

Chemical Analysis Report

CEN-DIST-2019-09-27-01

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

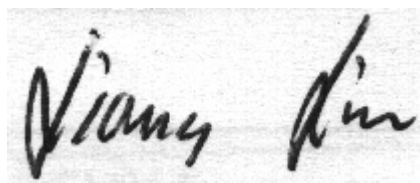
Event Description: **Dead Rvier / Lk Hatch Drain**
Request ID: **RQ-2019-09-30-41**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
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3319 Maguire Blvd., Suite 232
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Certified by: Liang Lin, Environmental Administrator

Date Certified: 22-OCT-2019 14:43

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Lake Hatchineha Drain downstream of drainage field

Collection Date/Time: 09/26/2019 09:53

Field ID: G4CE0168

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123048	EPA 180.1 Rev. 2.0	Turbidity	6.2	A	NTU	P371483	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P371980	
		Sulfate	11		mg SO4/L	P371984	
	SM 2120 B	Color (true)	140		PCU	P371486	
	SM 2320 B-97	Total Alkalinity	32		mg CaCO3/L	P371888	
	SM 2540 C-97	TDS	108		mg/L	P372028	
	SM 2540 D-97	TSS	9	I	mg/L	P372068	
	SM 4500 F-C-97	Fluoride	0.075	I	mg F/L	P371891	
2123049	EPA 350.1 Rev. 2.0	Ammonia-N	0.009		mg N/L	P371968	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.4		mg N/L	P371621	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P371650	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P371637	
	SM 5310 B-00	Organic Carbon	20		mg C/L	P371776	
2123050	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P371490	
2123059	EPA 8321B	Aldicarb	0.020	U	ug/L	P371702	
		Aldicarb Sulfone	0.0020	U	ug/L	P371702	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P371702	MS
		Carbaryl	0.0020	U	ug/L	P371702	
		Carbofuran	0.0020	U	ug/L	P371702	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P371702	
		Methiocarb	0.0020	U	ug/L	P371702	
		Methomyl	0.0020	U	ug/L	P371702	
		Oxamyl	0.0020	U	ug/L	P371702	
		Propoxur	0.0020	U	ug/L	P371702	
2123060		2,4-D	0.26		ug/L	P371387	
		Acesulfame K**	0.10	U	ug/L	P371503	
		AMPA**	0.24	I	ug/L	P371503	
		Sucralose**	0.073		ug/L	P371503	
		Acetaminophen**	0.0080	U	ug/L	P371387	
		Acetamiprid**	0.0020	U	ug/L	P371387	
		Endothal**	0.25	U	ug/L	P371503	
		Glufosinate**	0.10	U	ug/L	P371503	
		Glyphosate**	0.26	I	ug/L	P371503	
		Afidopyropen**	0.0020	UJ	ug/L	P371387	
		Bentazon	0.0094		ug/L	P371387	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371387	
		Carbamazepine**	8.0E-04	U	ug/L	P371387	
		Clothianidin**	0.0020	U	ug/L	P371387	
		Dinotefuran**	0.0021	I	ug/L	P371387	
		Diuron	0.0020	U	ug/L	P371387	
		Fenuron	0.021	I	ug/L	P371387	
		Fluridone**	0.0080		ug/L	P371387	

Field ID: G4CE0168

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123060	EPA 8321B	Imazapyr**	0.21		ug/L	P371387	
		Hydrocodone**	0.0020	U	ug/L	P371387	
		Ibuprofen**	0.020	U	ug/L	P371387	
		Imidacloprid	0.0095		ug/L	P371387	MS
		Linuron	0.0040	U	ug/L	P371387	
		Mandestrobin**	0.0020	UJ	ug/L	P371387	
		MCPP	0.0020	U	ug/L	P371387	
		Naproxen**	0.0080	U	ug/L	P371387	
		Primidone**	0.0040	U	ug/L	P371387	
		Pyraclostrobin**	0.0020	U	ug/L	P371387	
		Thiamethoxam**	0.0020	U	ug/L	P371387	
		Tolfenpyrad**	0.0020	U	ug/L	P371387	
		Triclopyr**	0.0040	U	ug/L	P371387	
2123063	EPA 8270E	Aldrin	4.3	UJ	ng/L	P371445	RPD
		Alpha-BHC	2.2	U	ng/L	P371445	
		Alpha-Chlordane	1.1	U	ng/L	P371445	
		Beta-BHC	11	U	ng/L	P371445	
		Bifenthrin**	4.3	U	ng/L	P371445	
		Delta-BHC	8.7	U	ng/L	P371445	
		Gamma-BHC	8.7	U	ng/L	P371445	
		Carbophenothion	11	U	ng/L	P371445	
		Chlorothalonil	2.2	U	ng/L	P371445	
		Cis-Nonachlor**	1.1	U	ng/L	P371445	
		Cypermethrin	22	U	ng/L	P371445	
		DDD-p,p'	6.5	U	ng/L	P371445	
		DDE-p,p'	6.5	U	ng/L	P371445	
		DDT-p,p'	7.6	U	ng/L	P371445	
		Dicofol	32	U	ng/L	P371445	
		Dieldrin	4.3	U	ng/L	P371445	
		Endosulfan I	4.3	U	ng/L	P371445	
		Endosulfan II	4.3	U	ng/L	P371445	
		Endosulfan Sulfate	2.2	U	ng/L	P371445	
		Endrin	2.2	U	ng/L	P371445	
		Endrin Aldehyde	2.2	U	ng/L	P371445	
		Endrin Ketone	2.2	U	ng/L	P371445	
		Ethalfuralin**	3.2	U	ng/L	P371445	
		Gamma-Chlordane	1.1	U	ng/L	P371445	
		Heptachlor	1.6	U	ng/L	P371445	
		Heptachlor Epoxide	2.2	U	ng/L	P371445	
		Hexachlorobenzene	2.2	U	ng/L	P371445	
		Methoxychlor	4.3	U	ng/L	P371445	
		Mirex	2.2	UJ	ng/L	P371445	LCS
		Permethrin	11	U	ng/L	P371445	
		Trans-Nonachlor**	1.1	U	ng/L	P371445	
		Trifluralin	2.7	U	ng/L	P371445	

Field ID: G4CE0168

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123063	EPA 8276	Chlordane	5.4	U	ng/L	P371445	
		Toxaphene	32	U	ng/L	P371445	
2123064	EPA 8270E	Acetochlor	0.26	U	ng/L	P371606	
		Alachlor	0.26	U	ng/L	P371606	
		Ametryn	0.63	U	ng/L	P371606	
		Atrazine	1.1		ng/L	P371606	
		Atrazine Desethyl	1.6	U	ng/L	P371606	
		Azinphos Methyl	5.2	U	ng/L	P371606	
		Bromacil	8.2		ng/L	P371606	
		Butylate	0.42	U	ng/L	P371606	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P371606	
		Chlorpyrifos Methyl	0.10	U	ng/L	P371606	
		Cyanazine	3.4	U	ng/L	P371606	
		Demeton	7.3	U	ng/L	P371606	
		Diazinon	0.13	U	ng/L	P371606	
		Dimethenamid**	0.10	U	ng/L	P371606	
		Disulfoton	0.52	U	ng/L	P371606	
		Dithiopyr**	0.10	U	ng/L	P371606	
		EPTC	1.3	U	ng/L	P371606	
		Ethion	0.16	U	ng/L	P371606	
		Ethoprop	0.10	U	ng/L	P371606	
		Fenamiphos	0.52	U	ng/L	P371606	
		Fipronil	0.26	U	ng/L	P371606	
		Fipronil Desulfinyl**	0.13	U	ng/L	P371606	
		Fipronil Sulfide	0.16	U	ng/L	P371606	
		Fipronil Sulfone	0.16	U	ng/L	P371606	
		Fonofos	0.21	U	ng/L	P371606	
		Hexazinone	0.52	U	ng/L	P371606	RPD
		Malathion	0.37	U	ng/L	P371606	
		Metalaxyl	2.8		ng/L	P371606	
		Metolachlor	0.52	U	ng/L	P371606	
		Metribuzin	0.79	U	ng/L	P371606	
		Mevinphos	0.52	U	ng/L	P371606	
		Molinate	0.31	U	ng/L	P371606	
		Norflurazon	19		ng/L	P371606	
		Oxadiazon**	0.10	U	ng/L	P371606	MS
		Parathion Ethyl	0.26	U	ng/L	P371606	
		Parathion Methyl	0.58	U	ng/L	P371606	
		Pendimethalin	1.0	U	ng/L	P371606	
		Phorate	0.26	U	ng/L	P371606	
		Prodiamine**	0.18	U	ng/L	P371606	MS, RPD
		Prometon	0.94	U	ng/L	P371606	
		Prometryn	0.21	U	ng/L	P371606	
		Simazine	3.9		ng/L	P371606	
		Tebuconazole**	0.52	U	ng/L	P371606	

Field ID: G4CE0168

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123064	EPA 8270E	Terbufos	0.10	U	ng/L	P371606	
		Terbuthylazine	0.45	U	ng/L	P371606	

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: J - second source check standards for some analytes were not available for analysis.

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

Sample Location: Dead River @ 1250m northe of Lake Hatchineha

Collection Date/Time: 09/26/2019 10:40

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123045	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P371483	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P371980	
		Sulfate	0.84		mg SO4/L	P371984	
	SM 2120 B	Color (true)	510		PCU	P371486	
	SM 2320 B-97	Total Alkalinity	31		mg CaCO3/L	P371888	
	SM 2540 C-97	TDS	154		mg/L	P372028	
	SM 2540 D-97	TSS	4	I	mg/L	P372068	
	SM 4500 F-C-97	Fluoride	0.085	I	mg F/L	P371891	
2123046	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P371968	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P371926	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039		mg N/L	P371650	
	EPA 365.1 Rev. 2.0	Total-P	0.073		mg P/L	P371637	
	SM 5310 B-00	Organic Carbon	43		mg C/L	P371776	
2123047	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.044		mg P/L	P371490	
2123057	EPA 8321B	Aldicarb	0.020	U	ug/L	P371702	
		Aldicarb Sulfone	0.0020	U	ug/L	P371702	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P371702	MS
		Carbaryl	0.0020	U	ug/L	P371702	
		Carbofuran	0.0020	U	ug/L	P371702	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P371702	
		Methiocarb	0.0020	U	ug/L	P371702	
		Methomyl	0.0020	U	ug/L	P371702	
		Oxamyl	0.0020	U	ug/L	P371702	
		Propoxur	0.0020	U	ug/L	P371702	
2123058		2,4-D	0.0020	U	ug/L	P371387	
		Acesulfame K**	0.10	U	ug/L	P371503	
		AMPA**	0.15	I	ug/L	P371503	
		Sucralose**	1.1		ug/L	P371503	
		Acetaminophen**	0.0080	U	ug/L	P371387	
		Acetamiprid**	0.0020	U	ug/L	P371387	
		Endothal**	0.25	U	ug/L	P371503	
		Glufosinate**	0.10	U	ug/L	P371503	
		Glyphosate**	0.10	U	ug/L	P371503	
		Afidopyropen**	0.0020	UJ	ug/L	P371387	
		Bentazon	0.014		ug/L	P371387	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P371387	
		Carbamazepine**	8.0E-04	U	ug/L	P371387	
		Clothianidin**	0.0020	U	ug/L	P371387	
		Dinotefuran**	0.0020	U	ug/L	P371387	
		Diuron	0.0025	I	ug/L	P371387	
		Fenuron	0.016	U	ug/L	P371387	
		Fluridone**	0.0019	I	ug/L	P371387	

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123058	EPA 8321B	Imazapyr**	0.066		ug/L	P371387	
		Hydrocodone**	0.0020	U	ug/L	P371387	
		Ibuprofen**	0.020	U	ug/L	P371387	
		Imidacloprid	0.0020	U	ug/L	P371387	MS
		Linuron	0.0040	U	ug/L	P371387	
		Mandestrobin**	0.0020	UJ	ug/L	P371387	
		MCP	0.0020	U	ug/L	P371387	
		Naproxen**	0.0080	U	ug/L	P371387	
		Primidone**	0.0040	U	ug/L	P371387	
		Pyraclostrobin**	0.0020	U	ug/L	P371387	
		Thiamethoxam**	0.0020	U	ug/L	P371387	
		Tolfenpyrad**	0.0020	U	ug/L	P371387	
		Triclopyr**	0.0040	U	ug/L	P371387	
2123061	EPA 8270E	Aldrin	4.2	UJ	ng/L	P371445	RPD
		Alpha-BHC	2.1	U	ng/L	P371445	
		Alpha-Chlordane	1.1	U	ng/L	P371445	
		Beta-BHC	11	U	ng/L	P371445	
		Bifenthrin**	4.2	U	ng/L	P371445	
		Delta-BHC	8.4	U	ng/L	P371445	
		Gamma-BHC	8.4	U	ng/L	P371445	
		Carbophenothion	11	U	ng/L	P371445	
		Chlorothalonil	2.1	U	ng/L	P371445	
		Cis-Nonachlor**	1.1	U	ng/L	P371445	
		Cypermethrin	21	U	ng/L	P371445	
		DDD-p,p'	6.3	U	ng/L	P371445	
		DDE-p,p'	6.3	U	ng/L	P371445	
		DDT-p,p'	7.4	U	ng/L	P371445	
		Dicofol	32	U	ng/L	P371445	
		Dieldrin	4.2	U	ng/L	P371445	
		Endosulfan I	4.2	U	ng/L	P371445	
		Endosulfan II	4.2	U	ng/L	P371445	
		Endosulfan Sulfate	2.1	U	ng/L	P371445	
		Endrin	2.1	U	ng/L	P371445	
		Endrin Aldehyde	2.1	U	ng/L	P371445	
		Endrin Ketone	2.1	U	ng/L	P371445	
		Ethalfuralin**	3.2	U	ng/L	P371445	
		Gamma-Chlordane	1.1	U	ng/L	P371445	
		Heptachlor	1.6	U	ng/L	P371445	
		Heptachlor Epoxide	2.1	U	ng/L	P371445	
		Hexachlorobenzene	2.1	U	ng/L	P371445	
		Methoxychlor	4.2	U	ng/L	P371445	
		Mirex	2.1	UJ	ng/L	P371445	LCS
		Permethrin	11	U	ng/L	P371445	
		Trans-Nonachlor**	1.1	U	ng/L	P371445	
		Trifluralin	2.6	U	ng/L	P371445	

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123061	EPA 8276	Chlordane	5.3	U	ng/L	P371445	
		Toxaphene	32	U	ng/L	P371445	
2123062	EPA 8270E	Acetochlor	0.26	U	ng/L	P371606	
		Alachlor	0.26	U	ng/L	P371606	
		Ametryn	0.62	U	ng/L	P371606	
		Atrazine	0.29	I	ng/L	P371606	
		Atrazine Desethyl	1.6	U	ng/L	P371606	
		Azinphos Methyl	5.2	U	ng/L	P371606	
		Bromacil	0.52	U	ng/L	P371606	
		Butylate	0.41	U	ng/L	P371606	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P371606	
		Chlorpyrifos Methyl	0.10	U	ng/L	P371606	
		Cyanazine	3.4	U	ng/L	P371606	
		Demeton	7.3	U	ng/L	P371606	
		Diazinon	0.13	U	ng/L	P371606	
		Dimethenamid**	0.10	U	ng/L	P371606	
		Disulfoton	0.52	U	ng/L	P371606	
		Dithiopyr**	0.10	U	ng/L	P371606	
		EPTC	1.3	U	ng/L	P371606	
		Ethion	0.16	U	ng/L	P371606	
		Ethoprop	0.10	U	ng/L	P371606	
		Fenamiphos	0.52	U	ng/L	P371606	
		Fipronil	0.26	U	ng/L	P371606	
		Fipronil Desulfinyl**	0.13	U	ng/L	P371606	
		Fipronil Sulfide	0.16	U	ng/L	P371606	
		Fipronil Sulfone	0.16	U	ng/L	P371606	
		Fonofos	0.21	U	ng/L	P371606	
		Hexazinone	0.52	UJ	ng/L	P371606	RPD
		Malathion	0.36	U	ng/L	P371606	
		Metalaxyl	0.31	U	ng/L	P371606	
		Metolachlor	0.52	U	ng/L	P371606	
		Metribuzin	0.78	U	ng/L	P371606	
		Mevinphos	0.52	U	ng/L	P371606	
		Molinate	0.31	U	ng/L	P371606	
		Norflurazon	0.52	U	ng/L	P371606	
		Oxadiazon**	0.10	UJ	ng/L	P371606	MS
		Parathion Ethyl	0.26	U	ng/L	P371606	
		Parathion Methyl	0.57	U	ng/L	P371606	
		Pendimethalin	1.0	U	ng/L	P371606	
		Phorate	0.26	U	ng/L	P371606	
		Prodiamine**	0.18	UJ	ng/L	P371606	MS, RPD
		Prometon	0.93	U	ng/L	P371606	
		Prometryn	0.21	U	ng/L	P371606	
		Simazine	0.52	U	ng/L	P371606	
		Tebuconazole**	0.52	U	ng/L	P371606	

Field ID: G4CE0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2123062	EPA 8270E	Terbufos	0.10	U	ng/L	P371606	
		Terbutylazine	0.44	U	ng/L	P371606	
2123065	EPA 200.7 Rev. 4.4	Barium	12.2		ug/L	P371543	
		Calcium	14.2		mg/L	P371543	
		Iron	610		ug/L	P371543	
		Magnesium	3.33		mg/L	P371543	
		Potassium	2.4		mg/L	P371543	
		Sodium	13.5		mg/L	P371543	
		Zinc	5.0	U	ug/L	P371543	
		Aluminum	204		ug/L	P371543	
	EPA 200.8 Rev. 5.4	Antimony	0.058	I	ug/L	P371543	
		Arsenic	0.62		ug/L	P371543	
		Boron**	31.3		ug/L	P371543	
		Cadmium	0.020	U	ug/L	P371543	
		Chromium	0.54	I	ug/L	P371543	
		Copper	0.47	I	ug/L	P371543	
		Lead	0.38	I	ug/L	P371543	
		Nickel	0.57	I	ug/L	P371543	
		Selenium	0.21	I	ug/L	P371543	
		Silver	0.010	U	ug/L	P371543	
		Thallium	0.10	U	ug/L	P371543	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 8321B: J - second source check standards for some analytes were not available for analysis.
EPA 8270E: Refer to the narrative for an explanation of QC Codes.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371483

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371543

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371543

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371980

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371984

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371968

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P371621

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P371926

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P371650

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P371637

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P371490

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

Reference Method: EPA 8270E
 Batch ID: P371445

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
 Batch ID: P371445

Component	Result	Code	Units
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E
 Batch ID: P371606

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P371606

Component	Result	Code	Units
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P371445

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

Reference Method: EPA 8321B
Batch ID: P371387

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

Reference Method: EPA 8321B
Batch ID: P371503

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P371503

Component	Result	Code	Units
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: EPA 8321B
Batch ID: P371702

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: SM 2120 B
Batch ID: P371486

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P371888

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

Reference Method: SM 2540 C-97
Batch ID: P372028

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P372068

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P371891

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P371776

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: P371543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	110		P	85 - 115
Iron	111		P	85 - 115
Magnesium	112		P	85 - 115
Potassium	106		P	85 - 115
Sodium	107		P	85 - 115
Zinc	99.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371543

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	101		P	85 - 115
Boron	102		P	85 - 115
Cadmium	98.5		P	85 - 115
Chromium	98.4		P	85 - 115
Copper	98.0		P	85 - 115
Lead	102		P	85 - 115
Nickel	98.7		P	85 - 115
Selenium	98.8		P	85 - 115
Silver	99.6		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371980

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371984

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371968

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371621

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P371926

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P371650

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P371637

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P371490

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

Reference Method: EPA 8270E
 Batch ID: P371445

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	39.0	25.8	P/P	20 - 93.0
Alpha-BHC	95.8	94.3	P/P	55 - 133
Alpha-Chlordane	82.3	87.6	P/P	58 - 112
Beta-BHC	107	120	P/P	54 - 168
Bifenthrin	52.7	67.6	P/P	30 - 134
Carbophenothion	96.5	90.4	P/P	26 - 147
Chlorothalonil	90.2	107	P/P	20 - 155
Cis-Nonachlor	84.5	92.2	P/P	54 - 115
Cypermethrin	57.3	69.7	P/P	40 - 137
DDD-p,p'	94.5	103	P/P	65 - 129
DDE-p,p'	74.1	78.5	P/P	57 - 116
DDT-p,p'	73.1	75.9	P/P	53 - 133
Delta-BHC	99.5	115	P/P	59 - 178
Dicofol	93.1	97.5	P/P	24 - 138
Dieldrin	94.1	101	P/P	60 - 120
Endosulfan I	98.4	106	P/P	64 - 118
Endosulfan II	105	114	P/P	58 - 142
Endosulfan Sulfate	96.4	106	P/P	60 - 127
Endrin	98.8	112	P/P	59 - 122
Endrin Aldehyde	98.2	116	P/P	49 - 132
Endrin Ketone	99.9	105	P/P	64 - 121
Ethalfuralin	77.5	83.4	P/P	60 - 126
Gamma-BHC	106	114	P/P	57 - 154
Gamma-Chlordane	73.2	79.1	P/P	56 - 110
Heptachlor	64.7	67.7	P/P	46 - 96.0
Heptachlor Epoxide	92.9	98.7	P/P	61 - 112
Hexachlorobenzene	66.6	69.3	P/P	44 - 98.0
Methoxychlor	92.4	97.2	P/P	63 - 134

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P371445

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	41.4	46.5	F/P	45 - 100
Permethrin	56.4	61.9	P/P	53 - 115
Trans-Nonachlor	74.6	79.9	P/P	47 - 110
Trifluralin	77.6	81.5	P/P	39 - 142

Reference Method: EPA 8270E

Batch ID: P371606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	84.0	92.1	P/P	69 - 122
Alachlor	80.8	90.6	P/P	71 - 120
Ametryn	84.7	91.9	P/P	47 - 138
Atrazine	106	108	P/P	74 - 124
Atrazine Desethyl	74.5	89.5	P/P	38 - 138
Azinphos Methyl	86.5	71.6	P/P	69 - 154
Bromacil	94.0	107	P/P	39 - 121
Butylate	65.8	71.7	P/P	27 - 87.0
Chlorpyrifos Ethyl	83.3	97.3	P/P	69 - 118
Chlorpyrifos Methyl	83.9	94.5	P/P	70 - 120
Cyanazine	94.7	109	P/P	20 - 250
Demeton	81.1	90.2	P/P	39 - 118
Diazinon	83.5	94.4	P/P	68 - 127
Dimethenamid	86.7	96.7	P/P	66 - 125
Disulfoton	72.5	78.6	P/P	52 - 126
Dithiopyr	81.0	93.7	P/P	67 - 127
EPTC	61.1	69.2	P/P	24 - 88.0
Ethion	64.3	81.5	P/P	51 - 132
Ethoprop	80.5	91.8	P/P	58 - 117
Fenamiphos	84.8	103	P/P	38 - 139
Fipronil	79.0	92.4	P/P	61 - 124
Fipronil Desulfinyl	72.4	87.4	P/P	47 - 120
Fipronil Sulfide	78.9	93.7	P/P	56 - 119
Fipronil Sulfone	76.8	89.3	P/P	50 - 117
Fonofos	78.9	88.7	P/P	60 - 121
Hexazinone	84.5	101	P/P	55 - 137
Malathion	94.8	109	P/P	66 - 126
Metaxyl	82.1	91.6	P/P	33 - 140
Metolachlor	81.7	92.8	P/P	69 - 119
Metribuzin	111	130	P/P	31 - 238
Mevinphos	90.4	102	P/P	42 - 113
Molinate	76.2	85.8	P/P	32 - 96.0
Norflurazon	85.4	96.6	P/P	54 - 123
Oxadiazon	74.7	87.0	P/P	63 - 128
Parathion Ethyl	85.3	101	P/P	72 - 111
Parathion Methyl	91.3	107	P/P	74 - 126
Pendimethalin	78.4	85.0	P/P	61 - 131
Phorate	78.0	88.0	P/P	51 - 115
Prodiamine	54.1	51.5	P/P	38 - 144
Prometon	78.4	90.4	P/P	54 - 119
Prometryn	78.9	92.3	P/P	63 - 120
Simazine	109	123	P/P	75 - 126
Tebuconazole	45.2	56.7	P/P	20 - 119

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P371606

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Terbufos	81.2	93.5	P/P	64 - 116
Terbutylazine	82.1	98.6	P/P	73 - 117

Reference Method: EPA 8276

Batch ID: P371445

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.3	73.9	P/P	43 - 128
Toxaphene	67.6	71.6	P/P	38 - 140

Reference Method: EPA 8321B

Batch ID: P371387

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	130		P	40 - 160
Acetaminophen	66.5		P	30 - 160
Acetamiprid	77.6		P	40 - 160
Afidopyropen	90.8		P	40 - 160
Bentazon	99.7		P	30 - 160
Benzovindiflupyr	87.3		P	40 - 160
Carbamazepine	95.3		P	40 - 160
Clothianidin	88.0		P	40 - 160
Dinotefuran	82.7		P	40 - 160
Diuron	93.8		P	40 - 160
Fenuron	89.4		P	40 - 160
Fluridone	87.9		P	40 - 160
Hydrocodone	86.0		P	40 - 160
Ibuprofen	81.5		P	30 - 160
Imazapyr	91.1		P	40 - 160
Imidacloprid	88.8		P	40 - 160
Linuron	78.9		P	40 - 160
Mandestrobin	89.6		P	40 - 160
MCPPP	133		P	40 - 160
Naproxen	75.5		P	40 - 160
Primidone	79.5		P	40 - 160
Pyraclostrobin	87.3		P	30 - 160
Thiamethoxam	91.3		P	40 - 160
Tolfenpyrad	58.0		P	40 - 160
Triclopyr	103		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P371503

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	119		P	40 - 150
AMPA	118		P	40 - 150
Endothall	94.7		P	40 - 150
Glufosinate	90.5		P	40 - 150
Glyphosate	98.2		P	40 - 140
Sucralose	106		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P371702

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	81.8		P	40 - 160
Aldicarb	71.5		P	30 - 160
Aldicarb Sulfone	88.2		P	40 - 160
Aldicarb Sulfoxide	93.9		P	40 - 160
Carbaryl	88.5		P	40 - 160
Carbofuran	101		P	40 - 160
Methiocarb	76.5		P	40 - 160
Methomyl	84.1		P	40 - 160
Oxamyl	88.4		P	40 - 160
Propoxur	86.4		P	40 - 160

Reference Method: SM 2120 B
Batch ID: P371486

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.7		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P371888

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

Reference Method: SM 4500 F-C-97
Batch ID: P371891

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P371776

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	103		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122656	Barium	103		P	80 - 120
2122656	Calcium	104		P	80 - 120
2122656	Iron	113		P	80 - 120
2122656	Magnesium	108		P	80 - 120
2122656	Potassium	100		P	80 - 120
2122656	Sodium	102		P	80 - 120
2122656	Zinc	103		P	80 - 120
2123022	Barium	108	108	P/P	80 - 120
2123022	Calcium	113	114	P/P	80 - 120
2123022	Iron	114	114	P/P	80 - 120
2123022	Magnesium	116	117	P/P	80 - 120
2123022	Potassium	107	109	P/P	80 - 120
2123022	Sodium	111	111	P/P	80 - 120
2123022	Zinc	107	107	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371543

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122656	Aluminum	102		P	80 - 120
2122656	Antimony	104		P	80 - 120
2122656	Arsenic	102		P	80 - 120
2122656	Boron	99.3		P	80 - 120
2122656	Cadmium	99.7		P	80 - 120
2122656	Chromium	98.0		P	80 - 120
2122656	Copper	98.8		P	80 - 120
2122656	Lead	103		P	80 - 120
2122656	Nickel	97.8		P	80 - 120
2122656	Selenium	99.2		P	80 - 120
2122656	Silver	100		P	80 - 120
2122656	Thallium	109		P	80 - 120
2123022	Aluminum	99.2	101	P/P	80 - 120
2123022	Antimony	102	105	P/P	80 - 120
2123022	Arsenic	100	103	P/P	80 - 120
2123022	Boron	101	104	P/P	80 - 120
2123022	Cadmium	98.6	99.7	P/P	80 - 120
2123022	Chromium	99.2	100	P/P	80 - 120
2123022	Copper	98.9	102	P/P	80 - 120
2123022	Lead	101	104	P/P	80 - 120
2123022	Nickel	97.9	99.5	P/P	80 - 120
2123022	Selenium	97.7	98.4	P/P	80 - 120
2123022	Silver	98.9	102	P/P	80 - 120
2123022	Thallium	102	108	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371980

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123033	Chloride	104		P	90 - 110
2123190	Chloride	104		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371984

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123033	Sulfate	105		P	90 - 110
2123190	Sulfate	108		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371968

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123016	Ammonia-N	102	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123074	Kjeldahl Nitrogen	94.8	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371650

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123041	NO2NO3-N	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123041	Total-P	99.6	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371490

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123035	O-Phosphate-P	97.9	99.6	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P371445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122184	Aldrin	45.5	41.4	P/P	25 - 92.0
2122184	Alpha-BHC	99.4	98.8	P/P	48 - 150
2122184	Alpha-Chlordane	91.0	87.8	P/P	50 - 115
2122184	Beta-BHC	121	113	P/P	39 - 184
2122184	Bifenthrin	81.1	75.4	P/P	46 - 116
2122184	Carbophenothion	106	110	P/P	27 - 180
2122184	Chlorothalonil	62.1	81.2	P/P	10 - 216
2122184	Cis-Nonachlor	95.0	90.8	P/P	55 - 112
2122184	Cypermethrin	68.8	67.6	P/P	40 - 153
2122184	DDD-p,p'	103	101	P/P	53 - 128
2122184	DDE-p,p'	86.4	83.3	P/P	48 - 116
2122184	DDT-p,p'	82.8	80.7	P/P	47 - 128
2122184	Delta-BHC	118	108	P/P	48 - 221
2122184	Dicofol	96.9	91.8	P/P	10 - 147
2122184	Dieldrin	98.7	97.2	P/P	48 - 128

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P371445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122184	Endosulfan I	105	101	P/P	58 - 126
2122184	Endosulfan II	110	110	P/P	50 - 150
2122184	Endosulfan Sulfate	103	101	P/P	56 - 130
2122184	Endrin	113	112	P/P	50 - 126
2122184	Endrin Aldehyde	107	109	P/P	12 - 145
2122184	Endrin Ketone	101	101	P/P	59 - 132
2122184	Ethalfuralin	88.0	85.6	P/P	65 - 122
2122184	Gamma-BHC	117	111	P/P	40 - 190
2122184	Gamma-Chlordane	83.7	80.1	P/P	50 - 112
2122184	Heptachlor	74.3	70.2	P/P	41 - 98.0
2122184	Heptachlor Epoxide	97.5	95.1	P/P	55 - 117
2122184	Hexachlorobenzene	80.0	72.2	P/P	47 - 91.0
2122184	Methoxychlor	81.7	87.1	P/P	55 - 133
2122184	Mirex	52.4	47.1	P/P	44 - 101
2122184	Permethrin	67.5	61.8	P/P	52 - 124
2122184	Trans-Nonachlor	86.6	83.3	P/P	53 - 99.0
2122184	Trifluralin	86.9	83.7	P/P	10 - 201

Reference Method: EPA 8270E

Batch ID: P371606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123062	Acetochlor	94.0	73.8	P/P	63 - 129
2123062	Alachlor	91.3	73.0	P/P	65 - 127
2123062	Ametryn	97.4	77.3	P/P	40 - 164
2123062	Atrazine	106	79.2	P/P	66 - 135
2123062	Atrazine Desethyl	135	103	P/P	14 - 157
2123062	Azinphos Methyl	106	92.1	P/P	49 - 180
2123062	Bromacil	92.2	84.7	P/P	48 - 130
2123062	Butylate	57.1	45.9	P/P	10 - 94.0
2123062	Chlorpyrifos Ethyl	92.2	71.9	P/P	58 - 123
2123062	Chlorpyrifos Methyl	84.3	67.4	P/P	58 - 125
2123062	Cyanazine	175	131	P/P	24 - 253
2123062	Demeton	89.0	68.6	P/P	25 - 149
2123062	Diazinon	108	83.6	P/P	59 - 144
2123062	Dimethenamid	89.9	71.9	P/P	46 - 139
2123062	Disulfoton	98.6	73.9	P/P	54 - 132
2123062	Dithiopyr	94.9	74.7	P/P	64 - 130
2123062	EPTC	59.9	49.0	P/P	10 - 92.0
2123062	Ethion	36.7	31.6	P/P	30 - 148
2123062	Ethoprop	98.1	73.4	P/P	50 - 130
2123062	Fenamiphos	120	94.9	P/P	49 - 142
2123062	Fipronil	99.3	82.6	P/P	46 - 140
2123062	Fipronil Desulfinyl	85.1	69.4	P/P	30 - 121
2123062	Fipronil Sulfide	76.4	62.6	P/P	31 - 136
2123062	Fipronil Sulfone	74.6	63.2	P/P	16 - 136
2123062	Fonofos	94.4	72.0	P/P	55 - 129
2123062	Hexazinone	119	80.4	P/P	56 - 141
2123062	Malathion	78.5	61.8	P/P	56 - 135
2123062	Metalaxyl	88.5	74.6	P/P	54 - 135
2123062	Metolachlor	80.8	65.2	P/P	51 - 140
2123062	Metribuzin	130	100	P/P	45 - 254

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P371606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123062	Mevinphos	99.2	79.3	P/P	33 - 131
2123062	Molinate	82.5	65.4	P/P	14 - 98.0
2123062	Norflurazon	91.2	75.8	P/P	34 - 136
2123062	Oxadiazon	80.1	64.9	P/F	67 - 116
2123062	Parathion Ethyl	78.8	67.3	P/P	66 - 118
2123062	Parathion Methyl	98.8	79.5	P/P	64 - 136
2123062	Pendimethalin	93.3	72.6	P/P	59 - 144
2123062	Phorate	98.7	75.5	P/P	42 - 130
2123062	Prodiamine	40.3	29.7	F/F	42 - 148
2123062	Prometon	88.4	69.1	P/P	59 - 134
2123062	Prometryn	92.2	73.2	P/P	54 - 135
2123062	Simazine	105	78.9	P/P	53 - 156
2123062	Tebuconazole	29.0	28.1	P/P	10 - 131
2123062	Terbufos	104	77.3	P/P	57 - 131
2123062	Terbutylazine	97.0	73.8	P/P	68 - 125

Reference Method: EPA 8276
Batch ID: P371445

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123291	Chlordane	71.8	89.5	P/P	34 - 136
2123291	Toxaphene	84.3	75.2	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P371387

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122592	2,4-D	155	138	P/P	40 - 160
2122592	Acetaminophen	71.1	65.2	P/P	30 - 160
2122592	Acetamiprid	109	97.4	P/P	40 - 160
2122592	Afidopyropen	100	86.4	P/P	40 - 160
2122592	Bentazon	101	88.7	P/P	30 - 160
2122592	Benzovindiflupyr	101	88.4	P/P	40 - 160
2122592	Carbamazepine	108	93.0	P/P	40 - 160
2122592	Clothianidin	106	94.6	P/P	40 - 160
2122592	Dinotefuran	103	92.8	P/P	40 - 160
2122592	Diuron	110	98.2	P/P	40 - 160
2122592	Fenuron	102	91.8	P/P	40 - 160
2122592	Fluridone	105	91.7	P/P	40 - 160
2122592	Hydrocodone	104	90.3	P/P	40 - 160
2122592	Ibuprofen	89.4	84.6	P/P	30 - 160
2122592	Imazapyr	136	118	P/P	40 - 160
2122592	Imidacloprid	163	139	F/P	40 - 160
2122592	Linuron	83.5	76.8	P/P	40 - 160
2122592	Mandestrobin	101	92.0	P/P	40 - 160
2122592	MCP	151	128	P/P	40 - 160
2122592	Naproxen	107	87.6	P/P	40 - 160
2122592	Primidone	88.7	78.4	P/P	40 - 160
2122592	Pyraclostrobin	97.9	93.4	P/P	30 - 160
2122592	Thiamethoxam	125	123	P/P	40 - 160
2122592	Tolfenpyrad	48.1	44.7	P/P	40 - 160
2122592	Triclopyr	125	112	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P371503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122962	Acesulfame K	90.7	92.9	P/P	40 - 150
2122962	AMPA	83.3	80.6	P/P	40 - 150
2122962	Endothall	49.9	52.4	P/P	40 - 150
2122962	Glufosinate	87.1	80.7	P/P	40 - 150
2122962	Glyphosate	83.9	81.6	P/P	40 - 140
2122962	Sucralose	110	107	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P371702

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123651	3-Hydroxycarbofuran	91.9	87.7	P/P	40 - 160
2123651	Aldicarb	85.5	81.8	P/P	30 - 160
2123651	Aldicarb Sulfone	97.5	97.1	P/P	40 - 160
2123651	Aldicarb Sulfoxide	38.3	35.9	F/F	40 - 160
2123651	Carbaryl	65.0	65.3	P/P	40 - 160
2123651	Carbofuran	78.4	76.1	P/P	40 - 160
2123651	Methiocarb	70.7	66.8	P/P	40 - 160
2123651	Methomyl	64.6	63.1	P/P	40 - 160
2123651	Oxamyl	86.6	82.0	P/P	40 - 160
2123651	Propoxur	70.7	67.0	P/P	40 - 160

Reference Method: SM 4500 F-C-97
Batch ID: P371891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2123040	Fluoride	97.9	97.3	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P371776

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2122935	Organic Carbon	104	105	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P371483

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123048	Turbidity	1.92	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P371543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123022	Barium	0.159	Spike	P	0 - 20
2123022	Calcium	0.922	Spike	P	0 - 20
2123022	Iron	0.191	Spike	P	0 - 20
2123022	Magnesium	0.873	Spike	P	0 - 20
2123022	Potassium	1.49	Spike	P	0 - 20
2123022	Sodium	0.544	Spike	P	0 - 20
2123022	Zinc	0.448	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P371543

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123022	Aluminum	1.83	Spike	P	0 - 20
2123022	Antimony	2.82	Spike	P	0 - 20
2123022	Arsenic	2.38	Spike	P	0 - 20
2123022	Boron	2.71	Spike	P	0 - 20
2123022	Cadmium	1.12	Spike	P	0 - 20
2123022	Chromium	1.21	Spike	P	0 - 20
2123022	Copper	3.10	Spike	P	0 - 20
2123022	Lead	3.31	Spike	P	0 - 20
2123022	Nickel	1.64	Spike	P	0 - 20
2123022	Selenium	0.766	Spike	P	0 - 20
2123022	Silver	2.63	Spike	P	0 - 20
2123022	Thallium	5.55	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371980

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123033	Chloride	0.889	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P371984

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123033	Sulfate	0.980	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P371968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123016	Ammonia-N	1.83	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123074	Kjeldahl Nitrogen	7.09	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P371926

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2124450	Kjeldahl Nitrogen	3.84	Sample	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P371650

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123041	NO2NO3-N	0.810	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P371637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123041	Total-P	0.517	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P371490

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123035	O-Phosphate-P	0.884	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P371445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122184	Aldrin	9.47	Spike	P	0 - 30
2122184	Alpha-BHC	0.609	Spike	P	0 - 30
2122184	Alpha-Chlordane	3.63	Spike	P	0 - 30
2122184	Beta-BHC	7.24	Spike	P	0 - 30
2122184	Bifenthrin	7.23	Spike	P	0 - 30
2122184	Carbophenothion	3.61	Spike	P	0 - 30
2122184	Chlorothalonil	26.6	Spike	P	0 - 30
2122184	Cis-Nonachlor	4.50	Spike	P	0 - 30
2122184	Cypermethrin	1.80	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P371445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122184	DDD-p,p'	2.31	Spike	P	0 - 30
2122184	DDE-p,p'	3.63	Spike	P	0 - 30
2122184	DDT-p,p'	2.54	Spike	P	0 - 30
2122184	Delta-BHC	9.25	Spike	P	0 - 30
2122184	Dicofol	5.38	Spike	P	0 - 30
2122184	Dieldrin	1.48	Spike	P	0 - 30
2122184	Endosulfan I	3.74	Spike	P	0 - 30
2122184	Endosulfan II	0.331	Spike	P	0 - 30
2122184	Endosulfan Sulfate	1.65	Spike	P	0 - 30
2122184	Endrin	1.17	Spike	P	0 - 30
2122184	Endrin Aldehyde	1.56	Spike	P	0 - 30
2122184	Endrin Ketone	0.230	Spike	P	0 - 30
2122184	Ethalfuralin	2.75	Spike	P	0 - 30
2122184	Gamma-BHC	4.98	Spike	P	0 - 30
2122184	Gamma-Chlordane	4.35	Spike	P	0 - 30
2122184	Heptachlor	5.72	Spike	P	0 - 30
2122184	Heptachlor Epoxide	2.53	Spike	P	0 - 30
2122184	Hexachlorobenzene	10.3	Spike	P	0 - 30
2122184	Methoxychlor	6.46	Spike	P	0 - 30
2122184	Mirex	9.53	Spike	P	0 - 30
2122184	Permethrin	8.81	Spike	P	0 - 30
2122184	Trans-Nonachlor	3.87	Spike	P	0 - 30
2122184	Trifluralin	3.70	Spike	P	0 - 30
LFB	Aldrin	40.8	LCS	F	0 - 30
LFB	Alpha-BHC	1.59	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.17	LCS	P	0 - 30
LFB	Beta-BHC	11.0	LCS	P	0 - 30
LFB	Bifenthrin	24.8	LCS	P	0 - 30
LFB	Carbophenothion	6.45	LCS	P	0 - 30
LFB	Chlorothalonil	17.0	LCS	P	0 - 30
LFB	Cis-Nonachlor	8.78	LCS	P	0 - 30
LFB	Cypermethrin	19.5	LCS	P	0 - 30
LFB	DDD-p,p'	8.58	LCS	P	0 - 30
LFB	DDE-p,p'	5.68	LCS	P	0 - 30
LFB	DDT-p,p'	3.71	LCS	P	0 - 30
LFB	Delta-BHC	14.8	LCS	P	0 - 30
LFB	Dicofol	4.62	LCS	P	0 - 30
LFB	Dieldrin	7.21	LCS	P	0 - 30
LFB	Endosulfan I	7.34	LCS	P	0 - 30
LFB	Endosulfan II	7.94	LCS	P	0 - 30
LFB	Endosulfan Sulfate	9.39	LCS	P	0 - 30
LFB	Endrin	12.8	LCS	P	0 - 30
LFB	Endrin Aldehyde	17.1	LCS	P	0 - 30
LFB	Endrin Ketone	5.02	LCS	P	0 - 30
LFB	Ethalfuralin	7.35	LCS	P	0 - 30
LFB	Gamma-BHC	7.21	LCS	P	0 - 30
LFB	Gamma-Chlordane	7.69	LCS	P	0 - 30
LFB	Heptachlor	4.54	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.98	LCS	P	0 - 30
LFB	Hexachlorobenzene	4.00	LCS	P	0 - 30
LFB	Methoxychlor	5.12	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P371445

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	11.8	LCS	P	0 - 30
LFB	Permethrin	9.27	LCS	P	0 - 30
LFB	Trans-Nonachlor	6.85	LCS	P	0 - 30
LFB	Trifluralin	4.89	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P371606

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123062	Acetochlor	24.1	Spike	P	0 - 30
2123062	Alachlor	22.3	Spike	P	0 - 30
2123062	Ametryn	23.0	Spike	P	0 - 30
2123062	Atrazine	27.0	Spike	P	0 - 30
2123062	Atrazine Desethyl	26.3	Spike	P	0 - 30
2123062	Azinphos Methyl	14.3	Spike	P	0 - 30
2123062	Bromacil	8.46	Spike	P	0 - 30
2123062	Butylate	21.6	Spike	P	0 - 30
2123062	Chlorpyrifos Ethyl	24.7	Spike	P	0 - 30
2123062	Chlorpyrifos Methyl	22.3	Spike	P	0 - 30
2123062	Cyanazine	28.8	Spike	P	0 - 30
2123062	Demeton	25.9	Spike	P	0 - 30
2123062	Diazinon	25.2	Spike	P	0 - 30
2123062	Dimethenamid	22.2	Spike	P	0 - 30
2123062	Disulfoton	28.6	Spike	P	0 - 30
2123062	Dithiopyr	23.9	Spike	P	0 - 30
2123062	EPTC	20.0	Spike	P	0 - 30
2123062	Ethion	14.9	Spike	P	0 - 30
2123062	Ethoprop	28.8	Spike	P	0 - 30
2123062	Fenamiphos	23.1	Spike	P	0 - 30
2123062	Fipronil	18.4	Spike	P	0 - 30
2123062	Fipronil Desulfinyl	20.3	Spike	P	0 - 30
2123062	Fipronil Sulfide	19.8	Spike	P	0 - 30
2123062	Fipronil Sulfone	16.5	Spike	P	0 - 30
2123062	Fonofos	27.0	Spike	P	0 - 30
2123062	Hexazinone	38.3	Spike	F	0 - 30
2123062	Malathion	23.9	Spike	P	0 - 30
2123062	Metalaxyl	17.0	Spike	P	0 - 30
2123062	Metolachlor	21.5	Spike	P	0 - 30
2123062	Metribuzin	26.0	Spike	P	0 - 30
2123062	Mevinphos	22.3	Spike	P	0 - 30
2123062	Molinate	23.2	Spike	P	0 - 30
2123062	Norflurazon	18.4	Spike	P	0 - 30
2123062	Oxadiazon	20.9	Spike	P	0 - 30
2123062	Parathion Ethyl	15.8	Spike	P	0 - 30
2123062	Parathion Methyl	21.6	Spike	P	0 - 30
2123062	Pendimethalin	24.9	Spike	P	0 - 30
2123062	Phorate	26.6	Spike	P	0 - 30
2123062	Prodiamine	30.2	Spike	F	0 - 30
2123062	Prometon	24.5	Spike	P	0 - 30
2123062	Prometryn	22.9	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P371606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123062	Simazine	28.6	Spike	P	0 - 30
2123062	Tebuconazole	3.15	Spike	P	0 - 30
2123062	Terbufos	29.3	Spike	P	0 - 30
2123062	Terbutylazine	27.2	Spike	P	0 - 30
LFB	Acetochlor	9.22	LCS	P	0 - 30
LFB	Alachlor	11.4	LCS	P	0 - 30
LFB	Ametryn	8.19	LCS	P	0 - 30
LFB	Atrazine	1.49	LCS	P	0 - 30
LFB	Atrazine Desethyl	18.3	LCS	P	0 - 30
LFB	Azinphos Methyl	18.9	LCS	P	0 - 30
LFB	Bromacil	12.8	LCS	P	0 - 30
LFB	Butylate	8.63	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	15.5	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	11.9	LCS	P	0 - 30
LFB	Cyanazine	14.2	LCS	P	0 - 30
LFB	Demeton	10.6	LCS	P	0 - 30
LFB	Diazinon	12.3	LCS	P	0 - 30
LFB	Dimethenamid	11.0	LCS	P	0 - 30
LFB	Disulfoton	8.12	LCS	P	0 - 30
LFB	Dithiopyr	14.5	LCS	P	0 - 30
LFB	EPTC	12.5	LCS	P	0 - 30
LFB	Ethion	23.6	LCS	P	0 - 30
LFB	Ethoprop	13.1	LCS	P	0 - 30
LFB	Fenamiphos	19.3	LCS	P	0 - 30
LFB	Fipronil	15.6	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	18.8	LCS	P	0 - 30
LFB	Fipronil Sulfide	17.2	LCS	P	0 - 30
LFB	Fipronil Sulfone	15.1	LCS	P	0 - 30
LFB	Fonofos	11.6	LCS	P	0 - 30
LFB	Hexazinone	17.7	LCS	P	0 - 30
LFB	Malathion	13.7	LCS	P	0 - 30
LFB	Metalaxyl	10.9	LCS	P	0 - 30
LFB	Metolachlor	12.7	LCS	P	0 - 30
LFB	Metribuzin	15.3	LCS	P	0 - 30
LFB	Mevinphos	11.8	LCS	P	0 - 30
LFB	Molinate	11.8	LCS	P	0 - 30
LFB	Norflurazon	12.3	LCS	P	0 - 30
LFB	Oxadiazon	15.2	LCS	P	0 - 30
LFB	Parathion Ethyl	16.5	LCS	P	0 - 30
LFB	Parathion Methyl	15.7	LCS	P	0 - 30
LFB	Pendimethalin	8.16	LCS	P	0 - 30
LFB	Phorate	12.1	LCS	P	0 - 30
LFB	Prodiamine	4.88	LCS	P	0 - 30
LFB	Prometon	14.2	LCS	P	0 - 30
LFB	Prometryn	15.6	LCS	P	0 - 30
LFB	Simazine	11.9	LCS	P	0 - 30
LFB	Tebuconazole	22.6	LCS	P	0 - 30
LFB	Terbufos	14.1	LCS	P	0 - 30
LFB	Terbutylazine	18.3	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
 Batch ID: P371445

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123291	Chlordane	22.0	Spike	P	0 - 30
2123291	Toxaphene	11.3	Spike	P	0 - 30
LFB	Chlordane	4.45	LCS	P	0 - 30
LFB	Toxaphene	5.69	LCS	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P371387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122592	2,4-D	11.7	Spike	P	0 - 30
2122592	Acetaminophen	8.63	Spike	P	0 - 30
2122592	Acetamiprid	10.9	Spike	P	0 - 30
2122592	Afidopyropen	14.6	Spike	P	0 - 30
2122592	Bentazon	8.91	Spike	P	0 - 30
2122592	Benzovindiflupyr	13.2	Spike	P	0 - 30
2122592	Carbamazepine	14.9	Spike	P	0 - 30
2122592	Clothianidin	11.5	Spike	P	0 - 30
2122592	Dinotefuran	10.2	Spike	P	0 - 30
2122592	Diuron	11.5	Spike	P	0 - 30
2122592	Fenuron	10.3	Spike	P	0 - 30
2122592	Fluridone	12.5	Spike	P	0 - 30
2122592	Hydrocodone	14.1	Spike	P	0 - 30
2122592	Ibuprofen	5.54	Spike	P	0 - 30
2122592	Imazapyr	12.5	Spike	P	0 - 30
2122592	Imidacloprid	15.7	Spike	P	0 - 30
2122592	Linuron	8.30	Spike	P	0 - 30
2122592	Mandestrobin	9.54	Spike	P	0 - 30
2122592	MCPP	16.7	Spike	P	0 - 30
2122592	Naproxen	19.7	Spike	P	0 - 30
2122592	Primidone	12.3	Spike	P	0 - 30
2122592	Pyraclostrobin	4.72	Spike	P	0 - 30
2122592	Thiamethoxam	1.40	Spike	P	0 - 30
2122592	Tolfenpyrad	7.43	Spike	P	0 - 30
2122592	Triclopyr	11.1	Spike	P	0 - 30

Reference Method: EPA 8321B
 Batch ID: P371503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122962	Acesulfame K	2.39	Spike	P	0 - 30
2122962	AMPA	3.35	Spike	P	0 - 30
2122962	Endothall	4.93	Spike	P	0 - 30
2122962	Glufosinate	7.64	Spike	P	0 - 30
2122962	Glyphosate	2.80	Spike	P	0 - 30
2122962	Sucralose	2.89	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P371702

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123651	3-Hydroxycarbofuran	4.68	Spike	P	0 - 30
2123651	Aldicarb	4.43	Spike	P	0 - 30
2123651	Aldicarb Sulfone	0.365	Spike	P	0 - 30
2123651	Aldicarb Sulfoxide	6.52	Spike	P	0 - 30
2123651	Carbaryl	0.488	Spike	P	0 - 30
2123651	Carbofuran	3.05	Spike	P	0 - 30
2123651	Methiocarb	5.59	Spike	P	0 - 30
2123651	Methomyl	2.30	Spike	P	0 - 30
2123651	Oxamyl	5.37	Spike	P	0 - 30
2123651	Propoxur	5.34	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P371486

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123033	Color (true)	0.310	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P371888

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123040	Total Alkalinity	1.10	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P372028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123040	TDS	6.23	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P371891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2123040	Fluoride	0.476	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P371776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2122935	Organic Carbon	0.156	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2123057
Field Sample ID: G4CE0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	62.2	P	30 - 160

Lab Sample ID: 2123058
Field Sample ID: G4CE0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	101	P	30 - 160
EPA 8321B	Acetaminophen-d4	60.0	P	30 - 160
EPA 8321B	Bentazon-d7	43.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.7	P	30 - 160
EPA 8321B	Diuron-d6	73.9	P	30 - 160
EPA 8321B	Endothall-d6	81.8	P	30 - 160
EPA 8321B	Endothall-d6	81.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.7	P	30 - 160
EPA 8321B	Primidone-d5	52.7	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2123059
Field Sample ID: G4CE0168

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	77.1	P	30 - 160

Lab Sample ID: 2123060
Field Sample ID: G4CE0168

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	50.6	P	30 - 160
EPA 8321B	Bentazon-d7	46.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.8	P	30 - 160
EPA 8321B	Diuron-d6	73.2	P	30 - 160
EPA 8321B	Endothall-d6	90.2	P	30 - 160
EPA 8321B	Endothall-d6	90.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.5	P	30 - 160
EPA 8321B	Primidone-d5	68.2	P	30 - 160
EPA 8321B	Sucralose-d6	98.5	P	30 - 160
EPA 8321B	Sucralose-d6	98.5	P	30 - 160

Lab Sample ID: 2123061
Field Sample ID: G4CE0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	98.5	P	39 - 109
EPA 8270E	Tetrachloro-m-xylene	75.4	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	57.3	P	30 - 103
EPA 8276	PCNB	99.8	P	37 - 143

Quality Assurance Report Surrogates

Lab Sample ID: 2123062
Field Sample ID: G4CE0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	125	P	68 - 130
EPA 8270E	Terbufos-d10	92.9	P	61 - 136

Lab Sample ID: 2123063
Field Sample ID: G4CE0168

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	87.4	P	39 - 109
EPA 8270E	Tetrachloro-m-xylene	73.0	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	46.4	P	30 - 103
EPA 8276	PCNB	105	P	37 - 143

Lab Sample ID: 2123064
Field Sample ID: G4CE0168

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	122	P	68 - 130
EPA 8270E	Terbufos-d10	93.4	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A94558

Included Lab Sample IDs: 2123045, 2123048

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

Reference Method: SM 2120 B

Run ID: A94559

Included Lab Sample IDs: 2123045, 2123048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115
Color (true)	99.1	99.4	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A94560

Included Lab Sample IDs: 2123047, 2123050

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A94627

Included Lab Sample IDs: 2123046, 2123049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A94630

Included Lab Sample IDs: 2123058, 2123060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	111	117	P/P	60 - 160
Acesulfame K	117	115	P/P	60 - 160
Endothall	102	98.3	P/P	60 - 160
Endothall	87.1	102	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94632

Included Lab Sample IDs: 2123058, 2123060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	65.6	63.6	P/P	60 - 160
AMPA	65.9	65.6	P/P	60 - 160
Glufosinate	84.6	96.2	P/P	60 - 160
Glufosinate	96.2	88.3	P/P	60 - 160
Glyphosate	86.9	91.8	P/P	60 - 160
Glyphosate	91.8	87.5	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94656

Included Lab Sample IDs: 2123046

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94656

Included Lab Sample IDs: 2123046

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A94659

Included Lab Sample IDs: 2123049

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94665

Included Lab Sample IDs: 2123049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.0	97.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A94666

Included Lab Sample IDs: 2123065

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	104	P/P	90 - 110
Calcium	101	106	P/P	90 - 110
Iron	104	108	P/P	90 - 110
Magnesium	105	109	P/P	90 - 110
Potassium	102	105	P/P	90 - 110
Sodium	101	105	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A94671

Included Lab Sample IDs: 2123061, 2123063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	116		P	80 - 120
Alpha-BHC	111		P	80 - 120
Alpha-Chlordane	114		P	80 - 120
Beta-BHC	113		P	80 - 120
Bifenthrin	108		P	80 - 120
Carbophenothion	113		P	80 - 120
Chlorothalonil	97.4		P	80 - 120
Cis-Nonachlor	112		P	80 - 120
Cypermethrin	108		P	80 - 120
DDD-p,p'	112		P	80 - 120
DDE-p,p'	114		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	104		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	114		P	80 - 120
Endosulfan I	111		P	80 - 120
Endosulfan II	112		P	80 - 120

Quality Assurance Report

Calibration Verification

Reference Method: EPA 8270E

Run ID: A94671

Included Lab Sample IDs: 2123061, 2123063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endosulfan Sulfate	104		P	80 - 120
Endrin	111		P	80 - 120
Endrin Aldehyde	111		P	80 - 120
Endrin Ketone	107		P	80 - 120
Ethalfuralin	111		P	80 - 120
Gamma-BHC	112		P	80 - 120
Gamma-Chlordane	113		P	80 - 120
Heptachlor	115		P	80 - 120
Heptachlor Epoxide	112		P	80 - 120
Hexachlorobenzene	113		P	80 - 120
Methoxychlor	106		P	80 - 120
Mirex	112		P	80 - 120
Permethrin	100		P	80 - 120
Trans-Nonachlor	114		P	80 - 120
Trifluralin	112		P	80 - 120

Reference Method: EPA 8321B

Run ID: A94677

Included Lab Sample IDs: 2123058, 2123060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	99.4	117	P/P	50 - 150
Acetaminophen	91.2	87.8	P/P	60 - 160
Acetamiprid	102	101	P/P	50 - 150
Afidopyropen	101	90.1	P/P	50 - 150
Bentazon	108	109	P/P	50 - 160
Benzovindiflupyr	106	105	P/P	50 - 150
Carbamazepine	103	104	P/P	60 - 150
Clothianidin	91.5	102	P/P	60 - 150
Dinotefuran	89.3	89.5	P/P	50 - 150
Diuron	104	111	P/P	60 - 150
Fenuron	102	102	P/P	60 - 150
Fluridone	102	105	P/P	60 - 160
Hydrocodone	93.6	92.7	P/P	60 - 150
Ibuprofen	104	90.4	P/P	50 - 160
Imazapyr	86.3	107	P/P	50 - 150
Imidacloprid	92.4	94.0	P/P	60 - 150
Linuron	96.6	101	P/P	60 - 150
Mandestrobin	100	100	P/P	50 - 150
MCP	101	96.7	P/P	50 - 150
Naproxen	79.8	91.4	P/P	50 - 160
Primidone	87.7	94.1	P/P	60 - 150
Pyraclostrobin	105	106	P/P	60 - 150
Thiamethoxam	95.0	83.3	P/P	50 - 150
Tolfenpyrad	95.7	100	P/P	60 - 150
Triclopyr	107	116	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A94678

Included Lab Sample IDs: 2123046, 2123049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	104	98.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A94686

Included Lab Sample IDs: 2123045, 2123048

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

Reference Method: EPA 8321B

Run ID: A94689

Included Lab Sample IDs: 2123058, 2123060

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	93.1	P/P	60 - 160
Sucralose	110	102	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A94716

Included Lab Sample IDs: 2123057, 2123059

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	98.7	95.0	P/P	60 - 150
Aldicarb	114	102	P/P	60 - 150
Aldicarb Sulfone	85.7	88.5	P/P	50 - 150
Aldicarb Sulfoxide	87.5	82.8	P/P	50 - 150
Carbaryl	91.0	107	P/P	60 - 150
Carbofuran	112	117	P/P	50 - 150
Methiocarb	94.0	93.7	P/P	50 - 150
Methomyl	88.2	92.1	P/P	50 - 150
Oxamyl	90.3	87.3	P/P	50 - 150
Propoxur	104	103	P/P	50 - 150

Reference Method: SM 2320 B-97

Run ID: A94720

Included Lab Sample IDs: 2123045, 2123048

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

Reference Method: SM 4500 F-C-97

Run ID: A94720

Included Lab Sample IDs: 2123045, 2123048

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A94750

Included Lab Sample IDs: 2123046, 2123049

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.1	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A94758

Included Lab Sample IDs: 2123046

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

Reference Method: EPA 8270E

Run ID: A94810

Included Lab Sample IDs: 2123062, 2123064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	96.0		P	80 - 120
Ametryn	96.4		P	80 - 120
Atrazine	106		P	80 - 120
Atrazine Desethyl	98.4		P	80 - 120
Azinphos Methyl	91.4		P	80 - 120
Bromacil	99.4		P	80 - 120
Butylate	96.5		P	80 - 120
Chlorpyrifos Ethyl	96.7		P	80 - 120
Chlorpyrifos Methyl	97.2		P	80 - 120
Cyanazine	93.1		P	80 - 120
Demeton	96.1		P	80 - 120
Diazinon	100		P	80 - 120
Dimethenamid	100		P	80 - 120
Disulfoton	92.7		P	80 - 120
Dithiopyr	97.7		P	80 - 120
EPTC	96.6		P	80 - 120
Ethion	96.4		P	80 - 120
Ethoprop	98.9		P	80 - 120
Fenamiphos	97.9		P	80 - 120
Fipronil	98.3		P	80 - 120
Fipronil Desulfinyl	98.5		P	80 - 120
Fipronil Sulfide	97.0		P	80 - 120
Fipronil Sulfone	97.6		P	80 - 120
Fonofos	98.1		P	80 - 120
Hexazinone	98.6		P	80 - 120
Malathion	95.2		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	101		P	80 - 120
Metribuzin	91.4		P	80 - 120
Mevinphos	99.8		P	80 - 120
Molinate	98.5		P	80 - 120
Norflurazon	102		P	80 - 120
Oxadiazon	102		P	80 - 120
Parathion Ethyl	100		P	80 - 120
Parathion Methyl	97.7		P	80 - 120
Pendimethalin	93.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A94810

Included Lab Sample IDs: 2123062, 2123064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Phorate	98.4		P	80 - 120
Prodiamine	93.9		P	80 - 120
Prometon	98.2		P	80 - 120
Prometryn	99.6		P	80 - 120
Simazine	103		P	80 - 120
Tebuconazole	98.5		P	80 - 120
Terbufos	95.9		P	80 - 120
Terbutylazine	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94947

Included Lab Sample IDs: 2123065

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	104	P/P	90 - 110
Antimony	103	101	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Boron	102	104	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	102	101	P/P	90 - 110
Copper	102	102	P/P	90 - 110
Lead	105	105	P/P	90 - 110
Nickel	102	101	P/P	90 - 110
Silver	99.0	99.3	P/P	90 - 110
Thallium	98.7	97.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A94978

Included Lab Sample IDs: 2123065

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

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.92	
EPA 200.7 Rev. 4.4	Barium	101		103	108	108			0.159
	Calcium	110		104	113	114			0.922
	Iron	111		113	114	114			0.191
	Magnesium	112		108	116	117			0.873
	Potassium	106		100	107	109			1.49
	Sodium	107		102	111	111			0.544
	Zinc	99.2		103	107	107			0.448
EPA 200.8 Rev. 5.4	Aluminum	100		102	99.2	101			1.83
	Antimony	102		104	102	105			2.82
	Arsenic	101		102	100	103			2.38
	Boron	102		99.3	101	104			2.71
	Cadmium	98.5		99.7	98.6	99.7			1.12
	Chromium	98.4		98.0	99.2	100			1.21
	Copper	98.0		98.8	98.9	102			3.10
	Lead	102		103	101	104			3.31
	Nickel	98.7		97.8	97.9	99.5			1.64
	Selenium	98.8		99.2	97.7	98.4			0.766
	Silver	99.6		100	98.9	102			2.63
	Thallium	104		109	102	108			5.55
EPA 300.0 Rev. 2.1	Chloride	102		104	104			0.889	
	Sulfate	103		105	108			0.980	
EPA 350.1 Rev. 2.0	Ammonia-N	98.6		102	103				1.83
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.8		94.8	106				7.09
	Kjeldahl Nitrogen	97.3						3.84	
EPA 353.2 Rev. 2.0	NO2NO3-N	104		104	105				0.810
EPA 365.1 Rev. 2.0	Total-P	97.0		99.6	100				0.517
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7		97.9	99.6				0.884
EPA 8270E	Acetochlor	84.0	92.1	94.0	73.8		9.22		24.1
	Alachlor	80.8	90.6	91.3	73.0		11.4		22.3
	Aldrin	25.8	39.0	45.5	41.4		40.8		9.47
	Alpha-BHC	94.3	95.8	99.4	98.8		1.59		0.609
	Alpha-Chlordane	82.3	87.6	91.0	87.8		6.17		3.63
	Ametryn	84.7	91.9	97.4	77.3		8.19		23.0
	Atrazine	106	108	106	79.2		1.49		27.0
	Atrazine Desethyl	74.5	89.5	135	103		18.3		26.3
	Azinphos Methyl	86.5	71.6	106	92.1		18.9		14.3
	Beta-BHC	107	120	121	113		11.0		7.24
	Bifenthrin	52.7	67.6	81.1	75.4		24.8		7.23
	Bromacil	94.0	107	92.2	84.7		12.8		8.46
	Butylate	65.8	71.7	57.1	45.9		8.63		21.6
	Carbophenothion	96.5	90.4	106	110		6.45		3.61
	Chlorothalonil	90.2	107	62.1	81.2		17.0		26.6
	Chlorpyrifos Ethyl	83.3	97.3	92.2	71.9		15.5		24.7
	Chlorpyrifos Methyl	83.9	94.5	84.3	67.4		11.9		22.3
	Cis-Nonachlor	92.2	84.5	95.0	90.8		8.78		4.50
	Cyanazine	94.7	109	175	131		14.2		28.8
	Cypermethrin	69.7	57.3	68.8	67.6		19.5		1.80
	DDD-p,p'	103	94.5	103	101		8.58		2.31
	DDE-p,p'	78.5	74.1	86.4	83.3		5.68		3.63
	DDT-p,p'	75.9	73.1	82.8	80.7		3.71		2.54
	Delta-BHC	99.5	115	118	108		14.8		9.25
	Demeton	81.1	90.2	89.0	68.6		10.6		25.9
	Diazinon	83.5	94.4	108	83.6		12.3		25.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Dicofol	97.5	93.1	96.9	91.8	4.62	5.38
	Dieldrin	101	94.1	98.7	97.2	7.21	1.48
	Dimethenamid	86.7	96.7	89.9	71.9	11.0	22.2
	Disulfoton	72.5	78.6	98.6	73.9	8.12	28.6
	Dithiopyr	81.0	93.7	94.9	74.7	14.5	23.9
	Endosulfan I	106	98.4	105	101	7.34	3.74
	Endosulfan II	114	105	110	110	7.94	0.331
	Endosulfan Sulfate	106	96.4	103	101	9.39	1.65
	Endrin	112	98.8	113	112	12.8	1.17
	Endrin Aldehyde	116	98.2	107	109	17.1	1.56
	Endrin Ketone	105	99.9	101	101	5.02	0.230
	EPTC	61.1	69.2	59.9	49.0	12.5	20.0
	Ethalfuralin	83.4	77.5	88.0	85.6	7.35	2.75
	Ethion	64.3	81.5	36.7	31.6	23.6	14.9
	Ethoprop	80.5	91.8	98.1	73.4	13.1	28.8
	Fenamiphos	84.8	103	120	94.9	19.3	23.1
	Fipronil	79.0	92.4	99.3	82.6	15.6	18.4
	Fipronil Desulfinyl	72.4	87.4	85.1	69.4	18.8	20.3
	Fipronil Sulfide	78.9	93.7	76.4	62.6	17.2	19.8
	Fipronil Sulfone	76.8	89.3	74.6	63.2	15.1	16.5
	Fonofos	78.9	88.7	94.4	72.0	11.6	27.0
	Gamma-BHC	106	114	117	111	7.21	4.98
	Gamma-Chlordane	79.1	73.2	83.7	80.1	7.69	4.35
	Heptachlor	64.7	67.7	74.3	70.2	4.54	5.72
	Heptachlor Epoxide	92.9	98.7	97.5	95.1	5.98	2.53
	Hexachlorobenzene	66.6	69.3	80.0	72.2	4.00	10.3
	Hexazinone	84.5	101	119	80.4	17.7	38.3
	Malathion	94.8	109	78.5	61.8	13.7	23.9
	Metalaxyl	82.1	91.6	88.5	74.6	10.9	17.0
	Methoxychlor	92.4	97.2	81.7	87.1	5.12	6.46
	Metolachlor	81.7	92.8	80.8	65.2	12.7	21.5
	Metribuzin	111	130	130	100	15.3	26.0
	Mevinphos	90.4	102	99.2	79.3	11.8	22.3
	Mirex	41.4	46.5	52.4	47.1	11.8	9.53
	Molinate	76.2	85.8	82.5	65.4	11.8	23.2
	Norflurazon	85.4	96.6	91.2	75.8	12.3	18.4
	Oxadiazon	74.7	87.0	80.1	64.9	15.2	20.9
	Parathion Ethyl	85.3	101	78.8	67.3	16.5	15.8
	Parathion Methyl	91.3	107	98.8	79.5	15.7	21.6
	Pendimethalin	78.4	85.0	93.3	72.6	8.16	24.9
	Permethrin	56.4	61.9	67.5	61.8	9.27	8.81
	Phorate	78.0	88.0	98.7	75.5	12.1	26.6
	Prodiamine	54.1	51.5	40.3	29.7	4.88	30.2
	Prometon	78.4	90.4	88.4	69.1	14.2	24.5
	Prometryn	78.9	92.3	92.2	73.2	15.6	22.9
	Simazine	109	123	105	78.9	11.9	28.6
	Tebuconazole	45.2	56.7	29.0	28.1	22.6	3.15
	Terbufos	81.2	93.5	104	77.3	14.1	29.3
	Terbutylazine	82.1	98.6	97.0	73.8	18.3	27.2
	Trans-Nonachlor	74.6	79.9	86.6	83.3	6.85	3.87
	Trifluralin	77.6	81.5	86.9	83.7	4.89	3.70
EPA 8276	Chlordane	77.3	73.9	71.8	89.5	4.45	22.0
	Toxaphene	67.6	71.6	84.3	75.2	5.69	11.3
EPA 8321B	2,4-D	130		155	138		11.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	3-Hydroxycarbofuran	81.8	91.9	87.7		4.68
	Acesulfame K	119	90.7	92.9		2.39
	Acetaminophen	66.5	65.2	71.1		8.63
	Acetamiprid	77.6	97.4	109		10.9
	Afidopyropen	90.8	86.4	100		14.6
	Aldicarb	71.5	85.5	81.8		4.43
	Aldicarb Sulfone	88.2	97.5	97.1		0.365
	Aldicarb Sulfoxide	93.9	38.3	35.9		6.52
	AMPA	118	83.3	80.6		3.35
	Bentazon	99.7	101	88.7		8.91
	Benzovindiflupyr	87.3	101	88.4		13.2
	Carbamazepine	95.3	93.0	108		14.9
	Carbaryl	88.5	65.0	65.3		0.488
	Carbofuran	101	78.4	76.1		3.05
	Clothianidin	88.0	94.6	106		11.5
	Dinotefuran	82.7	92.8	103		10.2
	Diuron	93.8	98.2	110		11.5
	Endothall	94.7	49.9	52.4		4.93
	Fenuron	89.4	91.8	102		10.3
	Fluridone	87.9	91.7	105		12.5
	Glufosinate	90.5	87.1	80.7		7.64
	Glyphosate	98.2	83.9	81.6		2.80
	Hydrocodone	86.0	90.3	104		14.1
	Ibuprofen	81.5	89.4	84.6		5.54
	Imazapyr	91.1	136	118		12.5
	Imidacloprid	88.8	139	163		15.7
	Linuron	78.9	76.8	83.5		8.30
	Mandestrobin	89.6	92.0	101		9.54
	MCPP	133	151	128		16.7
	Methiocarb	76.5	70.7	66.8		5.59
	Methomyl	84.1	64.6	63.1		2.30
	Naproxen	75.5	107	87.6		19.7
	Oxamyl	88.4	86.6	82.0		5.37
	Primidone	79.5	78.4	88.7		12.3
	Propoxur	86.4	70.7	67.0		5.34
	Pyraclostrobin	87.3	97.9	93.4		4.72
	Sucralose	106	110	107		2.89
	Thiamethoxam	91.3	123	125		1.40
	Tolfenpyrad	58.0	48.1	44.7		7.43
	Triclopyr	103	125	112		11.1
SM 2120 B	Color (true)	98.7			0.310	
SM 2320 B-97	Total Alkalinity	103			1.10	
SM 2540 C-97	TDS				6.23	
SM 4500 F-C-97	Fluoride	98.2	97.9	97.3		0.476
SM 5310 B-00	Organic Carbon	103	104	105		0.156

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2123045, 2123048
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2123065

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2123065
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2123045, 2123048
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2123045, 2123048
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2123046, 2123049
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2123046, 2123049
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2123046, 2123049
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2123046, 2123049
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2123047, 2123050
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2123061, 2123063
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2123062, 2123064
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2123061, 2123063
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2123057, 2123059
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2123058, 2123060
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2123058, 2123060
SM 2120 B / E31780	True Color measured at 450 nm	2123045, 2123048
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2123045, 2123048
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2123045, 2123048
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2123045, 2123048
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2123045, 2123048
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2123046, 2123049

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	09/27/2019			09/27/2019 16:08	Samantha Davila	2123045, 2123048
EPA 200.7 Rev. 4.4	09/27/2019	09/30/2019 14:15	Elliott D. Healy	10/02/2019 15:15	Alexander Thompson	2123065
EPA 200.8 Rev. 5.4	09/27/2019	09/30/2019 14:15	Elliott D. Healy	10/14/2019 18:53	Robert K Palmer	2123065
	09/27/2019	09/30/2019 14:15	Elliott D. Healy	10/15/2019 22:38	Robert K Palmer	2123065
EPA 300.0 Rev. 2.1	09/27/2019			10/05/2019 08:16	Julia Storbeck	2123045
	09/27/2019			10/05/2019 08:29	Julia Storbeck	2123048
EPA 350.1 Rev. 2.0	09/27/2019			10/04/2019 12:09	Ping Hua	2123046
	09/27/2019			10/04/2019 12:11	Ping Hua	2123049
EPA 351.2 Rev. 2.0	09/27/2019	10/01/2019 11:12	Sima Feizi	10/02/2019 15:04	Julia Storbeck	2123049
	09/27/2019	10/04/2019 14:15	Jhamieka S. Greenwood	10/07/2019 11:27	Virginia P. Brown	2123046
EPA 353.2 Rev. 2.0	09/27/2019			10/01/2019 11:41	Beverly Y. Sanders	2123046
	09/27/2019			10/01/2019 11:42	Beverly Y. Sanders	2123049
EPA 365.1 Rev. 2.0	09/27/2019	10/01/2019 12:41	Vijayalakshmi Reddy	10/02/2019 11:40	Lipi Saha	2123046
	09/27/2019	10/01/2019 12:41	Vijayalakshmi Reddy	10/02/2019 13:20	Lipi Saha	2123049
EPA 365.1 Rev. 2.0 dissolved	09/27/2019			09/27/2019 16:52	Virginia P. Brown	2123047, 2123050
EPA 8270E	09/27/2019	09/30/2019 09:00	Fe-Val Siddell	10/02/2019 19:50	Arthur Maknenko	2123061
	09/27/2019	09/30/2019 09:00	Fe-Val Siddell	10/02/2019 20:22	Arthur Maknenko	2123063
	09/27/2019	10/01/2019 08:30	Rasheda Ghaffari	10/03/2019 16:30	Vandana T. Nagar	2123062
	09/27/2019	10/01/2019 08:30	Rasheda Ghaffari	10/03/2019 16:56	Vandana T. Nagar	2123064
EPA 8276	09/27/2019	09/30/2019 09:00	Fe-Val Siddell	10/03/2019 05:45	Julie Wi	2123061
	09/27/2019	09/30/2019 09:00	Fe-Val Siddell	10/03/2019 06:41	Julie Wi	2123063
EPA 8321B	09/27/2019	09/30/2019 09:00	Hoor Shaik	10/02/2019 13:30	Juyoung Kim	2123058
	09/27/2019	09/30/2019 09:00	Hoor Shaik	10/02/2019 14:04	Juyoung Kim	2123060
	09/27/2019	09/30/2019 11:00	Rebecca Ware	09/30/2019 14:56	Rebecca Ware	2123058
	09/27/2019	09/30/2019 11:00	Rebecca Ware	09/30/2019 15:24	Rebecca Ware	2123060
	09/27/2019	09/30/2019 11:00	Rebecca Ware	10/01/2019 11:58	Rebecca Ware	2123058
	09/27/2019	09/30/2019 11:00	Rebecca Ware	10/01/2019 12:20	Rebecca Ware	2123060
	09/27/2019	09/30/2019 11:00	Rebecca Ware	10/02/2019 11:14	Rebecca Ware	2123058
	09/27/2019	09/30/2019 11:00	Rebecca Ware	10/02/2019 11:38	Rebecca Ware	2123060
	09/27/2019	10/02/2019 14:00	Hoor Shaik	10/03/2019 18:00	Juyoung Kim	2123057
	09/27/2019	10/02/2019 14:00	Hoor Shaik	10/03/2019 18:35	Juyoung Kim	2123059
SM 2120 B	09/27/2019			09/27/2019 16:58	Madeline Funaro	2123048
	09/27/2019			09/27/2019 17:21	Madeline Funaro	2123045
SM 2320 B-97	09/27/2019			10/03/2019 07:56	Dale L. Simmons	2123045
	09/27/2019			10/03/2019 08:08	Dale L. Simmons	2123048
SM 2540 C-97	09/27/2019			10/02/2019 15:09	Yijie Li	2123045, 2123048
SM 2540 D-97	09/27/2019			10/02/2019 15:09	Yijie Li	2123045, 2123048
SM 4500 F-C-97	09/27/2019			10/03/2019 07:56	Dale L. Simmons	2123045
	09/27/2019			10/03/2019 08:08	Dale L. Simmons	2123048
SM 5310 B-00	09/27/2019			10/02/2019 20:27	Madeline Funaro	2123046

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	09/27/2019			10/02/2019 20:39	Madeline Funaro	2123049