

Chemical Analysis Report

CEN-DIST-2018-05-16-01

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

Event Description: **Apopka / Howey / Harris X4**
Request ID: **RQ-2018-05-14-35**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:

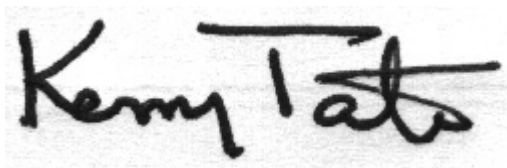
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
Attn: Michael Linger

For additional information please contact

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

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 18-JUN-2018 14:54

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 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: APOPKA BEAUCLAIR CANAL @ 200M S OF LOCK

Collection Date/Time: 05/15/2018 10:37

Field ID: G1CE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992980	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P345456	
	EPA 300.0 Rev. 2.1	Chloride	40		mg Cl/L	P345580	
		Sulfate	11		mg SO4/L	P345583	
	SM 2120 B	Color (true)	47		PCU	P345424	
	SM 2320 B-97	Total Alkalinity	159		mg CaCO3/L	P345633	
	SM 2540 C-97	TDS	284		mg/L	P346040	
	SM 2540 D-97	TSS	4	I	mg/L	P345881	
	SM 4500 F-C-97	Fluoride	0.31		mg F/L	P345634	
1992982	EPA 350.1 Rev. 2.0	Ammonia-N	0.082		mg N/L	P345575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6		mg N/L	P345613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.046		mg N/L	P345510	
	EPA 365.1 Rev. 2.0	Total-P	0.053		mg P/L	P345541	
	SM 5310 B-00	Organic Carbon	21		mg C/L	P345626	
1992984	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.008	I	mg P/L	P345461	
1993033	EPA 200.7 Rev. 4.4	Calcium	47.3		mg/L	P345478	
		Iron	40	I	ug/L	P345478	
		Magnesium	16.7		mg/L	P345478	
		Potassium	8.7		mg/L	P345478	
		Sodium	19.8		mg/L	P345478	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P345478	
		Arsenic	2.82		ug/L	P345478	
		Cadmium	0.020	U	ug/L	P345478	
		Chromium	0.40	U	ug/L	P345478	
		Copper	0.20	U	ug/L	P345478	
		Lead	0.061	I	ug/L	P345478	
		Nickel	0.20	U	ug/L	P345478	
		Silver	0.010	U	ug/L	P345478	

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: APOPKA BEAUCLAIR CANAL @ 200M S OF LOCK

Collection Date/Time: 05/15/2018 10:37

Field ID: G1CE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993018	EPA 8321B	Aldicarb	0.020	U	ug/L	P345390	
		Aldicarb Sulfone	0.0020	U	ug/L	P345390	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P345390	
		Carbaryl	0.0020	U	ug/L	P345390	
		Carbofuran	0.0020	U	ug/L	P345390	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P345390	
		Methiocarb	0.0020	U	ug/L	P345390	
		Methomyl	0.0020	U	ug/L	P345390	
		Oxamyl	0.0020	U	ug/L	P345390	

Field ID: G1CE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993018	EPA 8321B	Propoxur	0.0020	U	ug/L	P345390	
1993019		2,4-D	0.0028	I	ug/L	P345390	
		Bentazon	0.0036		ug/L	P345390	
		MCPP	0.0020	U	ug/L	P345390	
		Triclopyr**	0.0040	U	ug/L	P345390	
		Imidacloprid	0.0048	I	ug/L	P345390	MS
		Diuron	0.0020	U	ug/L	P345390	
		Pyraclostrobin**	0.0020	U	ug/L	P345390	
		Primidone**	0.0040	U	ug/L	P345390	
		Linuron	0.0040	U	ug/L	P345390	
		Acetaminophen**	0.0080	U	ug/L	P345390	MS
		Fenuron	0.016	U	ug/L	P345390	
		Imazapyr**	0.014	I	ug/L	P345390	
		Carbamazepine**	4.0E-04	U	ug/L	P345390	
		Fluridone**	4.0E-04	U	ug/L	P345390	
		Hydrocodone**	8.0E-04	U	ug/L	P345390	
		Sucralose**	0.31		ug/L	P345394	
		Glyphosate**	0.10	UJ	ug/L	P345394	SUR
		AMPA**	0.10	UJ	ug/L	P345394	SUR
		Endothall**	0.10	U	ug/L	P345394	
		Glufosinate**	0.10	UJ	ug/L	P345394	SUR
1993020	EPA 8270D	Aldrin	4.3	U	ng/L	P345471	
		Alpha-BHC	2.2	U	ng/L	P345471	
		Beta-BHC	4.3	U	ng/L	P345471	
		Delta-BHC	4.3	U	ng/L	P345471	
		Gamma-BHC	4.3	U	ng/L	P345471	
		Carbophenothion	4.3	U	ng/L	P345471	
		Chlorothalonil	2.2	UJ	ng/L	P345471	RPD
		Cypermethrin	22	U	ng/L	P345471	
		DDD-p,p'	3.2	U	ng/L	P345471	
		DDE-p,p'	3.2	U	ng/L	P345471	
		DDT-p,p'	3.2	U	ng/L	P345471	
		Dieldrin	4.3	U	ng/L	P345471	
		Endosulfan I	4.3	U	ng/L	P345471	
		Endosulfan II	4.3	U	ng/L	P345471	
		Endosulfan Sulfate	2.2	U	ng/L	P345471	
		Endrin	2.2	U	ng/L	P345471	
		Endrin Aldehyde	2.2	UJ	ng/L	P345471	MS, RPD
		Heptachlor	1.6	U	ng/L	P345471	
		Heptachlor Epoxide	2.2	U	ng/L	P345471	
		Methoxychlor	4.3	U	ng/L	P345471	
		Mirex	2.2	U	ng/L	P345471	
		Permethrin	11	U	ng/L	P345471	
		Trifluralin	1.1	U	ng/L	P345471	
		Alpha-Chlordane	1.1	U	ng/L	P345471	

Field ID: G1CE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993020	EPA 8270D	Gamma-Chlordane	1.1	U	ng/L	P345471	
		Endrin Ketone	2.2	U	ng/L	P345471	
		Dicofol	32	U	ng/L	P345471	
	EPA 8276	Chlordane**	2.7	U	ng/L	P345471	
		Toxaphene**	32	U	ng/L	P345471	
1993021	EPA 8270D	Alachlor	0.26	U	ng/L	P345559	
		Ametryn	2.7		ng/L	P345559	RPD
		Atrazine	9.8		ng/L	P345559	
		Atrazine Desethyl	1.6	UJ	ng/L	P345559	CCV, MS
		Azinphos Methyl	2.3	U	ng/L	P345559	
		Bromacil	0.52	U	ng/L	P345559	
		Butylate	0.41	U	ng/L	P345559	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P345559	
		Chlorpyrifos Methyl	0.10	U	ng/L	P345559	
		Demeton	2.1	U	ng/L	P345559	RPD
		Diazinon	0.13	U	ng/L	P345559	
		Disulfoton	0.52	U	ng/L	P345559	
		EPTC	1.3	U	ng/L	P345559	
		Ethion	0.16	U	ng/L	P345559	
		Ethoprop	0.10	U	ng/L	P345559	
		Fenamiphos	0.26	U	ng/L	P345559	
		Fipronil	0.26	U	ng/L	P345559	
		Fipronil Sulfide	0.16	U	ng/L	P345559	
		Fipronil Sulfone	0.16	U	ng/L	P345559	
		Hexazinone	0.52	U	ng/L	P345559	
		Malathion	0.36	U	ng/L	P345559	MS
		Metribuzin	0.21	U	ng/L	P345559	
		Mevinphos	0.52	U	ng/L	P345559	
		Molinate	0.31	U	ng/L	P345559	
		Norflurazon	0.52	U	ng/L	P345559	
		Pendimethalin	1.0	U	ng/L	P345559	
		Phorate	0.26	U	ng/L	P345559	
		Prometon	0.93	U	ng/L	P345559	
		Prometryn	0.37	I	ng/L	P345559	
		Simazine	0.52	U	ng/L	P345559	
		Terbufos	0.10	U	ng/L	P345559	
		Terbuthylazine	0.44	U	ng/L	P345559	MS
		Fonofos	0.21	U	ng/L	P345559	
		Metalaxyl	0.26	U	ng/L	P345559	
		Metolachlor	3.2		ng/L	P345559	
		Acetochlor	0.26	U	ng/L	P345559	
		Cyanazine	0.52	UJ	ng/L	P345559	CCV
		Parathion Ethyl	0.26	U	ng/L	P345559	
		Parathion Methyl	0.26	U	ng/L	P345559	

Field ID: G1CE0025

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment:							
EPA 8321B: Results confirmed in re-extraction. Refer to the narrative for an explanation of QC Codes.							
EPA 8270D: Refer to the narrative for an explanation of QC Codes.							

Sample Location: LITTLE LAKE HARRIS @ 1000M SE OF CENTER

Collection Date/Time: 05/15/2018 11:33

Field ID: G1CE0097

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992986	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P345456	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P345580	
		Sulfate	6.7		mg SO4/L	P345583	
	SM 2120 B	Color (true)	26		PCU	P345424	
	SM 2320 B-97	Total Alkalinity	90		mg CaCO3/L	P345633	
	SM 2540 C-97	TDS	163		mg/L	P346040	
	SM 2540 D-97	TSS	11	I	mg/L	P345881	
1992990	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P345634	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P345575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P345613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345510	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P345541	
1992994	SM 5310 B-00	Organic Carbon	14		mg C/L	P345626	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345461	
1993035	EPA 200.7 Rev. 4.4	Calcium	32.7		mg/L	P345478	
		Iron	47	I	ug/L	P345478	
		Magnesium	6.78		mg/L	P345478	
		Potassium	2.9		mg/L	P345478	
		Sodium	11.0		mg/L	P345478	
		Zinc	5.0	U	ug/L	P345478	
	EPA 200.8 Rev. 5.4	Arsenic	1.20		ug/L	P345478	
		Cadmium	0.020	U	ug/L	P345478	
		Chromium	0.40	U	ug/L	P345478	
		Copper	0.22	I	ug/L	P345478	
		Lead	0.18	I	ug/L	P345478	
		Nickel	0.20	U	ug/L	P345478	
		Silver	0.010	U	ug/L	P345478	

Ref. Method and Comment:
 SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated due to sample matrix interference.

Sample Location: LITTLE LAKE HARRIS @ CENTER

Collection Date/Time: 05/15/2018 11:40

Field ID: G1CE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992987	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P345456	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P345580	
		Sulfate	6.5		mg SO4/L	P345583	

Field ID: G1CE0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992987	SM 2120 B	Color (true)	26		PCU	P345424	
	SM 2320 B-97	Total Alkalinity	91		mg CaCO3/L	P345633	
	SM 2540 C-97	TDS	156		mg/L	P346040	
	SM 2540 D-97	TSS	12	I	mg/L	P345881	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P345634	
1992991	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P345575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P345613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345510	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P345541	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P345626	
1992995	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345461	
1993036	EPA 200.7 Rev. 4.4	Calcium	32.8		mg/L	P345478	
		Iron	41	I	ug/L	P345478	
		Magnesium	6.75		mg/L	P345478	
		Potassium	2.9		mg/L	P345478	
		Sodium	10.9		mg/L	P345478	
		Zinc	5.0	U	ug/L	P345478	
	EPA 200.8 Rev. 5.4	Arsenic	1.21		ug/L	P345478	
		Cadmium	0.020	U	ug/L	P345478	
		Chromium	0.40	U	ug/L	P345478	
		Copper	0.21	I	ug/L	P345478	
		Lead	0.19	I	ug/L	P345478	
		Nickel	0.20	U	ug/L	P345478	
		Silver	0.010	U	ug/L	P345478	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated due to sample matrix interference.

Sample Location: LITTLE LAKE HARRIS @ 1000M SW OF CENTER

Collection Date/Time: 05/15/2018 11:53

Field ID: G1CE0096

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992988	EPA 180.1 Rev. 2.0	Turbidity	2.8		NTU	P345456	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P345580	
		Sulfate	6.6		mg SO4/L	P345583	
		Color (true)	27		PCU	P345424	
	SM 2320 B-97	Total Alkalinity	90		mg CaCO3/L	P345633	
	SM 2540 C-97	TDS	157		mg/L	P346040	
	SM 2540 D-97	TSS	11	I	mg/L	P345881	
1992992	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P345634	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P345575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.96		mg N/L	P345613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345510	
	EPA 365.1 Rev. 2.0	Total-P	0.025		mg P/L	P345541	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P345626	

Field ID: G1CE0096

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992996	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345461	
1993037	EPA 200.7 Rev. 4.4	Calcium	32.2		mg/L	P345478	
		Iron	42	I	ug/L	P345478	
		Magnesium	6.84		mg/L	P345478	
		Potassium	2.9		mg/L	P345478	
		Sodium	10.7		mg/L	P345478	
		Zinc	5.0	U	ug/L	P345478	
	EPA 200.8 Rev. 5.4	Arsenic	1.22		ug/L	P345478	
		Cadmium	0.020	U	ug/L	P345478	
		Chromium	0.40	U	ug/L	P345478	
		Copper	0.24	I	ug/L	P345478	
		Lead	0.16	I	ug/L	P345478	
		Nickel	0.20	U	ug/L	P345478	
		Silver	0.010	U	ug/L	P345478	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The PQL was elevated due to sample matrix interference.

Sample Location: LITTLE LAKE HARRIS @ 2500M S OF CENTER Collection Date/Time: 05/15/2018 12:03

Field ID: G1CE0098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992989	EPA 180.1 Rev. 2.0	Turbidity	2.7	A	NTU	P345457	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P345580	
		Sulfate	6.6		mg SO4/L	P345583	
	SM 2120 B	Color (true)	27		PCU	P345424	
	SM 2320 B-97	Total Alkalinity	90		mg CaCO3/L	P345633	
	SM 2540 C-97	TDS	168		mg/L	P346041	
	SM 2540 D-97	TSS	9	I	mg/L	P345882	
	SM 4500 F-C-97	Fluoride	0.12		mg F/L	P345914	
1992993	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P345575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P345614	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P345510	
	EPA 365.1 Rev. 2.0	Total-P	0.026		mg P/L	P345541	
	SM 5310 B-00	Organic Carbon	15		mg C/L	P345626	
1992997	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P345461	
1993038	EPA 200.7 Rev. 4.4	Calcium	32.5		mg/L	P345478	
		Iron	39	I	ug/L	P345478	
		Magnesium	6.93		mg/L	P345478	
		Potassium	3.0		mg/L	P345478	
		Sodium	10.9		mg/L	P345478	
		Zinc	5.0	U	ug/L	P345478	
	EPA 200.8 Rev. 5.4	Arsenic	1.14		ug/L	P345478	
		Cadmium	0.020	U	ug/L	P345478	
		Chromium	0.40	U	ug/L	P345478	

Field ID: G1CE0098

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1993038	EPA 200.8 Rev. 5.4	Copper	0.20	U	ug/L	P345478	
		Lead	0.15	I	ug/L	P345478	
		Nickel	0.20	U	ug/L	P345478	
		Silver	0.010	U	ug/L	P345478	

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: DOUBLE RUN @ 800M DS OF DOUBLE RUN RD. **Collection Date/Time: 05/15/2018 12:13**

Field ID: G1CE0032

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1992981	EPA 180.1 Rev. 2.0	Turbidity	0.60		NTU	P345456	
	EPA 300.0 Rev. 2.1	Chloride	12		mg Cl/L	P345580	
		Sulfate	7.7		mg SO4/L	P345583	
		Color (true)	94		PCU	P345424	
	SM 2120 B	Total Alkalinity	68		mg CaCO3/L	P345633	
	SM 2320 B-97	TDS	122		mg/L	P346040	
	SM 2540 C-97	TSS	2	I	mg/L	P345881	
	SM 2540 D-97	Fluoride	0.073	I	mg F/L	P345634	
1992983	EPA 4500 F-C-97	Ammonia-N	0.041		mg N/L	P345575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P345613	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.27		mg N/L	P345510	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P345541	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P345626	
1992985	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.031		mg P/L	P345461	
1993034	EPA 200.7 Rev. 4.4	Calcium	21.7		mg/L	P345478	
		Iron	130		ug/L	P345478	
		Magnesium	7.78		mg/L	P345478	
		Potassium	1.7		mg/L	P345478	
		Sodium	5.0		mg/L	P345478	
		Zinc	5.0	U	ug/L	P345478	
		Arsenic	0.42		ug/L	P345478	
	EPA 200.8 Rev. 5.4	Cadmium	0.020	U	ug/L	P345478	
		Chromium	0.40	U	ug/L	P345478	
		Copper	0.20	U	ug/L	P345478	
		Lead	0.050	U	ug/L	P345478	
		Nickel	0.20	U	ug/L	P345478	
		Silver	0.010	U	ug/L	P345478	

Ref. Method and Comment:

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

Quality Assurance Report

Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345456

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345457

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345478

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345478

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345580

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345583

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345575

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: P345613

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345614

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345510

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345541

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345461

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

Reference Method: EPA 8270D
Batch ID: P345471

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D

Batch ID: P345471

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

Reference Method: EPA 8270D

Batch ID: P345559

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P345471

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Toxaphene	30	U	ng/L

Reference Method: EPA 8321B
Batch ID: P345390

Component	Result	Code	Units
2,4-D	0.00200	U	ug/L
3-Hydroxycarbofuran	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Aldicarb	0.020	U	ug/L
Aldicarb Sulfone	0.0020	U	ug/L
Aldicarb Sulfoxide	0.0020	U	ug/L
Bentazon	8.00E-04	U	ug/L
Carbamazepine	4.0E-04	U	ug/L
Carbaryl	0.0020	U	ug/L
Carbofuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	8.0E-04	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
MCPP	0.00200	U	ug/L
Methiocarb	0.0020	U	ug/L
Methomyl	0.0020	U	ug/L
Oxamyl	0.0020	U	ug/L
Primidone	0.0040	U	ug/L
Propoxur	0.0020	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.00400	U	ug/L

Reference Method: EPA 8321B
Batch ID: P345394

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

Reference Method: SM 2120 B
Batch ID: P345424

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-97
Batch ID: P345633

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

Reference Method: SM 2540 C-97
Batch ID: P346040

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P346041

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P345881

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P345882

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P345634

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P345914

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P345626

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: P345478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	103		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	98.4		P	85 - 115
Sodium	99.7		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345478

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Arsenic	103		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	91.9		P	85 - 115
Copper	97.8		P	85 - 115
Lead	96.3		P	85 - 115
Nickel	101		P	85 - 115
Silver	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345580

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345583

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345575

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345613

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	92.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.0		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345510

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345541

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	99.4		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.4		P	90 - 110

Reference Method: EPA 8270D
Batch ID: P345471

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	40.8	33.9	P/P	24 - 89.0
Alpha-BHC	88.6	85.9	P/P	58 - 117
Alpha-Chlordane	86.6	81.9	P/P	56 - 115
Beta-BHC	90.1	95.5	P/P	55 - 137
Carbophenothion	104	102	P/P	37 - 145
Chlorothalonil	63.2	107	P/P	26 - 163
Cypermethrin	85.9	79.8	P/P	42 - 156
DDD-p,p'	93.3	90.4	P/P	59 - 129
DDE-p,p'	90.0	84.3	P/P	52 - 117
DDT-p,p'	93.9	84.1	P/P	48 - 128
Delta-BHC	98.1	101	P/P	59 - 158
Dicofol	84.5	89.7	P/P	19 - 124
Dieldrin	90.5	84.7	P/P	57 - 126
Endosulfan I	88.6	87.9	P/P	59 - 133
Endosulfan II	95.0	96.9	P/P	58 - 148
Endosulfan Sulfate	99.9	101	P/P	56 - 135
Endrin	93.3	82.5	P/P	50 - 140
Endrin Aldehyde	83.4	87.6	P/P	47 - 141
Endrin Ketone	90.6	88.5	P/P	63 - 123
Gamma-BHC	98.8	96.0	P/P	59 - 132
Gamma-Chlordane	87.4	82.0	P/P	55 - 112
Heptachlor	78.3	72.4	P/P	45 - 102
Heptachlor Epoxide	89.3	84.2	P/P	61 - 116
Methoxychlor	93.8	92.3	P/P	60 - 133
Mirex	82.0	74.1	P/P	40 - 98.0
Permethrin	86.2	80.4	P/P	45 - 131
Trifluralin	83.9	77.6	P/P	38 - 179

Reference Method: EPA 8270D
Batch ID: P345559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	95.4	96.1	P/P	74 - 119
Alachlor	92.4	97.6	P/P	75 - 118

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D

Batch ID: P345559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ametryn	86.3	95.1	P/P	59 - 137
Atrazine	94.5	97.8	P/P	73 - 120
Atrazine Desethyl	78.9	106	P/P	19 - 129
Azinphos Methyl	106	111	P/P	65 - 181
Bromacil	86.8	94.3	P/P	43 - 123
Butylate	51.3	58.0	P/P	28 - 85.0
Chlorpyrifos Ethyl	78.7	87.0	P/P	55 - 112
Chlorpyrifos Methyl	82.4	91.4	P/P	35 - 124
Cyanazine	188	209	P/P	26 - 262
Demeton	68.8	76.4	P/P	43 - 122
Diazinon	103	104	P/P	72 - 120
Disulfoton	84.8	89.2	P/P	45 - 137
EPTC	54.6	61.7	P/P	28 - 95.0
Ethion	80.2	85.8	P/P	63 - 127
Ethoprop	84.5	93.1	P/P	63 - 109
Fenamiphos	79.7	102	P/P	66 - 136
Fipronil	96.8	98.7	P/P	63 - 126
Fipronil Sulfide	78.2	85.4	P/P	59 - 123
Fipronil Sulfone	79.4	84.4	P/P	56 - 122
Fonofos	89.8	96.5	P/P	64 - 114
Hexazinone	95.4	94.2	P/P	49 - 144
Malathion	83.8	92.0	P/P	68 - 131
Metaxyl	96.4	98.5	P/P	57 - 126
Metolachlor	92.5	95.0	P/P	75 - 118
Metribuzin	82.6	103	P/P	46 - 169
Mevinphos	74.3	85.6	P/P	34 - 126
Molinate	65.9	70.9	P/P	37 - 101
Norflurazon	93.8	96.2	P/P	63 - 127
Parathion Ethyl	88.9	92.1	P/P	78 - 109
Parathion Methyl	95.5	99.4	P/P	74 - 123
Pendimethalin	105	109	P/P	51 - 130
Phorate	83.7	86.7	P/P	53 - 116
Prometon	84.8	87.8	P/P	66 - 124
Prometryn	92.7	95.7	P/P	66 - 124
Simazine	87.8	103	P/P	62 - 134
Terbufos	85.9	91.7	P/P	59 - 115
Terbuthylazine	94.0	95.8	P/P	76 - 113

Reference Method: EPA 8276

Batch ID: P345471

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	87.1	95.1	P/P	47 - 125
Toxaphene	64.7	64.4	P/P	46 - 147

Reference Method: EPA 8321B

Batch ID: P345390

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	74.0		P	40 - 150
3-Hydroxycarbofuran	100		P	40 - 150
Acetaminophen	125		P	30 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P345390

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldicarb	70.2		P	30 - 150
Aldicarb Sulfone	97.5		P	40 - 150
Aldicarb Sulfoxide	93.7		P	40 - 150
Bentazon	125		P	30 - 150
Carbamazepine	80.1		P	40 - 150
Carbaryl	69.9		P	40 - 150
Carbofuran	75.4		P	40 - 150
Diuron	76.5		P	40 - 150
Fenuron	94.6		P	40 - 150
Fluridone	84.8		P	40 - 150
Hydrocodone	95.8		P	40 - 150
Imazapyr	82.2		P	40 - 150
Imidacloprid	103		P	40 - 160
Linuron	90.9		P	40 - 150
MCPP	84.4		P	40 - 150
Methiocarb	83.5		P	40 - 150
Methomyl	98.8		P	40 - 150
Oxamyl	87.9		P	40 - 150
Primidone	95.9		P	40 - 150
Propoxur	78.5		P	40 - 150
Pyraclostrobin	78.6		P	40 - 150
Triclopyr	82.8		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P345394

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
AMPA	89.7		P	40 - 140
Endothall	97.1		P	40 - 140
Glufosinate	102		P	40 - 140
Glyphosate	115		P	40 - 140
Sucralose	79.4		P	40 - 150

Reference Method: SM 2320 B-97

Batch ID: P345633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 107

Reference Method: SM 4500 F-C-97

Batch ID: P345634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.3		P	91 - 105

Reference Method: SM 4500 F-C-97

Batch ID: P345914

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	95.4		P	91 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-00
 Batch ID: P345626

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
 Batch ID: P345478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993037	Calcium	99.1		P	80 - 120
1993037	Iron	104	102	P/P	80 - 120
1993037	Magnesium	101		P	80 - 120
1993037	Potassium	97.1	94.0	P/P	80 - 120
1993037	Sodium	98.0		P	80 - 120
1993037	Zinc	102	99.4	P/P	80 - 120
1993209	Calcium	101		P	80 - 120
1993209	Iron	102		P	80 - 120
1993209	Magnesium	102		P	80 - 120
1993209	Potassium	97.7		P	80 - 120
1993209	Sodium	99.4		P	80 - 120
1993209	Zinc	99.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
 Batch ID: P345478

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993037	Arsenic	102	101	P/P	80 - 120
1993037	Cadmium	99.8	98.6	P/P	80 - 120
1993037	Chromium	91.2	89.1	P/P	80 - 120
1993037	Copper	96.7	95.2	P/P	80 - 120
1993037	Lead	96.8	95.2	P/P	80 - 120
1993037	Nickel	99.5	98.5	P/P	80 - 120
1993037	Silver	100	97.9	P/P	80 - 120
1993209	Arsenic	102		P	80 - 120
1993209	Cadmium	103		P	80 - 120
1993209	Chromium	91.6		P	80 - 120
1993209	Copper	95.6		P	80 - 120
1993209	Lead	97.0		P	80 - 120
1993209	Nickel	98.9		P	80 - 120
1993209	Silver	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P345580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992902	Chloride	100		P	90 - 110
1992964	Chloride	99.6		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345583

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992902	Sulfate	99.9		P	90 - 110
1992964	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992990	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345613

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992951	Kjeldahl Nitrogen	98.0	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992993	Kjeldahl Nitrogen	92.1	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992991	NO2NO3-N	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345541

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992992	Total-P	99.2	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992972	O-Phosphate-P	95.7	96.1	P/P	90 - 110

Reference Method: EPA 8270D
Batch ID: P345471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993020	Aldrin	52.2	48.5	P/P	26 - 96.0
1993020	Alpha-BHC	92.9	94.3	P/P	51 - 123
1993020	Alpha-Chlordane	64.0	61.6	P/P	45 - 120
1993020	Beta-BHC	78.0	61.6	P/P	43 - 146
1993020	Carbophenothion	103	105	P/P	26 - 179
1993020	Chlorothalonil	75.3	81.6	P/P	10 - 215
1993020	Cypermethrin	85.8	77.6	P/P	35 - 169
1993020	DDD-p,p'	86.5	82.6	P/P	49 - 131
1993020	DDE-p,p'	61.0	60.4	P/P	39 - 127

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P345471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993020	DDT-p,p'	80.0	66.7	P/P	49 - 120
1993020	Delta-BHC	90.9	104	P/P	49 - 187
1993020	Dicofol	80.8	91.0	P/P	10 - 129
1993020	Dieldrin	64.1	53.3	P/P	46 - 132
1993020	Endosulfan I	83.2	82.9	P/P	57 - 130
1993020	Endosulfan II	78.9	84.8	P/P	52 - 148
1993020	Endosulfan Sulfate	96.3	89.6	P/P	55 - 129
1993020	Endrin	63.0	67.6	P/P	45 - 133
1993020	Endrin Aldehyde	6.73	20.0	F/F	26 - 140
1993020	Endrin Ketone	98.9	101	P/P	60 - 125
1993020	Gamma-BHC	92.4	77.4	P/P	50 - 145
1993020	Gamma-Chlordane	62.5	58.4	P/P	44 - 118
1993020	Heptachlor	60.5	57.3	P/P	35 - 106
1993020	Heptachlor Epoxide	69.0	67.2	P/P	52 - 123
1993020	Methoxychlor	70.6	71.8	P/P	54 - 132
1993020	Mirex	51.2	56.1	P/P	36 - 107
1993020	Permethrin	75.9	71.9	P/P	47 - 135
1993020	Trifluralin	63.7	62.8	P/P	32 - 228

Reference Method: EPA 8270D
Batch ID: P345559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992932	Acetochlor	100	87.5	P/P	67 - 125
1992932	Alachlor	104	93.9	P/P	69 - 123
1992932	Ametryn	112	80.2	P/P	52 - 151
1992932	Atrazine	124	91.1	P/P	71 - 125
1992932	Atrazine Desethyl	110	136	P/F	10 - 129
1992932	Azinphos Methyl	118	98.4	P/P	48 - 200
1992932	Bromacil	101	91.1	P/P	46 - 130
1992932	Butylate	51.5	39.3	P/P	10 - 85.0
1992932	Chlorpyrifos Ethyl	99.2	81.1	P/P	54 - 115
1992932	Chlorpyrifos Methyl	88.5	79.3	P/P	44 - 117
1992932	Cyanazine	199	181	P/P	10 - 262
1992932	Demeton	117	81.1	P/P	24 - 145
1992932	Diazinon	123	106	P/P	66 - 129
1992932	Disulfoton	96.8	98.8	P/P	45 - 139
1992932	EPTC	44.3	34.4	P/P	10 - 86.0
1992932	Ethion	67.2	69.1	P/P	59 - 133
1992932	Ethoprop	113	92.4	P/P	54 - 116
1992932	Fenamiphos	71.0	72.4	P/P	55 - 140
1992932	Fipronil	93.2	83.5	P/P	37 - 142
1992932	Fipronil Sulfide	76.2	71.1	P/P	37 - 130
1992932	Fipronil Sulfone	70.2	66.8	P/P	18 - 143
1992932	Fonofos	117	99.5	P/P	55 - 118
1992932	Hexazinone	118	113	P/P	62 - 140
1992932	Malathion	61.8	76.6	F/P	64 - 132
1992932	Metalaxyl	104	88.7	P/P	55 - 129
1992932	Metolachlor	109	86.7	P/P	56 - 137
1992932	Metribuzin	137	172	P/P	16 - 218
1992932	Mevinphos	115	93.7	P/P	34 - 129
1992932	Molinate	57.4	47.4	P/P	16 - 99.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D

Batch ID: P345559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992932	Norflurazon	66.0	60.4	P/P	43 - 135
1992932	Parathion Ethyl	101	93.2	P/P	71 - 112
1992932	Parathion Methyl	122	106	P/P	65 - 127
1992932	Pendimethalin	119	113	P/P	35 - 159
1992932	Phorate	125	107	P/P	41 - 129
1992932	Prometon	112	87.6	P/P	56 - 140
1992932	Prometryn	93.4	85.1	P/P	65 - 130
1992932	Simazine	102	95.6	P/P	54 - 148
1992932	Terbufos	123	101	P/P	53 - 126
1992932	Terbuthylazine	115	95.8	F/P	73 - 114

Reference Method: EPA 8276

Batch ID: P345471

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993243	Chlordane	80.9	82.6	P/P	41 - 134
1993243	Toxaphene	57.0	54.5	P/P	39 - 158

Reference Method: EPA 8321B

Batch ID: P345390

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993445	2,4-D	106	91.6	P/P	40 - 150
1993445	3-Hydroxycarbofuran	86.6	91.5	P/P	40 - 150
1993445	Acetaminophen	139	155	P/F	30 - 150
1993445	Aldicarb	43.4	42.3	P/P	30 - 150
1993445	Aldicarb Sulfone	90.5	103	P/P	40 - 150
1993445	Aldicarb Sulfoxide	72.6	85.4	P/P	40 - 150
1993445	Bentazon	92.4	102	P/P	30 - 150
1993445	Carbamazepine	57.4	60.7	P/P	40 - 150
1993445	Carbaryl	42.1	47.1	P/P	40 - 150
1993445	Carbofuran	47.3	50.8	P/P	40 - 150
1993445	Diuron	48.4	56.9	P/P	40 - 150
1993445	Fenuron	71.3	78.6	P/P	40 - 150
1993445	Fluridone	62.5	68.5	P/P	40 - 150
1993445	Hydrocodone	95.3	104	P/P	40 - 150
1993445	Imazapyr	65.0	98.2	P/P	40 - 150
1993445	Imidacloprid	164	180	F/F	40 - 160
1993445	Linuron	69.7	86.3	P/P	40 - 150
1993445	MCPP	119	117	P/P	40 - 150
1993445	Methiocarb	64.7	67.5	P/P	40 - 150
1993445	Methomyl	75.8	85.5	P/P	40 - 150
1993445	Oxamyl	72.9	81.2	P/P	40 - 150
1993445	Primidone	87.7	95.7	P/P	40 - 150
1993445	Propoxur	47.6	49.9	P/P	40 - 150
1993445	Pyraclostrobin	78.8	85.3	P/P	40 - 150
1993445	Triclopyr	130	132	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P345394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P345394

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992930	AMPA	68.1	62.4	P/P	40 - 140
1992930	Endothall	101	108	P/P	40 - 140
1992930	Glufosinate	88.2	83.8	P/P	40 - 140
1992930	Glyphosate	91.9	100	P/P	40 - 140
1992930	Sucralose	78.8	70.8	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P345634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993148	Fluoride	94.4	95.6	P/P	91 - 105

Reference Method: SM 4500 F-C-97
Batch ID: P345914

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1993151	Fluoride	94.5	95.6	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P345626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1992991	Organic Carbon	100	98.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992999	Turbidity	2.29	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P345457

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992989	Turbidity	10.2	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993037	Calcium	2.40	Spike	P	0 - 20
1993037	Iron	1.23	Spike	P	0 - 20
1993037	Magnesium	2.10	Spike	P	0 - 20
1993037	Potassium	1.86	Spike	P	0 - 20
1993037	Sodium	1.73	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P345478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993037	Zinc	2.77	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P345478

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993037	Arsenic	1.05	Spike	P	0 - 20
1993037	Cadmium	1.17	Spike	P	0 - 20
1993037	Chromium	2.29	Spike	P	0 - 20
1993037	Copper	1.57	Spike	P	0 - 20
1993037	Lead	1.64	Spike	P	0 - 20
1993037	Nickel	0.979	Spike	P	0 - 20
1993037	Silver	2.23	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992902	Chloride	0.774	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P345583

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992902	Sulfate	1.36	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P345575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992990	Ammonia-N	1.28	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345613

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992951	Kjeldahl Nitrogen	2.45	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P345614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992993	Kjeldahl Nitrogen	6.02	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P345510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992991	NO2NO3-N	0.976	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P345541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992992	Total-P	0.498	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P345461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992972	O-Phosphate-P	0.261	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P345471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993020	Aldrin	7.33	Spike	P	0 - 30
1993020	Alpha-BHC	1.46	Spike	P	0 - 30
1993020	Alpha-Chlordane	3.70	Spike	P	0 - 30
1993020	Beta-BHC	23.6	Spike	P	0 - 30
1993020	Carbophenothion	2.70	Spike	P	0 - 30
1993020	Chlorothalonil	7.97	Spike	P	0 - 30
1993020	Cypermethrin	9.98	Spike	P	0 - 30
1993020	DDD-p,p'	4.61	Spike	P	0 - 30
1993020	DDE-p,p'	1.04	Spike	P	0 - 30
1993020	DDT-p,p'	18.2	Spike	P	0 - 30
1993020	Delta-BHC	13.7	Spike	P	0 - 30
1993020	Dicofol	12.0	Spike	P	0 - 30
1993020	Dieldrin	18.4	Spike	P	0 - 30
1993020	Endosulfan I	0.372	Spike	P	0 - 30
1993020	Endosulfan II	7.12	Spike	P	0 - 30
1993020	Endosulfan Sulfate	7.24	Spike	P	0 - 30
1993020	Endrin	7.00	Spike	P	0 - 30
1993020	Endrin Aldehyde	99.4	Spike	F	0 - 30
1993020	Endrin Ketone	2.55	Spike	P	0 - 30
1993020	Gamma-BHC	17.7	Spike	P	0 - 30
1993020	Gamma-Chlordane	6.74	Spike	P	0 - 30
1993020	Heptachlor	5.31	Spike	P	0 - 30
1993020	Heptachlor Epoxide	2.71	Spike	P	0 - 30
1993020	Methoxychlor	1.67	Spike	P	0 - 30
1993020	Mirex	9.05	Spike	P	0 - 30
1993020	Permethrin	5.44	Spike	P	0 - 30
1993020	Trifluralin	1.46	Spike	P	0 - 30
LFB	Aldrin	18.3	LCS	P	0 - 30
LFB	Alpha-BHC	3.10	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.50	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P345471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-BHC	5.88	LCS	P	0 - 30
LFB	Carbophenothion	2.41	LCS	P	0 - 30
LFB	Chlorothalonil	51.9	LCS	F	0 - 30
LFB	Cypermethrin	7.40	LCS	P	0 - 30
LFB	DDD-p,p'	3.16	LCS	P	0 - 30
LFB	DDE-p,p'	6.58	LCS	P	0 - 30
LFB	DDT-p,p'	11.1	LCS	P	0 - 30
LFB	Delta-BHC	2.50	LCS	P	0 - 30
LFB	Dicofol	6.02	LCS	P	0 - 30
LFB	Dieldrin	6.64	LCS	P	0 - 30
LFB	Endosulfan I	0.822	LCS	P	0 - 30
LFB	Endosulfan II	1.94	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.966	LCS	P	0 - 30
LFB	Endrin	12.3	LCS	P	0 - 30
LFB	Endrin Aldehyde	4.94	LCS	P	0 - 30
LFB	Endrin Ketone	2.37	LCS	P	0 - 30
LFB	Gamma-BHC	2.87	LCS	P	0 - 30
LFB	Gamma-Chlordane	6.40	LCS	P	0 - 30
LFB	Heptachlor	7.83	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.86	LCS	P	0 - 30
LFB	Methoxychlor	1.58	LCS	P	0 - 30
LFB	Mirex	10.1	LCS	P	0 - 30
LFB	Permethrin	6.93	LCS	P	0 - 30
LFB	Trifluralin	7.79	LCS	P	0 - 30

Reference Method: EPA 8270D

Batch ID: P345559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992932	Acetochlor	13.7	Spike	P	0 - 30
1992932	Alachlor	10.1	Spike	P	0 - 30
1992932	Ametryn	33.1	Spike	F	0 - 30
1992932	Atrazine	22.8	Spike	P	0 - 30
1992932	Atrazine Desethyl	20.9	Spike	P	0 - 30
1992932	Azinphos Methyl	18.3	Spike	P	0 - 30
1992932	Bromacil	10.8	Spike	P	0 - 30
1992932	Butylate	27.0	Spike	P	0 - 30
1992932	Chlorpyrifos Ethyl	20.1	Spike	P	0 - 30
1992932	Chlorpyrifos Methyl	11.0	Spike	P	0 - 30
1992932	Cyanazine	9.28	Spike	P	0 - 30
1992932	Demeton	36.0	Spike	F	0 - 30
1992932	Diazinon	15.6	Spike	P	0 - 30
1992932	Disulfoton	2.04	Spike	P	0 - 30
1992932	EPTC	25.1	Spike	P	0 - 30
1992932	Ethion	2.78	Spike	P	0 - 30
1992932	Ethoprop	20.5	Spike	P	0 - 30
1992932	Fenamiphos	2.01	Spike	P	0 - 30
1992932	Fipronil	10.9	Spike	P	0 - 30
1992932	Fipronil Sulfide	6.97	Spike	P	0 - 30
1992932	Fipronil Sulfone	4.98	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D

Batch ID: P345559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992932	Fonofos	15.8	Spike	P	0 - 30
1992932	Hexazinone	4.28	Spike	P	0 - 30
1992932	Malathion	21.3	Spike	P	0 - 30
1992932	Metalaxyl	15.9	Spike	P	0 - 30
1992932	Metolachlor	23.0	Spike	P	0 - 30
1992932	Metribuzin	22.2	Spike	P	0 - 30
1992932	Mevinphos	20.3	Spike	P	0 - 30
1992932	Molinate	19.2	Spike	P	0 - 30
1992932	Norflurazon	8.85	Spike	P	0 - 30
1992932	Parathion Ethyl	7.95	Spike	P	0 - 30
1992932	Parathion Methyl	13.7	Spike	P	0 - 30
1992932	Pendimethalin	5.07	Spike	P	0 - 30
1992932	Phorate	15.7	Spike	P	0 - 30
1992932	Prometon	24.4	Spike	P	0 - 30
1992932	Prometryn	9.31	Spike	P	0 - 30
1992932	Simazine	6.42	Spike	P	0 - 30
1992932	Terbufos	20.1	Spike	P	0 - 30
1992932	Terbutylazine	18.4	Spike	P	0 - 30
LFB	Acetochlor	0.692	LCS	P	0 - 30
LFB	Alachlor	5.45	LCS	P	0 - 30
LFB	Ametryn	9.78	LCS	P	0 - 30
LFB	Atrazine	3.42	LCS	P	0 - 30
LFB	Atrazine Desethyl	28.9	LCS	P	0 - 30
LFB	Azinphos Methyl	4.76	LCS	P	0 - 30
LFB	Bromacil	8.28	LCS	P	0 - 30
LFB	Butylate	12.2	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	10.1	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	10.4	LCS	P	0 - 30
LFB	Cyanazine	10.6	LCS	P	0 - 30
LFB	Demeton	10.4	LCS	P	0 - 30
LFB	Diazinon	1.06	LCS	P	0 - 30
LFB	Disulfoton	4.98	LCS	P	0 - 30
LFB	EPTC	12.3	LCS	P	0 - 30
LFB	Ethion	6.79	LCS	P	0 - 30
LFB	Ethoprop	9.69	LCS	P	0 - 30
LFB	Fenamiphos	24.3	LCS	P	0 - 30
LFB	Fipronil	1.91	LCS	P	0 - 30
LFB	Fipronil Sulfide	8.76	LCS	P	0 - 30
LFB	Fipronil Sulfone	6.15	LCS	P	0 - 30
LFB	Fonofos	7.15	LCS	P	0 - 30
LFB	Hexazinone	1.19	LCS	P	0 - 30
LFB	Malathion	9.37	LCS	P	0 - 30
LFB	Metalaxyl	2.13	LCS	P	0 - 30
LFB	Metolachlor	2.63	LCS	P	0 - 30
LFB	Metribuzin	21.5	LCS	P	0 - 30
LFB	Mevinphos	14.1	LCS	P	0 - 30
LFB	Molinate	7.29	LCS	P	0 - 30
LFB	Norflurazon	2.52	LCS	P	0 - 30
LFB	Parathion Ethyl	3.47	LCS	P	0 - 30
LFB	Parathion Methyl	3.99	LCS	P	0 - 30
LFB	Pendimethalin	3.66	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P345559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Phorate	3.54	LCS	P	0 - 30
LFB	Prometon	3.48	LCS	P	0 - 30
LFB	Prometryn	3.18	LCS	P	0 - 30
LFB	Simazine	15.6	LCS	P	0 - 30
LFB	Terbufos	6.56	LCS	P	0 - 30
LFB	Terbutylazine	1.86	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P345471

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993243	Chlordane	2.07	Spike	P	0 - 30
1993243	Toxaphene	4.56	Spike	P	0 - 30
LFB	Chlordane	8.74	LCS	P	0 - 30
LFB	Toxaphene	0.412	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P345390

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993445	2,4-D	12.8	Spike	P	0 - 30
1993445	3-Hydroxycarbofuran	5.49	Spike	P	0 - 30
1993445	Acetaminophen	10.8	Spike	P	0 - 30
1993445	Aldicarb	2.53	Spike	P	0 - 30
1993445	Aldicarb Sulfone	13.4	Spike	P	0 - 30
1993445	Aldicarb Sulfoxide	16.3	Spike	P	0 - 30
1993445	Bentazon	6.76	Spike	P	0 - 30
1993445	Carbamazepine	5.60	Spike	P	0 - 30
1993445	Carbaryl	11.2	Spike	P	0 - 30
1993445	Carbofuran	7.04	Spike	P	0 - 30
1993445	Diuron	7.61	Spike	P	0 - 30
1993445	Fenuron	9.73	Spike	P	0 - 30
1993445	Fluridone	6.70	Spike	P	0 - 30
1993445	Hydrocodone	9.14	Spike	P	0 - 30
1993445	Imazapyr	7.38	Spike	P	0 - 30
1993445	Imidacloprid	6.94	Spike	P	0 - 30
1993445	Linuron	21.3	Spike	P	0 - 30
1993445	MCP	1.09	Spike	P	0 - 30
1993445	Methiocarb	4.18	Spike	P	0 - 30
1993445	Methomyl	12.0	Spike	P	0 - 30
1993445	Oxamyl	10.8	Spike	P	0 - 30
1993445	Primidone	8.74	Spike	P	0 - 30
1993445	Propoxur	4.86	Spike	P	0 - 30
1993445	Pyraclostrobin	7.87	Spike	P	0 - 30
1993445	Triclopyr	1.43	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P345394

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992930	AMPA	8.73	Spike	P	0 - 30
1992930	Endothall	6.81	Spike	P	0 - 30
1992930	Glufosinate	5.14	Spike	P	0 - 30
1992930	Glyphosate	8.83	Spike	P	0 - 30
1992930	Sucralose	10.7	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P345424

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992965	Color (true)	0.132	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P345633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993148	Total Alkalinity	1.43	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P346040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992950	TDS	6.01	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P346041

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993146	TDS	5.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P345634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993148	Fluoride	0.993	Spike	P	0 - 3.5

Reference Method: SM 4500 F-C-97
Batch ID: P345914

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1993151	Fluoride	0.948	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P345626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1992991	Organic Carbon	0.782	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: 1993018
Field Sample ID: G1CE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	34.4	P	30 - 160

Lab Sample ID: 1993019
Field Sample ID: G1CE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	56.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	101	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.0	P	30 - 160
EPA 8321B	Diuron-d6	51.0	P	30 - 160
EPA 8321B	Endothall-d6	120	P	50 - 160
EPA 8321B	Glyphosate 13C 15N	20.2	F	40 - 160
EPA 8321B	Primidone-d5	80.4	P	30 - 160
EPA 8321B	Sucralose-d6	80.4	P	40 - 160

Lab Sample ID: 1993020
Field Sample ID: G1CE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	57.9	P	37 - 117
EPA 8270D	Tetrachloro-m-xylene	42.9	P	34 - 101
EPA 8276	Decachlorobiphenyl	49.6	P	31 - 108
EPA 8276	PCNB	81.9	P	62 - 142

Lab Sample ID: 1993021
Field Sample ID: G1CE0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	106	P	71 - 126
EPA 8270D	Terbufos-d10	115	P	59 - 149

Quality Assurance Report Calibration Verification

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B

Run ID: A83942

Included Lab Sample IDs: 1992980, 1992981, 1992986, 1992987, 1992988, 1992989

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A83955

Included Lab Sample IDs: 1992980, 1992981, 1992986, 1992987, 1992988, 1992989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	98.5	P/P	95 - 105
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A83956

Included Lab Sample IDs: 1992984, 1992985, 1992994, 1992995, 1992996, 1992997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A83979

Included Lab Sample IDs: 1992982, 1992983, 1992990, 1992991, 1992992, 1992993

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A84014

Included Lab Sample IDs: 1992982, 1992983, 1992990, 1992991, 1992992, 1992993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	102	102	P/P	90 - 110
Ammonia-N	104	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A84015

Included Lab Sample IDs: 1992980, 1992981, 1992986, 1992987, 1992988, 1992989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.5	99.0	P/P	90 - 110
Chloride	99.0	101	P/P	90 - 110
Sulfate	99.8	100	P/P	90 - 110
Sulfate	100	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84027

Included Lab Sample IDs: 1993033, 1993034, 1993035, 1993036, 1993037, 1993038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	100	100	P/P	90 - 110
Arsenic	100	96.7	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A84027

Included Lab Sample IDs: 1993033, 1993034, 1993035, 1993036, 1993037, 1993038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	98.6	99.7	P/P	90 - 110
Cadmium	99.2	98.6	P/P	90 - 110
Cadmium	99.7	98.5	P/P	90 - 110
Chromium	91.9	91.7	P/P	90 - 110
Chromium	92.9	91.9	P/P	90 - 110
Chromium	97.5	92.9	P/P	90 - 110
Copper	101	99.1	P/P	90 - 110
Copper	98.2	95.3	P/P	90 - 110
Copper	99.1	98.2	P/P	90 - 110
Lead	96.5	95.6	P/P	90 - 110
Lead	96.5	96.5	P/P	90 - 110
Lead	97.0	96.5	P/P	90 - 110
Nickel	101	98.5	P/P	90 - 110
Nickel	98.5	98.9	P/P	90 - 110
Nickel	98.9	95.5	P/P	90 - 110
Silver	99.0	99.5	P/P	90 - 110
Silver	99.5	98.4	P/P	90 - 110
Silver	99.8	99.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A84029

Included Lab Sample IDs: 1993033, 1993034, 1993035, 1993036, 1993037, 1993038

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	101	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Iron	99.5	99.8	P/P	90 - 110
Iron	99.8	99.6	P/P	90 - 110
Magnesium	100	100	P/P	90 - 110
Magnesium	100	100	P/P	90 - 110
Potassium	96.9	97.5	P/P	90 - 110
Potassium	97.5	97.1	P/P	90 - 110
Sodium	98.2	99.3	P/P	90 - 110
Sodium	99.3	98.5	P/P	90 - 110
Zinc	100	101	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A84034

Included Lab Sample IDs: 1992982, 1992983, 1992990, 1992991, 1992992, 1992993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	100	101	P/P	90 - 110
Organic Carbon	99.8	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A84037

Included Lab Sample IDs: 1992980, 1992981, 1992986, 1992987, 1992988, 1992989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-97

Run ID: A84037

Included Lab Sample IDs: 1992980, 1992981, 1992986, 1992987, 1992988, 1992989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.2	102	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A84037

Included Lab Sample IDs: 1992980, 1992981, 1992986, 1992987, 1992988

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	97.1	97.6	P/P	90 - 110
Fluoride	97.6	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84102

Included Lab Sample IDs: 1992983, 1992990, 1992991, 1992992, 1992993

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A84103

Included Lab Sample IDs: 1992982

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.3	98.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A84107

Included Lab Sample IDs: 1993019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	84.8	90.3	P/P	60 - 160
Endothall	86.4	141	P/P	60 - 160
Glufosinate	89.8	95.9	P/P	60 - 160
Glyphosate	107	105	P/P	60 - 160
Sucralose	66.3	81.4	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A84117

Included Lab Sample IDs: 1992982, 1992983, 1992990, 1992991, 1992992, 1992993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.6	94.2	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A84132

Included Lab Sample IDs: 1993020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	98.1		P	80 - 120
Alpha-BHC	97.8		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	92.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A84132

Included Lab Sample IDs: 1993020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	91.0		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cypermethrin	94.8		P	80 - 120
DDD-p,p'	98.9		P	80 - 120
DDE-p,p'	99.5		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	96.3		P	80 - 120
Dicofol	109		P	80 - 120
Dieldrin	93.4		P	80 - 120
Endosulfan I	97.1		P	80 - 120
Endosulfan II	96.2		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	92.3		P	80 - 120
Endrin Aldehyde	98.2		P	80 - 120
Endrin Ketone	97.3		P	80 - 120
Gamma-BHC	100		P	80 - 120
Gamma-Chlordane	99.7		P	80 - 120
Heptachlor	98.4		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Methoxychlor	108		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	93.7		P	80 - 120
Trifluralin	98.5		P	80 - 120

Reference Method: SM 4500 F-C-97

Run ID: A84146

Included Lab Sample IDs: 1992989

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.5	99.1	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A84183

Included Lab Sample IDs: 1993020

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	103		P	80 - 120
Toxaphene	81.6		P	80 - 120

Reference Method: EPA 8321B

Run ID: A84268

Included Lab Sample IDs: 1993019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	106	P/P	50 - 150
3-Hydroxycarbofuran	109	117	P/P	50 - 150
Acetaminophen	131	129	P/P	60 - 150
Aldicarb	104	112	P/P	60 - 150
Aldicarb Sulfone	102	109	P/P	50 - 150
Aldicarb Sulfoxide	103	107	P/P	50 - 150
Bentazon	97.9	93.4	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A84268

Included Lab Sample IDs: 1993019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	109	95.6	P/P	60 - 150
Carbaryl	110	105	P/P	60 - 150
Carbofuran	108	112	P/P	50 - 150
Diuron	109	109	P/P	60 - 150
Fenuron	105	109	P/P	60 - 150
Fluridone	110	106	P/P	60 - 160
Hydrocodone	109	107	P/P	60 - 150
Imazapyr	98.7	99.3	P/P	50 - 150
Imidacloprid	104	109	P/P	60 - 150
Linuron	97.6	103	P/P	60 - 150
MCPP	111	110	P/P	50 - 150
Methiocarb	104	107	P/P	50 - 150
Methomyl	106	107	P/P	50 - 150
Oxamyl	104	112	P/P	50 - 150
Primidone	106	104	P/P	60 - 150
Propoxur	93.5	105	P/P	50 - 150
Pyraclostrobin	105	100	P/P	60 - 150
Triclopyr	116	102	P/P	50 - 160

Reference Method: EPA 8270D

Run ID: A84287

Included Lab Sample IDs: 1993021

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.9		P	80 - 120
Alachlor	102		P	80 - 120
Ametryn	101		P	80 - 120
Atrazine	92.4		P	80 - 120
Atrazine Desethyl	78.5*		F	80 - 120
Azinphos Methyl	99.7		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	101		P	80 - 120
Chlorpyrifos Ethyl	95.3		P	80 - 120
Chlorpyrifos Methyl	95.8		P	80 - 120
Cyanazine	66.4*		F	80 - 120
Demeton	100		P	80 - 120
Diazinon	99.2		P	80 - 120
Disulfoton	95.3		P	80 - 120
EPTC	101		P	80 - 120
Ethion	93.9		P	80 - 120
Ethoprop	97.3		P	80 - 120
Fenamiphos	92.8		P	80 - 120
Fipronil	97.6		P	80 - 120
Fipronil Sulfide	108		P	80 - 120
Fipronil Sulfone	95.6		P	80 - 120
Fonofos	97.1		P	80 - 120
Hexazinone	96.9		P	80 - 120
Malathion	95.6		P	80 - 120
Metalaxyl	101		P	80 - 120
Metolachlor	104		P	80 - 120
Metribuzin	85.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D
Run ID: A84287
Included Lab Sample IDs: 1993021

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mevinphos	97.4		P	80 - 120
Molinate	96.4		P	80 - 120
Norflurazon	98.1		P	80 - 120
Parathion Ethyl	92.9		P	80 - 120
Parathion Methyl	94.4		P	80 - 120
Pendimethalin	96.1		P	80 - 120
Phorate	91.3		P	80 - 120
Prometon	97.2		P	80 - 120
Prometryn	102		P	80 - 120
Simazine	94.7		P	80 - 120
Terbufos	94.0		P	80 - 120
Terbuthylazine	96.5		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							2.29	
	Turbidity							10.2	
EPA 200.7 Rev. 4.4	Calcium	103		99.1	101				2.40
	Iron	103		104	102	102			1.23
	Magnesium	103		101	102				2.10
	Potassium	98.4		97.1	94.0	97.7			1.86
	Sodium	99.7		98.0	99.4				1.73
	Zinc	104		102	99.4	99.4			2.77
EPA 200.8 Rev. 5.4	Arsenic	103		102	101	102			1.05
	Cadmium	101		99.8	98.6	103			1.17
	Chromium	91.9		91.2	89.1	91.6			2.29
	Copper	97.8		96.7	95.2	95.6			1.57
	Lead	96.3		96.8	95.2	97.0			1.64
	Nickel	101		99.5	98.5	98.9			0.979
	Silver	101		100	97.9	102			2.23
EPA 300.0 Rev. 2.1	Chloride	100		100	99.6			0.774	
	Sulfate	101		99.9	101			1.36	
EPA 350.1 Rev. 2.0	Ammonia-N	102		101	102				1.28
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	92.8		98.0	102				2.45
	Kjeldahl Nitrogen	94.0		92.1	103				6.02
EPA 353.2 Rev. 2.0	NO2NO3-N	100		102	103				0.976
EPA 365.1 Rev. 2.0	Total-P	99.4		99.2	99.8				0.498
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		95.7	96.1				0.261
EPA 8270D	Acetochlor	95.4	96.1	100	87.5	0.692			13.7
	Alachlor	92.4	97.6	93.9	104	5.45			10.1
	Aldrin	40.8	33.9	52.2	48.5	18.3			7.33
	Alpha-BHC	88.6	85.9	92.9	94.3	3.10			1.46
	Alpha-Chlordane	86.6	81.9	64.0	61.6	5.50			3.70

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						SMP	MS
EPA 8270D	Ametryn	86.3	95.1	80.2	112	9.78	33.1
	Atrazine	94.5	97.8	91.1	124	3.42	22.8
	Atrazine Desethyl	78.9	106	136	110	28.9	20.9
	Azinphos Methyl	106	111	118	98.4	4.76	18.3
	Beta-BHC	90.1	95.5	78.0	61.6	5.88	23.6
	Bromacil	86.8	94.3	101	91.1	8.28	10.8
	Butylate	51.3	58.0	51.5	39.3	12.2	27.0
	Carbophenothion	104	102	103	105	2.41	2.70
	Chlorothalonil	63.2	107	75.3	81.6	51.9	7.97
	Chlorpyrifos Ethyl	78.7	87.0	99.2	81.1	10.1	20.1
	Chlorpyrifos Methyl	82.4	91.4	88.5	79.3	10.4	11.0
	Cyanazine	188	209	199	181	10.6	9.28
	Cypermethrin	85.9	79.8	85.8	77.6	7.40	9.98
	DDD-p,p'	93.3	90.4	86.5	82.6	3.16	4.61
	DDE-p,p'	90.0	84.3	61.0	60.4	6.58	1.04
	DDT-p,p'	93.9	84.1	80.0	66.7	11.1	18.2
	Delta-BHC	98.1	101	90.9	104	2.50	13.7
	Demeton	68.8	76.4	81.1	117	10.4	36.0
	Diazinon	103	104	106	123	1.06	15.6
	Dicofol	84.5	89.7	80.8	91.0	6.02	12.0
	Dieldrin	90.5	84.7	64.1	53.3	6.64	18.4
	Disulfoton	84.8	89.2	98.8	96.8	4.98	2.04
	Endosulfan I	88.6	87.9	83.2	82.9	0.822	0.372
	Endosulfan II	95.0	96.9	78.9	84.8	1.94	7.12
	Endosulfan Sulfate	99.9	101	96.3	89.6	0.966	7.24
	Endrin	93.3	82.5	63.0	67.6	12.3	7.00
	Endrin Aldehyde	83.4	87.6	6.73	20.0	4.94	99.4
	Endrin Ketone	90.6	88.5	98.9	101	2.37	2.55
	EPTC	54.6	61.7	34.4	44.3	12.3	25.1
	Ethion	80.2	85.8	69.1	67.2	6.79	2.78
	Ethoprop	84.5	93.1	92.4	113	9.69	20.5
	Fenamiphos	79.7	102	72.4	71.0	24.3	2.01
	Fipronil	96.8	98.7	83.5	93.2	1.91	10.9
	Fipronil Sulfide	78.2	85.4	71.1	76.2	8.76	6.97
	Fipronil Sulfone	79.4	84.4	66.8	70.2	6.15	4.98
	Fonofos	89.8	96.5	99.5	117	7.15	15.8
	Gamma-BHC	98.8	96.0	92.4	77.4	2.87	17.7
	Gamma-Chlordane	87.4	82.0	62.5	58.4	6.40	6.74
	Heptachlor	78.3	72.4	60.5	57.3	7.83	5.31
	Heptachlor Epoxide	89.3	84.2	69.0	67.2	5.86	2.71
	Hexazinone	95.4	94.2	113	118	1.19	4.28
	Malathion	83.8	92.0	76.6	61.8	9.37	21.3
	Metalaxyl	96.4	98.5	104	88.7	2.13	15.9
	Methoxychlor	93.8	92.3	70.6	71.8	1.58	1.67
	Metolachlor	92.5	95.0	109	86.7	2.63	23.0
	Metribuzin	82.6	103	172	137	21.5	22.2
	Mevinphos	74.3	85.6	93.7	115	14.1	20.3
	Mirex	82.0	74.1	51.2	56.1	10.1	9.05
	Molinate	65.9	70.9	47.4	57.4	7.29	19.2
	Norflurazon	93.8	96.2	60.4	66.0	2.52	8.85
	Parathion Ethyl	88.9	92.1	101	93.2	3.47	7.95
	Parathion Methyl	95.5	99.4	122	106	3.99	13.7
	Pendimethalin	105	109	113	119	3.66	5.07
	Permethrin	86.2	80.4	75.9	71.9	6.93	5.44

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Phorate	83.7	86.7	107	125	3.54	15.7
	Prometon	84.8	87.8	87.6	112	3.48	24.4
	Prometryn	92.7	95.7	85.1	93.4	3.18	9.31
	Simazine	87.8	103	95.6	102	15.6	6.42
	Terbufos	85.9	91.7	101	123	6.56	20.1
	Terbutylazine	94.0	95.8	95.8	115	1.86	18.4
	Trifluralin	83.9	77.6	63.7	62.8	7.79	1.46
EPA 8276	Chlordane	87.1	95.1	80.9	82.6	8.74	2.07
	Toxaphene	64.7	64.4	57.0	54.5	0.412	4.56
EPA 8321B	2,4-D	74.0		106	91.6		12.8
	3-Hydroxycarbofuran	100		86.6	91.5		5.49
	Acetaminophen	125		139	155		10.8
	Aldicarb	70.2		43.4	42.3		2.53
	Aldicarb Sulfone	97.5		90.5	103		13.4
	Aldicarb Sulfoxide	93.7		72.6	85.4		16.3
	AMPA	89.7		68.1	62.4		8.73
	Bentazon	125		92.4	102		6.76
	Carbamazepine	80.1		57.4	60.7		5.60
	Carbaryl	69.9		42.1	47.1		11.2
	Carbofuran	75.4		47.3	50.8		7.04
	Diuron	76.5		48.4	56.9		7.61
	Endothall	97.1		101	108		6.81
	Fenuron	94.6		71.3	78.6		9.73
	Fluridone	84.8		62.5	68.5		6.70
	Glufosinate	102		88.2	83.8		5.14
	Glyphosate	115		91.9	100		8.83
	Hydrocodone	95.8		95.3	104		9.14
	Imazapyr	82.2		65.0	98.2		7.38
	Imidacloprid	103		164	180		6.94
	Linuron	90.9		69.7	86.3		21.3
	MCPP	84.4		119	117		1.09
	Methiocarb	83.5		64.7	67.5		4.18
	Methomyl	98.8		75.8	85.5		12.0
	Oxamyl	87.9		72.9	81.2		10.8
	Primidone	95.9		87.7	95.7		8.74
	Propoxur	78.5		47.6	49.9		4.86
	Pyraclostrobin	78.6		78.8	85.3		7.87
	Sucralose	79.4		78.8	70.8		10.7
	Triclopyr	82.8		130	132		1.43
SM 2120 B	Color (true)					0.132	
SM 2320 B-97	Total Alkalinity	102				1.43	
SM 2540 C-97	TDS					6.01	
	TDS					5.88	
SM 4500 F-C-97	Fluoride	95.3		94.4	95.6		0.993
	Fluoride	95.4		94.5	95.6		0.948
SM 5310 B-00	Organic Carbon	97.8		100	98.8		0.782

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1992980, 1992981, 1992986, 1992987, 1992988, 1992989

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	1993033, 1993034, 1993035, 1993036, 1993037, 1993038
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	1993033, 1993034, 1993035, 1993036, 1993037, 1993038
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1992982, 1992983, 1992990, 1992991, 1992992, 1992993
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1992982, 1992983, 1992990, 1992991, 1992992, 1992993
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1992982, 1992983, 1992990, 1992991, 1992992, 1992993
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1992982, 1992983, 1992990, 1992991, 1992992, 1992993
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	1992984, 1992985, 1992994, 1992995, 1992996, 1992997
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	1993020
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS	1993021
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	1993020
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	1993018
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	1993019
SM 2120 B / E31780	True Color measured at 450 nm	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	1992982, 1992983, 1992990, 1992991, 1992992, 1992993

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	05/16/2018			05/16/2018 16:23	William L. Brown IV	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
EPA 200.7 Rev. 4.4	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 18:43	Betina Topolski	1993033
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 18:50	Betina Topolski	1993034
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 18:58	Betina Topolski	1993035
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 19:05	Betina Topolski	1993036
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 19:12	Betina Topolski	1993038
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 19:44	Betina Topolski	1993037
EPA 200.8 Rev. 5.4	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 14:06	Nadine Brooks	1993037
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 16:49	Nadine Brooks	1993033
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 17:28	Nadine Brooks	1993034
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 17:37	Nadine Brooks	1993035
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 17:47	Nadine Brooks	1993036
	05/16/2018	05/17/2018 13:30	Allison Taylor	05/18/2018 17:57	Nadine Brooks	1993038
EPA 300.0 Rev. 2.1	05/16/2018			05/18/2018 05:16	Lipi Saha	1992980
	05/16/2018			05/18/2018 05:28	Lipi Saha	1992981
	05/16/2018			05/18/2018 05:40	Lipi Saha	1992986
	05/16/2018			05/18/2018 05:51	Lipi Saha	1992987
	05/16/2018			05/18/2018 06:27	Lipi Saha	1992988
	05/16/2018			05/18/2018 06:39	Lipi Saha	1992989
EPA 350.1 Rev. 2.0	05/16/2018			05/18/2018 12:06	Julia Storbeck	1992982
	05/16/2018			05/18/2018 12:08	Julia Storbeck	1992983
	05/16/2018			05/18/2018 12:17	Julia Storbeck	1992991
	05/16/2018			05/18/2018 12:18	Julia Storbeck	1992992
	05/16/2018			05/18/2018 12:20	Julia Storbeck	1992993
	05/16/2018			05/18/2018 13:55	Julia Storbeck	1992990
EPA 351.2 Rev. 2.0	05/16/2018	05/21/2018 11:00	Tanya Welborn	05/23/2018 10:01	Joseph Suarez	1992982
	05/16/2018	05/21/2018 11:00	Tanya Welborn	05/23/2018 10:03	Joseph Suarez	1992983
	05/16/2018	05/21/2018 11:00	Tanya Welborn	05/23/2018 10:04	Joseph Suarez	1992990
	05/16/2018	05/21/2018 11:00	Tanya Welborn	05/23/2018 10:06	Joseph Suarez	1992991
	05/16/2018	05/21/2018 11:00	Tanya Welborn	05/23/2018 10:07	Joseph Suarez	1992992
	05/16/2018	05/21/2018 11:00	Tanya Welborn	05/23/2018 10:12	Joseph Suarez	1992993
EPA 353.2 Rev. 2.0	05/16/2018			05/17/2018 11:40	Lauren Bottorf	1992982
	05/16/2018			05/17/2018 11:42	Lauren Bottorf	1992983
	05/16/2018			05/17/2018 11:43	Lauren Bottorf	1992990
	05/16/2018			05/17/2018 11:44	Lauren Bottorf	1992991
	05/16/2018			05/17/2018 11:45	Lauren Bottorf	1992992
	05/16/2018			05/17/2018 11:46	Lauren Bottorf	1992993
EPA 365.1 Rev. 2.0	05/16/2018	05/17/2018 13:40	Sima Feizi	05/23/2018 08:51	Beverly Y. Sanders	1992982
	05/16/2018	05/17/2018 13:40	Sima Feizi	05/23/2018 09:31	Beverly Y. Sanders	1992983

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	05/16/2018	05/17/2018 13:40	Sima Feizi	05/23/2018 09:32	Beverly Y. Sanders	1992990
	05/16/2018	05/17/2018 13:40	Sima Feizi	05/23/2018 09:33	Beverly Y. Sanders	1992991
	05/16/2018	05/17/2018 13:40	Sima Feizi	05/23/2018 09:34	Beverly Y. Sanders	1992992
	05/16/2018	05/17/2018 13:40	Sima Feizi	05/23/2018 09:35	Beverly Y. Sanders	1992993
EPA 365.1 Rev. 2.0 dissolved	05/16/2018			05/16/2018 15:56	Megan Treadwell	1992984
	05/16/2018			05/16/2018 15:57	Megan Treadwell	1992985
	05/16/2018			05/16/2018 15:58	Megan Treadwell	1992994, 1992995
	05/16/2018			05/16/2018 15:59	Megan Treadwell	1992996
	05/16/2018			05/16/2018 16:00	Megan Treadwell	1992997
EPA 8270D	05/16/2018	05/18/2018 09:00	Fe-Val Siddell	05/22/2018 22:58	Dinesh Mishra	1993020
	05/16/2018	05/18/2018 12:39	Rasheda Ghaffari	05/23/2018 15:07	Vandana T. Nagar	1993021
EPA 8276	05/16/2018	05/18/2018 09:00	Fe-Val Siddell	05/26/2018 01:26	John P. Burgos	1993020
EPA 8321B	05/16/2018	05/18/2018 10:00	Hoor Shaik	05/19/2018 08:18	Juyoung Kim	1993019
	05/16/2018	05/18/2018 10:00	Hoor Shaik	05/19/2018 19:15	Juyoung Kim	1993018
	05/16/2018	05/18/2018 10:00	Hoor Shaik	05/19/2018 23:51	Juyoung Kim	1993019
	05/16/2018	05/18/2018 14:30	Juyoung Kim	05/21/2018 15:01	Juyoung Kim	1993019
SM 2120 B	05/16/2018			05/16/2018 14:15	Tanya Welborn	1992980
	05/16/2018			05/16/2018 14:16	Tanya Welborn	1992981
	05/16/2018			05/16/2018 14:17	Tanya Welborn	1992986, 1992987
	05/16/2018			05/16/2018 14:18	Tanya Welborn	1992988
	05/16/2018			05/16/2018 14:19	Tanya Welborn	1992989
SM 2320 B-97	05/16/2018			05/19/2018 00:08	Dale L. Simmons	1992980
	05/16/2018			05/19/2018 00:18	Dale L. Simmons	1992981
	05/16/2018			05/19/2018 00:28	Dale L. Simmons	1992986
	05/16/2018			05/19/2018 00:39	Dale L. Simmons	1992987
	05/16/2018			05/19/2018 01:12	Dale L. Simmons	1992988
SM 2540 C-97	05/16/2018			05/19/2018 01:19	Dale L. Simmons	1992989
	05/16/2018			05/19/2018 23:10	Yijie Li	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 2540 D-97	05/16/2018			05/19/2018 23:10	Yijie Li	1992980, 1992981, 1992986, 1992987, 1992988, 1992989
SM 4500 F-C-97	05/16/2018			05/19/2018 00:08	Dale L. Simmons	1992980
	05/16/2018			05/19/2018 00:18	Dale L. Simmons	1992981
	05/16/2018			05/19/2018 00:28	Dale L. Simmons	1992986
	05/16/2018			05/19/2018 00:39	Dale L. Simmons	1992987
	05/16/2018			05/19/2018 01:12	Dale L. Simmons	1992988
	05/16/2018			05/23/2018 21:00	Dale L. Simmons	1992989
SM 5310 B-00	05/16/2018			05/19/2018 04:32	Julia Storbeck	1992991
	05/16/2018			05/19/2018 06:31	Julia Storbeck	1992982
	05/16/2018			05/19/2018 06:43	Julia Storbeck	1992983

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	05/16/2018			05/19/2018 06:55	Julia Storbeck	1992990
	05/16/2018			05/19/2018 07:08	Julia Storbeck	1992992
	05/16/2018			05/19/2018 07:22	Julia Storbeck	1992993