117930	Sulfate	2.22	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370667

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117713	Ammonia-N	0.750	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P370673

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117566	Ammonia-N	3.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P370598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117717	Kjeldahl Nitrogen	5.05	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P370599

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117932	Kjeldahl Nitrogen	1.29	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P370554

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117714	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P370710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117877	NO2NO3-N	0.537	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P370566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117566	Total-P	2.26	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P370641

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117710	Total-P	4.04	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P370500

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117938	O-Phosphate-P	0.876	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P370502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117968	O-Phosphate-P	1.76	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P370470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117895	Acetochlor	8.55	Spike	P	0 - 30
2117895	Alachlor	4.30	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117895	Ametryn	8.39	Spike	P	0 - 30
2117895	Atrazine	7.43	Spike	P	0 - 30
2117895	Atrazine Desethyl	52.2	Spike	F	0 - 30
2117895	Azinphos Methyl	1.75	Spike	P	0 - 30
2117895	Bromacil	25.8	Spike	P	0 - 30
2117895	Butylate	14.3	Spike	P	0 - 30
2117895	Chlorpyrifos Ethyl	9.98	Spike	P	0 - 30
2117895	Chlorpyrifos Methyl	1.45	Spike	P	0 - 30
2117895	Cyanazine	53.1	Spike	F	0 - 30
2117895	Demeton	19.7	Spike	P	0 - 30
2117895	Diazinon	3.23	Spike	P	0 - 30
2117895	Dimethenamid	20.0	Spike	P	0 - 30
2117895	Disulfoton	4.29	Spike	P	0 - 30
2117895	Dithiopyr	7.47	Spike	P	0 - 30
2117895	EPTC	17.1	Spike	P	0 - 30
2117895	Ethion	5.41	Spike	P	0 - 30
2117895	Ethoprop	18.9	Spike	P	0 - 30
2117895	Fenamiphos	10.7	Spike	P	0 - 30
2117895	Fipronil	46.2	Spike	F	0 - 30
2117895	Fipronil Desulfinyl	51.0	Spike	F	0 - 30
2117895	Fipronil Sulfide	50.2	Spike	F	0 - 30
2117895	Fipronil Sulfone	49.7	Spike	F	0 - 30
2117895	Fonofos	8.55	Spike	P	0 - 30
2117895	Hexazinone	21.5	Spike	P	0 - 30
2117895	Malathion	0.466	Spike	P	0 - 30
2117895	Metalaxyl	7.90	Spike	P	0 - 30
2117895	Metolachlor	14.1	Spike	P	0 - 30
2117895	Metribuzin	20.3	Spike	P	0 - 30
2117895	Mevinphos	7.97	Spike	P	0 - 30
2117895	Molinate	2.10	Spike	P	0 - 30
2117895	Norflurazon	72.0	Spike	F	0 - 30
2117895	Oxadiazon	18.0	Spike	P	0 - 30
2117895	Parathion Ethyl	6.92	Spike	P	0 - 30
2117895	Parathion Methyl	9.04	Spike	P	0 - 30
2117895	Pendimethalin	0.934	Spike	P	0 - 30
2117895	Phorate	10.8	Spike	P	0 - 30
2117895	Prodiamine	0.719	Spike	P	0 - 30
2117895	Prometon	3.32	Spike	P	0 - 30
2117895	Prometryn	4.56	Spike	P	0 - 30
2117895	Simazine	12.3	Spike	P	0 - 30
2117895	Tebuconazole	12.5	Spike	P	0 - 30
2117895	Terbufos	9.97	Spike	P	0 - 30
2117895	Terbutylazine	1.58	Spike	P	0 - 30
LFB	Acetochlor	6.00	LCS	P	0 - 30
LFB	Alachlor	5.97	LCS	P	0 - 30
LFB	Ametryn	4.03	LCS	P	0 - 30
LFB	Atrazine	1.90	LCS	P	0 - 30
LFB	Atrazine Desethyl	25.4	LCS	P	0 - 30
LFB	Azinphos Methyl	0.0515	LCS	P	0 - 30
LFB	Bromacil	21.9	LCS	P	0 - 30
LFB	Butylate	8.06	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370470

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorpyrifos Ethyl	9.34	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	5.02	LCS	P	0 - 30
LFB	Cyanazine	36.4	LCS	F	0 - 30
LFB	Demeton	1.56	LCS	P	0 - 30
LFB	Diazinon	8.58	LCS	P	0 - 30
LFB	Dimethenamid	10.2	LCS	P	0 - 30
LFB	Disulfoton	19.1	LCS	P	0 - 30
LFB	Dithiopyr	5.94	LCS	P	0 - 30
LFB	EPTC	13.9	LCS	P	0 - 30
LFB	Ethion	12.1	LCS	P	0 - 30
LFB	Ethoprop	5.63	LCS	P	0 - 30
LFB	Fenamiphos	6.58	LCS	P	0 - 30
LFB	Fipronil	18.8	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	14.2	LCS	P	0 - 30
LFB	Fipronil Sulfide	15.8	LCS	P	0 - 30
LFB	Fipronil Sulfone	24.6	LCS	P	0 - 30
LFB	Fonofos	13.1	LCS	P	0 - 30
LFB	Hexazinone	7.31	LCS	P	0 - 30
LFB	Malathion	0.766	LCS	P	0 - 30
LFB	Metaxyl	7.21	LCS	P	0 - 30
LFB	Metolachlor	18.4	LCS	P	0 - 30
LFB	Metribuzin	50.1	LCS	F	0 - 30
LFB	Mevinphos	3.33	LCS	P	0 - 30
LFB	Molinate	2.27	LCS	P	0 - 30
LFB	Norflurazon	13.7	LCS	P	0 - 30
LFB	Oxadiazon	13.1	LCS	P	0 - 30
LFB	Parathion Ethyl	2.79	LCS	P	0 - 30
LFB	Parathion Methyl	2.58	LCS	P	0 - 30
LFB	Pendimethalin	1.92	LCS	P	0 - 30
LFB	Phorate	5.80	LCS	P	0 - 30
LFB	Prodiamine	1.57	LCS	P	0 - 30
LFB	Prometon	15.0	LCS	P	0 - 30
LFB	Prometryn	8.58	LCS	P	0 - 30
LFB	Simazine	5.61	LCS	P	0 - 30
LFB	Tebuconazole	24.1	LCS	P	0 - 30
LFB	Terbufos	11.8	LCS	P	0 - 30
LFB	Terbutylazine	7.68	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P370542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118790	Aldrin	1.58	Spike	P	0 - 30
2118790	Alpha-BHC	9.31	Spike	P	0 - 30
2118790	Alpha-Chlordane	3.55	Spike	P	0 - 30
2118790	Beta-BHC	7.53	Spike	P	0 - 30
2118790	Bifenthrin	1.74	Spike	P	0 - 30
2118790	Carbophenothion	6.24	Spike	P	0 - 30
2118790	Chlorothalonil	26.2	Spike	P	0 - 30
2118790	Cis-Nonachlor	5.35	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118790	Cypermethrin	1.31	Spike	P	0 - 30
2118790	DDD-p,p'	0.668	Spike	P	0 - 30
2118790	DDE-p,p'	2.06	Spike	P	0 - 30
2118790	DDT-p,p'	6.21	Spike	P	0 - 30
2118790	Delta-BHC	3.17	Spike	P	0 - 30
2118790	Dicofol	4.52	Spike	P	0 - 30
2118790	Dieldrin	2.30	Spike	P	0 - 30
2118790	Endosulfan I	6.28	Spike	P	0 - 30
2118790	Endosulfan II	7.62	Spike	P	0 - 30
2118790	Endosulfan Sulfate	0.622	Spike	P	0 - 30
2118790	Endrin	7.88	Spike	P	0 - 30
2118790	Endrin Aldehyde	15.0	Spike	P	0 - 30
2118790	Endrin Ketone	3.33	Spike	P	0 - 30
2118790	Ethalfuralin	4.33	Spike	P	0 - 30
2118790	Gamma-BHC	6.24	Spike	P	0 - 30
2118790	Gamma-Chlordane	3.99	Spike	P	0 - 30
2118790	Heptachlor	3.91	Spike	P	0 - 30
2118790	Heptachlor Epoxide	1.91	Spike	P	0 - 30
2118790	Hexachlorobenzene	6.87	Spike	P	0 - 30
2118790	Methoxychlor	5.72	Spike	P	0 - 30
2118790	Mirex	3.87	Spike	P	0 - 30
2118790	Permethrin	2.38	Spike	P	0 - 30
2118790	Trans-Nonachlor	6.98	Spike	P	0 - 30
2118790	Trifluralin	3.64	Spike	P	0 - 30
LFB	Aldrin	0.985	LCS	P	0 - 30
LFB	Alpha-BHC	9.63	LCS	P	0 - 30
LFB	Alpha-Chlordane	3.71	LCS	P	0 - 30
LFB	Beta-BHC	5.60	LCS	P	0 - 30
LFB	Bifenthrin	16.5	LCS	P	0 - 30
LFB	Carbophenothion	4.16	LCS	P	0 - 30
LFB	Chlorothalonil	3.71	LCS	P	0 - 30
LFB	Cis-Nonachlor	4.68	LCS	P	0 - 30
LFB	Cypermethrin	11.0	LCS	P	0 - 30
LFB	DDD-p,p'	0.787	LCS	P	0 - 30
LFB	DDE-p,p'	4.95	LCS	P	0 - 30
LFB	DDT-p,p'	4.47	LCS	P	0 - 30
LFB	Delta-BHC	6.23	LCS	P	0 - 30
LFB	Dicofol	6.04	LCS	P	0 - 30
LFB	Dieldrin	3.85	LCS	P	0 - 30
LFB	Endosulfan I	2.76	LCS	P	0 - 30
LFB	Endosulfan II	5.98	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.633	LCS	P	0 - 30
LFB	Endrin	5.32	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.86	LCS	P	0 - 30
LFB	Endrin Ketone	0.390	LCS	P	0 - 30
LFB	Ethalfuralin	1.77	LCS	P	0 - 30
LFB	Gamma-BHC	7.51	LCS	P	0 - 30
LFB	Gamma-Chlordane	4.31	LCS	P	0 - 30
LFB	Heptachlor	2.88	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.46	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.44	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P370542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Methoxychlor	0.550	LCS	P	0 - 30
LFB	Mirex	12.6	LCS	P	0 - 30
LFB	Permethrin	6.08	LCS	P	0 - 30
LFB	Trans-Nonachlor	4.28	LCS	P	0 - 30
LFB	Trifluralin	2.26	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P370542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117894	Chlordane	8.88	Spike	P	0 - 30
2117894	Toxaphene	4.58	Spike	P	0 - 30
LFB	Chlordane	5.87	LCS	P	0 - 30
LFB	Toxaphene	5.45	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116928	3-Hydroxycarbofuran	5.71	Spike	P	0 - 30
2116928	Aldicarb	17.8	Spike	P	0 - 30
2116928	Aldicarb Sulfone	7.96	Spike	P	0 - 30
2116928	Aldicarb Sulfoxide	5.81	Spike	P	0 - 30
2116928	Carbaryl	8.44	Spike	P	0 - 30
2116928	Carbofuran	5.11	Spike	P	0 - 30
2116928	Methiocarb	9.03	Spike	P	0 - 30
2116928	Methomyl	8.99	Spike	P	0 - 30
2116928	Oxamyl	4.25	Spike	P	0 - 30
2116928	Propoxur	5.05	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117512	2,4-D	7.69	Spike	P	0 - 30
2117512	Acetaminophen	8.25	Spike	P	0 - 30
2117512	Acetamiprid	4.86	Spike	P	0 - 30
2117512	Afidopyropen	14.6	Spike	P	0 - 30
2117512	Bentazon	6.36	Spike	P	0 - 30
2117512	Benzovindiflupyr	13.4	Spike	P	0 - 30
2117512	Carbamazepine	0.547	Spike	P	0 - 30
2117512	Clothianidin	11.4	Spike	P	0 - 30
2117512	Dinotefuran	5.01	Spike	P	0 - 30
2117512	Diuron	0.301	Spike	P	0 - 30
2117512	Fenuron	1.36	Spike	P	0 - 30
2117512	Fluridone	2.75	Spike	P	0 - 30
2117512	Hydrocodone	15.4	Spike	P	0 - 30
2117512	Ibuprofen	13.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P370469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117512	Imazapyr	6.90	Spike	P	0 - 30
2117512	Imidacloprid	15.5	Spike	P	0 - 30
2117512	Linuron	10.4	Spike	P	0 - 30
2117512	Mandestrobin	8.96	Spike	P	0 - 30
2117512	MCP	2.67	Spike	P	0 - 30
2117512	Naproxen	5.37	Spike	P	0 - 30
2117512	Primidone	2.44	Spike	P	0 - 30
2117512	Pyraclostrobin	13.1	Spike	P	0 - 30
2117512	Thiamethoxam	17.3	Spike	P	0 - 30
2117512	Tolfenpyrad	6.80	Spike	P	0 - 30
2117512	Triclopyr	7.35	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P370512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117252	Acesulfame K	25.8	Spike	P	0 - 30
2117252	AMPA	0.691	Spike	P	0 - 30
2117252	Endothall	4.86	Spike	P	0 - 30
2117252	Glufosinate	0.774	Spike	P	0 - 30
2117252	Glyphosate	3.36	Spike	P	0 - 30
2117252	Sucralose	6.19	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P370530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117500	Color (true)	0.131	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P370694

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117355	Total Alkalinity	0.666	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P371100

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2119562	Total Alkalinity	1.13	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P371102

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118624	Total Alkalinity	0.706	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-97
Batch ID: P371062

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117960	TDS	4.65	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P370697

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117355	Fluoride	0.483	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P371105

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2119562	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P371508

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2118723	Fluoride	0.477	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P370678

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2117872	Organic Carbon	0.520	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: 2117891
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	99.2	P	30 - 160

Lab Sample ID: 2117892
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	148	P	30 - 160
EPA 8321B	Acetaminophen-d4	70.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	85.3	P	30 - 160
EPA 8321B	Diuron-d6	95.9	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Endothall-d6	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	42.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	42.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	74.6	P	30 - 160
EPA 8321B	Primidone-d5	85.4	P	30 - 160
EPA 8321B	Sucralose-d6	152	P	30 - 160
EPA 8321B	Sucralose-d6	152	P	30 - 160

Lab Sample ID: 2117893
Field Sample ID: 20030593

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	152	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	82.6	P	30 - 160
EPA 8321B	Diuron-d6	99.0	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.6	P	30 - 160
EPA 8321B	Primidone-d5	88.5	P	30 - 160
EPA 8321B	Sucralose-d6	158	P	30 - 160
EPA 8321B	Sucralose-d6	158	P	30 - 160

Lab Sample ID: 2117894
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	99.9	P	39 - 109
EPA 8270E	Tetrachloro-m-xylene	75.0	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	50.8	P	30 - 103
EPA 8276	PCNB	114	P	37 - 143

Lab Sample ID: 2117895
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	127	P	68 - 130
EPA 8270E	Terbufos-d10	96.9	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0

Run ID: A94097

Included Lab Sample IDs: 2117864, 2117867, 2117870, 2117871

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94136

Included Lab Sample IDs: 2117864, 2117867, 2117870, 2117871, 2117876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A94137

Included Lab Sample IDs: 2117866, 2117869, 2117874, 2117875, 2117878

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	98.9	P/P	90 - 110
O-Phosphate-P	99.2	99.9	P/P	90 - 110
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A94152

Included Lab Sample IDs: 2117876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.5	101	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94154

Included Lab Sample IDs: 2117865, 2117868

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A94159

Included Lab Sample IDs: 2117876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	102	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94202

Included Lab Sample IDs: 2117865, 2117868

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94210

Included Lab Sample IDs: 2117900, 2117901, 2117902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	103	P/P	95 - 105
Iron	103	103	P/P	90 - 110
Manganese	102	102	P/P	90 - 110
Manganese	102	102	P/P	95 - 105
Zinc	98.6	98.1	P/P	90 - 110
Zinc	99.0	98.6	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94212

Included Lab Sample IDs: 2117872, 2117873, 2117877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94214

Included Lab Sample IDs: 2117865, 2117868

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.7	97.3	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A94219

Included Lab Sample IDs: 2117865, 2117868, 2117872, 2117873, 2117877

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

Reference Method: SM 2320 B-97

Run ID: A94232

Included Lab Sample IDs: 2117864, 2117867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94232

Included Lab Sample IDs: 2117864, 2117867

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94233

Included Lab Sample IDs: 2117872, 2117873, 2117877

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94238

Included Lab Sample IDs: 2117892, 2117893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	117	113	P/P	60 - 160
Glufosinate	120	122	P/P	60 - 160
Glyphosate	120	121	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94240

Included Lab Sample IDs: 2117865, 2117868, 2117872, 2117873, 2117877

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.1	99.9	P/P	90 - 110
Kjeldahl Nitrogen	99.9	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94243

Included Lab Sample IDs: 2117892, 2117893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	154	83.7	P/P	60 - 160
Endothall	96.8	107	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94244

Included Lab Sample IDs: 2117872, 2117873

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94245

Included Lab Sample IDs: 2117877

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94322

Included Lab Sample IDs: 2117903, 2117904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	100	P/P	90 - 110
Boron	99.0	97.8	P/P	90 - 110
Calcium	99.0	97.7	P/P	90 - 110
Iron	100	98.6	P/P	95 - 105
Iron	98.6	96.8	P/P	90 - 110
Magnesium	98.6	95.7	P/P	90 - 110
Manganese	102	103	P/P	95 - 105
Potassium	99.8	104	P/P	90 - 110
Sodium	99.5	107	P/P	90 - 110
Zinc	101	101	P/P	95 - 105
Zinc	101	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94323

Included Lab Sample IDs: 2117900, 2117901, 2117902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	107	P/P	90 - 110
Antimony	97.9	98.4	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Cadmium	102	102	P/P	90 - 110
Copper	102	101	P/P	90 - 110
Lead	105	105	P/P	90 - 110
Nickel	103	99.8	P/P	90 - 110
Selenium	100	103	P/P	90 - 110
Thallium	94.2	92.7	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94342

Included Lab Sample IDs: 2117900, 2117901, 2117902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	92.1	90.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94372

Included Lab Sample IDs: 2117900, 2117901, 2117902

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

Reference Method: SM 2320 B-97

Run ID: A94392

Included Lab Sample IDs: 2117870, 2117871, 2117876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94392

Included Lab Sample IDs: 2117870

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

Reference Method: EPA 8276

Run ID: A94396

Included Lab Sample IDs: 2117894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	104		P	80 - 120
Toxaphene	95.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A94400

Included Lab Sample IDs: 2117892, 2117893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	111	102	P/P	50 - 150
3-Hydroxycarbofuran	120	112	P/P	60 - 150
Acetaminophen	105	102	P/P	60 - 160
Acetamiprid	112	116	P/P	50 - 150
Afidopyropen	132	114	P/P	50 - 150
Aldicarb	129	119	P/P	60 - 150
Aldicarb Sulfone	101	108	P/P	50 - 150
Aldicarb Sulfoxide	114	112	P/P	50 - 150
Bentazon	100	97.4	P/P	50 - 160
Bentazon	75.8	80.5	P/P	50 - 160
Benzovindiflupyr	106	100	P/P	50 - 150
Carbamazepine	105	107	P/P	60 - 150
Carbaryl	128	130	P/P	60 - 150
Carbofuran	117	116	P/P	50 - 150
Clothianidin	101	94.6	P/P	60 - 150
Dinotefuran	96.7	104	P/P	50 - 150
Diuron	132	132	P/P	60 - 150
Fenuron	111	112	P/P	60 - 150
Fluridone	108	107	P/P	60 - 160
Hydrocodone	108	108	P/P	60 - 150
Ibuprofen	77.6	82.8	P/P	50 - 160
Imazapyr	101	98.6	P/P	50 - 150
Imazapyr	91.8	92.1	P/P	50 - 150
Imidacloprid	94.9	96.6	P/P	60 - 150
Linuron	99.1	99.3	P/P	60 - 150
Mandestrobin	111	113	P/P	50 - 150
MCPP	90.9	91.6	P/P	50 - 150
Methiocarb	101	101	P/P	50 - 150
Methomyl	112	112	P/P	50 - 150
Naproxen	125	77.8	P/P	50 - 160
Oxamyl	115	121	P/P	50 - 150
Primidone	90.8	91.6	P/P	60 - 150
Propoxur	110	115	P/P	50 - 150
Pyraclostrobin	100	114	P/P	60 - 150
Thiamethoxam	103	112	P/P	50 - 150
Tolfenpyrad	110	125	P/P	60 - 150
Triclopyr	93.2	85.0	P/P	50 - 150

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94403

Included Lab Sample IDs: 2117903, 2117904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	106	109	P/P	90 - 110
Antimony	97.4	97.5	P/P	90 - 110
Arsenic	102	103	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Copper	103	103	P/P	90 - 110
Lead	100	101	P/P	90 - 110
Nickel	101	100	P/P	90 - 110
Selenium	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94403

Included Lab Sample IDs: 2117903, 2117904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	97.4	98.0	P/P	90 - 110
Thallium	95.1	95.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A94470

Included Lab Sample IDs: 2117895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	104		P	80 - 120
Alachlor	106		P	80 - 120
Ametryn	94.8		P	80 - 120
Atrazine	90.6		P	80 - 120
Atrazine Desethyl	95.3		P	80 - 120
Azinphos Methyl	98.3		P	80 - 120
Bromacil	102		P	80 - 120
Butylate	95.3		P	80 - 120
Chlorpyrifos Ethyl	98.3		P	80 - 120
Chlorpyrifos Methyl	99.9		P	80 - 120
Cyanazine	84.2		P	80 - 120
Demeton	85.7		P	80 - 120
Diazinon	104		P	80 - 120
Dimethenamid	105		P	80 - 120
Disulfoton	98.7		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	99.9		P	80 - 120
Ethion	97.2		P	80 - 120
Ethoprop	98.0		P	80 - 120
Fenamiphos	94.7		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	105		P	80 - 120
Fipronil Sulfide	96.7		P	80 - 120
Fipronil Sulfone	96.6		P	80 - 120
Fonofos	96.5		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	96.3		P	80 - 120
Metaxyl	104		P	80 - 120
Metolachlor	108		P	80 - 120
Metribuzin	96.2		P	80 - 120
Mevinphos	100		P	80 - 120
Molinate	99.8		P	80 - 120
Norflurazon	103		P	80 - 120
Oxadiazon	108		P	80 - 120
Parathion Ethyl	98.2		P	80 - 120
Parathion Methyl	99.0		P	80 - 120
Pendimethalin	96.6		P	80 - 120
Phorate	95.1		P	80 - 120
Prodiamine	95.4		P	80 - 120
Prometon	102		P	80 - 120
Prometryn	104		P	80 - 120
Simazine	97.8		P	80 - 120
Tebuconazole	104		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A94470
Included Lab Sample IDs: 2117895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Terbufos	96.6		P	80 - 120
Terbutylazine	99.2		P	80 - 120

Reference Method: EPA 8270E
Run ID: A94482
Included Lab Sample IDs: 2117894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	107		P	80 - 120
Alpha-BHC	115		P	80 - 120
Alpha-Chlordane	107		P	80 - 120
Beta-BHC	109		P	80 - 120
Bifenthrin	107		P	80 - 120
Carbophenothion	118		P	80 - 120
Chlorothalonil	103		P	80 - 120
Cis-Nonachlor	105		P	80 - 120
Cypermethrin	108		P	80 - 120
DDD-p,p'	106		P	80 - 120
DDE-p,p'	105		P	80 - 120
DDT-p,p'	113		P	80 - 120
Delta-BHC	110		P	80 - 120
Dicofol	108		P	80 - 120
Dieldrin	94.2		P	80 - 120
Endosulfan I	107		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	106		P	80 - 120
Endrin Aldehyde	103		P	80 - 120
Endrin Ketone	110		P	80 - 120
Ethalfuralin	114		P	80 - 120
Gamma-BHC	112		P	80 - 120
Gamma-Chlordane	106		P	80 - 120
Heptachlor	104		P	80 - 120
Heptachlor Epoxide	105		P	80 - 120
Hexachlorobenzene	116		P	80 - 120
Methoxychlor	112		P	80 - 120
Mirex	104		P	80 - 120
Permethrin	99.4		P	80 - 120
Trans-Nonachlor	105		P	80 - 120
Trifluralin	114		P	80 - 120

Reference Method: EPA 8321B
Run ID: A94533
Included Lab Sample IDs: 2117892, 2117893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	138	138	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94545

Included Lab Sample IDs: 2117903, 2117904

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	93.6	92.4	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A94568

Included Lab Sample IDs: 2117871, 2117876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	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							3.42	
EPA 200.7 Rev. 4.4	Barium	99.5		93.2	93.9				0.661
	Boron	102		97.8	100				1.01
	Calcium	102							1.84
	Iron	107		109	110	106			0.935
	Iron	101		95.8	95.7				0.0664
	Magnesium	101							2.53
	Manganese	101		101	101				0.225
	Manganese	100		93.9	94.6				0.602
	Potassium	99.0							1.31
	Sodium	95.9							2.31
	Zinc	98.9		99.2	99.0	97.0			0.127
	Zinc	99.0		101	102				0.355
EPA 200.8 Rev. 5.4	Aluminum	100		99.0	109	104			3.32
	Aluminum	105		112	113				0.634
	Antimony	101		103	102	99.4			2.93
	Antimony	98.0		101	103				1.68
	Arsenic	101		104	103	99.8			3.53
	Arsenic	101		108	109				1.20
	Cadmium	101		103	105	101			3.15
	Cadmium	97.2		99.1	98.4				0.716
	Chromium	91.2		90.4	90.0	89.4			0.562
	Chromium	91.3		93.7	91.4				2.50
	Copper	101		97.8	97.5	94.1			3.46
	Copper	98.6		97.4	98.9				1.42
	Lead	105		106	107	105			2.25
	Lead	98.4		103	102				1.16
	Nickel	102		98.2	101	98.4			2.35
	Nickel	98.1		95.0	96.3				1.36
	Selenium	101		100	99.8	97.3			2.50
	Selenium	101		102	104				1.65
	Silver	107		108	106	103			3.23
	Silver	98.6		94.3	94.9				0.607
	Thallium	101		104	103	101			1.19
	Thallium	102		105	106				1.26
EPA 300.0	Bromide	94.8		92.6	93.4	92.5			0.738
EPA 300.0 Rev. 2.1	Chloride	101		99.5	101			1.48	
	Sulfate	102		101	101			2.22	
EPA 350.1 Rev. 2.0	Ammonia-N	99.1		96.4	97.2				0.750
	Ammonia-N	95.7		93.7	96.8				3.00
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.6		93.8	100				5.05
	Kjeldahl Nitrogen	102		106	107				1.29
EPA 353.2 Rev. 2.0	NO2NO3-N	100		102	102				0.0
	NO2NO3-N	99.5		93.4	92.9				0.537
EPA 365.1 Rev. 2.0	Total-P	97.9		96.0	93.7				2.26
	Total-P	96.4		90.0	94.1				4.04
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.0		96.4	97.4				0.876
	O-Phosphate-P	98.0		96.0	97.7				1.76
EPA 8270E	Acetochlor	97.0	91.4	95.1	87.3	6.00			8.55
	Alachlor	94.1	88.6	95.4	91.4	5.97			4.30
	Aldrin	42.9	42.4	64.7	63.7	0.985			1.58
	Alpha-BHC	117	107	135	123	9.63			9.31
	Alpha-Chlordane	84.4	87.6	100	96.5	3.71			3.55
	Ametryn	84.0	87.4	215	198	4.03			8.39

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	MS
						SMP	
EPA 8270E	Atrazine	99.4	97.5			1.90	7.43
	Atrazine Desethyl	103	80.1	42.7	137	25.4	52.2
	Azinphos Methyl	108	108	94.1	92.5	0.0515	1.75
	Beta-BHC	129	122	147	136	5.60	7.53
	Bifenthrin	71.6	84.5	96.3	94.6	16.5	1.74
	Bromacil	66.7	83.1	58.6	94.2	21.9	25.8
	Butylate	59.1	64.1	61.8	71.3	8.06	14.3
	Carbophenothion	52.0	49.8	99.7	93.7	4.16	6.24
	Chlorothalonil	115	120	160	123	3.71	26.2
	Chlorpyrifos Ethyl	93.7	103	101	91.1	9.34	9.98
	Chlorpyrifos Methyl	94.0	98.8	95.4	96.8	5.02	1.45
	Cis-Nonachlor	84.0	88.0	96.2	91.2	4.68	5.35
	Cyanazine	108	156	89.8	155	36.4	53.1
	Cypermethrin	85.2	95.1	110	109	11.0	1.31
	DDD-p,p'	92.3	93.1	99.8	99.2	0.787	0.668
	DDE-p,p'	83.4	87.7	91.7	89.9	4.95	2.06
	DDT-p,p'	98.2	103	121	113	4.47	6.21
	Delta-BHC	127	119	168	163	6.23	3.17
	Demeton	65.2	66.3	81.2	99.0	1.56	19.7
	Diazinon	91.8	100	111	107	8.58	3.23
	Dicofol	78.8	74.1	79.8	76.3	6.04	4.52
	Dieldrin	87.6	91.0	99.2	96.9	3.85	2.30
	Dimethenamid	97.1	87.7	86.2	68.3	10.2	20.0
	Disulfoton	79.2	96.0	105	109	19.1	4.29
	Dithiopyr	94.1	88.6	90.4	83.3	5.94	7.47
	Endosulfan I	95.7	98.4	106	99.2	2.76	6.28
	Endosulfan II	97.0	103	107	99.3	5.98	7.62
	Endosulfan Sulfate	110	111	113	113	0.633	0.622
	Endrin	99.5	105	115	106	5.32	7.88
	Endrin Aldehyde	113	110	84.8	98.6	1.86	15.0
	Endrin Ketone	106	107	111	114	0.390	3.33
	EPTC	67.5	58.7	61.5	72.9	13.9	17.1
	Ethalfuralin	90.2	91.8	104	99.5	1.77	4.33
	Ethion	106	94.2	89.0	84.3	12.1	5.41
	Ethoprop	85.6	90.6	99.3	120	5.63	18.9
	Fenamiphos	89.6	95.7	30.8	34.3	6.58	10.7
	Fipronil	96.3	79.7	46.5	85.0	18.8	46.2
	Fipronil Desulfinyl	92.2	80.0	36.7	83.2	14.2	51.0
	Fipronil Sulfide	97.2	83.0	13.0	88.8	15.8	50.2
	Fipronil Sulfone	96.4	75.3			24.6	49.7
	Fonofos	82.5	94.1	101	110	13.1	8.55
	Gamma-BHC	126	116	136	128	7.51	6.24
	Gamma-Chlordane	74.7	78.0	92.7	89.1	4.31	3.99
	Heptachlor	69.5	71.5	80.5	77.4	2.88	3.91
	Heptachlor Epoxide	88.9	91.1	105	103	2.46	1.91
	Hexachlorobenzene	83.7	84.9	94.7	88.4	1.44	6.87
	Hexazinone	107	99.5			7.31	21.5
	Malathion	99.2	98.5	89.4	89.9	0.766	0.466
	Metalaxyl	97.7	90.9	92.3	85.3	7.21	7.90
	Methoxychlor	124	124	103	96.8	0.550	5.72
	Metolachlor	100	83.3	98.6	79.6	18.4	14.1
	Metribuzin	168	101	180	224	50.1	20.3
	Mevinphos	85.5	82.7	90.4	97.9	3.33	7.97
	Mirex	55.8	63.3	76.7	73.8	12.6	3.87

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Molinate	74.4	76.1	80.5	82.2	2.27	2.10
	Norflurazon	96.9	84.5	40.1	85.2	13.7	72.0
	Oxadiazon	103	90.3	95.5	72.2	13.1	18.0
	Parathion Ethyl	94.5	91.9	91.7	98.3	2.79	6.92
	Parathion Methyl	97.7	100	99.8	109	2.58	9.04
	Pendimethalin	90.1	91.9	95.9	95.0	1.92	0.934
	Permethrin	71.6	76.1	88.6	86.5	6.08	2.38
	Phorate	88.6	93.9	88.5	100	5.80	10.8
	Prodiamine	84.6	83.3	83.2	83.8	1.57	0.719
	Prometon	91.2	78.5	81.1	77.6	15.0	3.32
	Prometryn	92.7	85.1	87.1	83.2	8.58	4.56
	Simazine	102	108			5.61	12.3
	Tebuconazole	75.7	96.4	13.8	11.1	24.1	12.5
	Terbufos	84.2	94.7	105	116	11.8	9.97
	Terbuthylazine	99.5	92.2	97.9	99.4	7.68	1.58
	Trans-Nonachlor	75.0	78.3	89.1	83.1	4.28	6.98
	Trifluralin	91.1	93.2	106	102	2.26	3.64
EPA 8276	Chlordane	82.3	77.6	73.5	80.3	5.87	8.88
	Toxaphene	70.1	66.4	59.1	61.8	5.45	4.58
EPA 8321B	2,4-D	165		167	154		7.69
	3-Hydroxycarbofuran	109		93.4	98.9		5.71
	Acesulfame K	128		94.2	124		25.8
	Acetaminophen	85.8		95.5	104		8.25
	Acetamiprid	118		123	117		4.86
	Afidopyropen	108		117	101		14.6
	Aldicarb	113		78.3	93.7		17.8
	Aldicarb Sulfone	105		101	110		7.96
	Aldicarb Sulfoxide	105		52.3	55.4		5.81
	AMPA	122		69.3	68.0		0.691
	Bentazon	148		104	110		6.36
	Benzovindiflupyr	97.0		106	92.7		13.4
	Carbamazepine	118		111	111		0.547
	Carbaryl	113		81.7	88.9		8.44
	Carbofuran	93.0		65.3	68.7		5.11
	Clothianidin	103		110	123		11.4
	Dinotefuran	93.2		111	117		5.01
	Diuron	139		125	125		0.301
	Endothall	94.1		69.5	73.0		4.86
	Fenuron	122		118	117		1.36
	Fluridone	98.7		99.5	102		2.75
	Glufosinate	119		93.8	94.6		0.774
	Glyphosate	123		123	113		3.36
	Hydrocodone	102		101	118		15.4
	Ibuprofen	87.3		90.5	79.4		13.1
	Imazapyr	107		138	148		6.90
	Imidacloprid	110		180	213		15.5
	Linuron	78.9		70.5	78.3		10.4
	Mandestrobin	98.9		98.6	90.1		8.96
	MCPP	176		168	164		2.67
	Methiocarb	80.4		64.5	70.6		9.03
	Methomyl	90.6		69.8	76.4		8.99
	Naproxen	110		99.5	94.3		5.37
	Oxamyl	112		92.4	96.4		4.25
	Primidone	91.0		96.8	99.2		2.44

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Propoxur	95.4	67.0	70.5		5.05
	Pyraclostrobin	86.8	105	92.3		13.1
	Sucralose	146	165	153		6.19
	Thiamethoxam	113	151	180		17.3
	Tolfenpyrad	73.7	81.9	76.5		6.80
	Triclopyr	142	141	131		7.35
SM 2120 B	Color (true)	98.6			0.131	
SM 2320 B-97	Total Alkalinity	104			0.666	
	Total Alkalinity	103			1.13	
	Total Alkalinity	103			0.706	
SM 2540 C-97	TDS				4.65	
SM 4500 F-C-97	Fluoride	96.9	99.8	99.2		0.483
	Fluoride	96.1	95.6	95.6		0.0
	Fluoride	96.1	98.4	97.7		0.477
SM 5310 B-00	Organic Carbon	104	106	105		0.520

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2117864, 2117867, 2117870, 2117871, 2117876
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2117900, 2117901, 2117902, 2117903, 2117904
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2117900, 2117901, 2117902, 2117903, 2117904
EPA 300.0 / E31780	Bromide in aqueous matrices	2117864, 2117867, 2117870, 2117871
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2117876
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2117876
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2117865, 2117868, 2117872, 2117873, 2117877
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2117865, 2117868, 2117872, 2117873, 2117877
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2117865, 2117868, 2117872, 2117873, 2117877
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2117865, 2117868, 2117872, 2117873, 2117877
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2117866, 2117869, 2117874, 2117875, 2117878
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2117894
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2117895
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2117894
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2117891
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2117892, 2117893
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2117892, 2117893
SM 2120 B / E31780	True Color measured at 450 nm	2117876
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2117864, 2117867, 2117870, 2117871, 2117876
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2117876
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2117864, 2117867, 2117870, 2117871, 2117876
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2117864, 2117867, 2117870, 2117871, 2117876

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2117865, 2117868, 2117872, 2117873, 2117877

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	09/11/2019			09/11/2019 16:13	Samantha Davila	2117864, 2117867, 2117870, 2117871, 2117876
EPA 200.7 Rev. 4.4	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/13/2019 13:58	Alexander Thompson	2117900
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/13/2019 14:06	Alexander Thompson	2117901
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/13/2019 14:40	Alexander Thompson	2117902
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/18/2019 13:30	Betina Topolski	2117903
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/18/2019 14:51	Betina Topolski	2117904
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/18/2019 15:03	Betina Topolski	2117904
EPA 200.8 Rev. 5.4	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/18/2019 07:04	Robert K Palmer	2117900
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/18/2019 07:13	Robert K Palmer	2117901
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/18/2019 07:23	Robert K Palmer	2117902
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/18/2019 22:50	Robert K Palmer	2117900
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/18/2019 22:56	Robert K Palmer	2117901
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/18/2019 23:02	Robert K Palmer	2117902
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/20/2019 01:43	Robert K Palmer	2117900
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/20/2019 01:49	Robert K Palmer	2117901
	09/11/2019	09/12/2019 14:30	Elliott D. Healy	09/20/2019 01:55	Robert K Palmer	2117902
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/20/2019 21:18	Justin Cutchin	2117903
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/20/2019 21:48	Justin Cutchin	2117904
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/26/2019 15:42	Robert K Palmer	2117903
	09/11/2019	09/16/2019 14:50	Elliott D. Healy	09/26/2019 16:00	Robert K Palmer	2117904
EPA 300.0	09/11/2019			09/13/2019 16:37	Jhamieka S. Greenwood	2117864
	09/11/2019			09/13/2019 16:54	Jhamieka S. Greenwood	2117867
	09/11/2019			09/13/2019 17:11	Jhamieka S. Greenwood	2117870
	09/11/2019			09/13/2019 17:28	Jhamieka S. Greenwood	2117871
EPA 300.0 Rev. 2.1	09/11/2019			09/14/2019 03:56	Jhamieka S. Greenwood	2117876
EPA 350.1 Rev. 2.0	09/11/2019			09/13/2019 13:01	Ping Hua	2117872
	09/11/2019			09/13/2019 13:03	Ping Hua	2117873
	09/11/2019			09/13/2019 13:04	Ping Hua	2117877
	09/11/2019			09/13/2019 13:07	Ping Hua	2117865
	09/11/2019			09/13/2019 13:09	Ping Hua	2117868
EPA 351.2 Rev. 2.0	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:31	Julia Storbeck	2117872
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:33	Julia Storbeck	2117873
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:34	Julia Storbeck	2117877
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:54	Julia Storbeck	2117865
	09/11/2019	09/12/2019 13:00	Sima Feizi	09/13/2019 17:56	Julia Storbeck	2117868
EPA 353.2 Rev. 2.0	09/11/2019			09/12/2019 09:59	Beverly Y. Sanders	2117865
	09/11/2019			09/12/2019 10:01	Beverly Y. Sanders	2117868
	09/11/2019			09/16/2019 11:12	Beverly Y. Sanders	2117877
	09/11/2019			09/16/2019 11:18	Beverly Y. Sanders	2117872

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 353.2 Rev. 2.0	09/11/2019			09/16/2019 11:19	Beverly Y. Sanders	2117873
EPA 365.1 Rev. 2.0	09/11/2019	09/12/2019 13:45	Lipi Saha	09/13/2019 14:45	Rosalyn Ballman	2117865
	09/11/2019	09/12/2019 13:45	Lipi Saha	09/13/2019 14:46	Rosalyn Ballman	2117868
	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 12:07	Rosalyn Ballman	2117877
	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 15:03	Rosalyn Ballman	2117872
	09/11/2019	09/13/2019 13:45	Lipi Saha	09/16/2019 15:04	Rosalyn Ballman	2117873
EPA 365.1 Rev. 2.0 dissolved	09/11/2019			09/11/2019 16:14	Jhamieka S. Greenwood	2117866, 2117869
	09/11/2019			09/11/2019 16:27	Jhamieka S. Greenwood	2117878
	09/11/2019			09/11/2019 16:33	Jhamieka S. Greenwood	2117874
	09/11/2019			09/11/2019 16:34	Jhamieka S. Greenwood	2117875
EPA 8270E	09/11/2019	09/12/2019 08:00	Fe-Val Siddell	09/13/2019 15:28	Vandana T. Nagar	2117895
	09/11/2019	09/13/2019 08:00	Fe-Val Siddell	09/20/2019 22:49	Arthur Maknenko	2117894
EPA 8276	09/11/2019	09/13/2019 08:00	Fe-Val Siddell	09/19/2019 23:18	Michael Poppell	2117894
EPA 8321B	09/11/2019	09/12/2019 10:00	Rebecca Ware	09/13/2019 09:08	Rebecca Ware	2117892
	09/11/2019	09/12/2019 10:00	Rebecca Ware	09/13/2019 09:22	Rebecca Ware	2117893
	09/11/2019	09/12/2019 10:00	Rebecca Ware	09/13/2019 17:09	Rebecca Ware	2117892
	09/11/2019	09/12/2019 10:00	Rebecca Ware	09/13/2019 17:20	Rebecca Ware	2117893
	09/11/2019	09/12/2019 10:00	Rebecca Ware	09/25/2019 14:11	Rebecca Ware	2117892
	09/11/2019	09/12/2019 10:00	Rebecca Ware	09/25/2019 14:23	Rebecca Ware	2117893
	09/11/2019	09/12/2019 10:30	Hoor Shaik	09/13/2019 23:30	Juyoung Kim	2117891
	09/11/2019	09/13/2019 10:00	Hoor Shaik	09/14/2019 14:29	Juyoung Kim	2117892
	09/11/2019	09/13/2019 10:00	Hoor Shaik	09/14/2019 15:04	Juyoung Kim	2117893
	09/11/2019	09/13/2019 10:00	Hoor Shaik	09/16/2019 14:49	Juyoung Kim	2117893
SM 2120 B	09/11/2019			09/11/2019 17:31	Madeline Funaro	2117876
SM 2320 B-97	09/11/2019			09/13/2019 21:57	Dale L. Simmons	2117867
	09/11/2019			09/13/2019 22:09	Dale L. Simmons	2117864
	09/11/2019			09/19/2019 03:59	Dale L. Simmons	2117870
	09/11/2019			09/19/2019 06:43	Dale L. Simmons	2117871
	09/11/2019			09/19/2019 06:56	Dale L. Simmons	2117876
SM 2540 C-97	09/11/2019			09/13/2019 15:21	Yijie Li	2117876
SM 2540 D-97	09/11/2019			09/13/2019 15:21	Yijie Li	2117864, 2117867, 2117870, 2117871, 2117876
SM 4500 F-C-97	09/11/2019			09/13/2019 21:57	Dale L. Simmons	2117867
	09/11/2019			09/13/2019 22:09	Dale L. Simmons	2117864
	09/11/2019			09/19/2019 03:59	Dale L. Simmons	2117870
	09/11/2019			09/25/2019 16:27	Dale L. Simmons	2117871
	09/11/2019			09/25/2019 16:43	Dale L. Simmons	2117876
SM 5310 B-00	09/11/2019			09/13/2019 23:48	Madeline Funaro	2117872
	09/11/2019			09/14/2019 02:26	Madeline Funaro	2117865
	09/11/2019			09/14/2019 02:39	Madeline Funaro	2117868

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	09/11/2019			09/14/2019 03:27	Madeline Funaro	2117873
	09/11/2019			09/14/2019 03:40	Madeline Funaro	2117877