

Chemical Analysis Report

NW-DIST-2019-05-14-02

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

Event Description: **PENS/CANT RUN**

Request ID: **RQ-2019-05-13-25**

Customer: **NW-DIST**

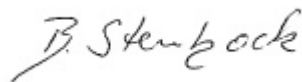
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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

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

Date Certified: 05-JUN-2019 18:30



NON-CONFORMANCE REPORT INCLUDED

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: Jones Creek upstream of N Navy Blvd

Collection Date/Time: 05/13/2019 11:00

Field ID: G4NW0429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085818	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P363956	
	EPA 300.0 Rev. 2.1	Chloride	9.1		mg Cl/L	P364028	
		Sulfate	8.4		mg SO4/L	P364030	
	SM 2120 B	Color (true)	110		PCU	P363940	
	SM 2320 B-97	Total Alkalinity	5.5		mg CaCO3/L	P364261	
	SM 2540 C-97	TDS	51		mg/L	P364389	
	SM 2540 D-97	TSS	3	I	mg/L	P364395	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P364266	
2085819	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P364152	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P364338	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P364212	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P364186	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P364107	
2085820	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P363935	
2085856	EPA 8321B	2,4-D	0.0020	U	ug/L	P363904	
		Acesulfame K**	0.10	U	ug/L	P364011	
		AMPA**	0.10	U	ug/L	P364011	MS
		Sucralose**	0.19		ug/L	P364011	
		Acetaminophen**	0.0080	U	ug/L	P363904	
		Endothall**	0.25	U	ug/L	P364011	
		Glufosinate**	0.10	U	ug/L	P364011	
		Bentazon	8.0E-04	U	ug/L	P363904	
		Glyphosate**	0.10	U	ug/L	P364011	
		Carbamazepine**	8.0E-04	U	ug/L	P363904	
		Diuron	0.0020	U	ug/L	P363904	
		Fenuron	0.016	U	ug/L	P363904	
		Fluridone**	8.0E-04	U	ug/L	P363904	
		Imazapyr**	0.0059	I	ug/L	P363904	
		Hydrocodone**	0.0020	U	ug/L	P363904	
		Ibuprofen**	0.020	U	ug/L	P363904	
		Imidacloprid	0.0031	I	ug/L	P363904	
		Linuron	0.0040	U	ug/L	P363904	
		MCP	0.0020	U	ug/L	P363904	MS
		Naproxen**	0.0080	U	ug/L	P363904	
		Primidone**	0.0092	I	ug/L	P363904	
		Pyraclostrobin**	0.0020	U	ug/L	P363904	RPD
		Triclopyr**	0.0040	U	ug/L	P363904	

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: Jackson Creek upstream of Old Corry Field Road

Collection Date/Time: 05/13/2019 11:20

Field ID: G4NW0430

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085857	EPA 8321B	2,4-D	0.011		ug/L	P363904	
		Acesulfame K**	0.10	U	ug/L	P364011	
		AMPA**	0.20	I	ug/L	P364011	MS
		Sucralose**	1.9		ug/L	P364011	
		Acetaminophen**	0.0080	U	ug/L	P363904	
		Endothall**	0.25	U	ug/L	P364011	
		Glufosinate**	0.10	U	ug/L	P364011	
		Bentazon	0.10		ug/L	P363904	
		Glyphosate**	0.10	U	ug/L	P364011	
		Carbamazepine**	0.018		ug/L	P363904	
		Diuron	0.0020	I	ug/L	P363904	
		Fenuron	0.016	U	ug/L	P363904	
		Fluridone**	8.0E-04	U	ug/L	P363904	
		Imazapyr**	0.0059	I	ug/L	P363904	
		Hydrocodone**	0.0020	U	ug/L	P363904	
		Ibuprofen**	0.020	U	ug/L	P363904	
		Imidacloprid	0.031		ug/L	P363904	
		Linuron	0.0040	U	ug/L	P363904	
		MCP	0.0020	U	ug/L	P363904	MS
		Naproxen**	0.0080	U	ug/L	P363904	
		Primidone**	0.0040	U	ug/L	P363904	
		Pyraclostrobin**	0.0020	U	ug/L	P363904	RPD
		Triclopyr**	0.0040	U	ug/L	P363904	

Sample Location: Marcus Creek upstream of Marcus Pointe Blvd Collection Date/Time: 05/13/2019 12:00

Field ID: G4NW0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085821	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P363956	
	EPA 300.0 Rev. 2.1	Chloride	5.8	A	mg Cl/L	P364028	
		Sulfate	2.3	A	mg SO4/L	P364030	
	SM 2120 B	Color (true)	41		PCU	P363940	
	SM 2320 B-97	Total Alkalinity	44		mg CaCO3/L	P364261	
	SM 2540 C-97	TDS	60		mg/L	P364389	
	SM 2540 D-97	TSS	2	I	mg/L	P364395	
	SM 4500 F-C-97	Fluoride	0.036	I	mg F/L	P364266	
2085822	EPA 350.1 Rev. 2.0	Ammonia-N	0.058		mg N/L	P364152	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P364338	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.33		mg N/L	P364213	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P364186	
	SM 5310 B-00	Organic Carbon	4.8		mg C/L	P364410	
2085823	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P363935	
2085862	EPA 200.7 Rev. 4.4	Barium	18.5		ug/L	P363918	
		Calcium	12.0		mg/L	P363918	
		Iron	870		ug/L	P363918	
		Magnesium	2.65		mg/L	P363918	
		Potassium	3.9		mg/L	P363918	
		Sodium	5.4		mg/L	P363918	
		Zinc	5.0	U	ug/L	P363918	
	EPA 200.8 Rev. 5.4	Aluminum	88		ug/L	P363918	
		Antimony	0.051	I	ug/L	P363918	
		Arsenic	0.47		ug/L	P363918	
		Boron**	132		ug/L	P363918	
		Cadmium	0.020	U	ug/L	P363918	
		Chromium	0.40	U	ug/L	P363918	
		Copper	0.40	U	ug/L	P363918	
		Lead	0.20	U	ug/L	P363918	
		Nickel	0.50	U	ug/L	P363918	
		Selenium	0.20	U	ug/L	P363918	
		Silver	0.010	U	ug/L	P363918	
		Thallium	0.10	U	ug/L	P363918	

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: Carpenter Creek upstream of 9th Avenue

Collection Date/Time: 05/13/2019 12:30

Field ID: G4NW0415

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085815	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P363956	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P364028	
		Sulfate	4.1		mg SO4/L	P364030	
	SM 2120 B	Color (true)	30		PCU	P363940	
	SM 2320 B-97	Total Alkalinity	23		mg CaCO3/L	P364261	
	SM 2540 C-97	TDS	42		mg/L	P364389	
	SM 2540 D-97	TSS	8	I	mg/L	P364395	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P364266	
2085816	EPA 350.1 Rev. 2.0	Ammonia-N	0.011	Y	mg N/L	P364152	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen		O	mg N/L	P364682	
	EPA 353.2 Rev. 2.0	NO2NO3-N		O	mg N/L	P364212	
	EPA 365.1 Rev. 2.0	Total-P	0.020	Y	mg P/L	P364186	
	SM 5310 B-00	Organic Carbon	3.8	Y	mg C/L	P364107	
2085817	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P363935	
2085854	EPA 8321B	Aldicarb	0.020	U	ug/L	P363978	
		Aldicarb Sulfone	0.0020	U	ug/L	P363978	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P363978	MS
		Carbaryl	0.0020	U	ug/L	P363978	
		Carbofuran	0.0020	U	ug/L	P363978	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P363978	
		Methiocarb	0.0020	U	ug/L	P363978	
		Methomyl	0.0020	U	ug/L	P363978	
		Oxamyl	0.0020	U	ug/L	P363978	
		Propoxur	0.0020	U	ug/L	P363978	
		2,4-D	0.0099		ug/L	P363904	
		Acesulfame K**	0.10	U	ug/L	P364011	
		AMPA**	0.22	I	ug/L	P364011	MS
2085855		Sucralose**	0.23		ug/L	P364011	
		Acetaminophen**	0.0080	U	ug/L	P363904	
		Endothall**	0.25	U	ug/L	P364011	
		Glufosinate**	0.10	U	ug/L	P364011	
		Bentazon	8.0E-04	U	ug/L	P363904	
		Glyphosate**	0.16	I	ug/L	P364011	
		Carbamazepine**	0.0011	I	ug/L	P363904	
		Diuron	0.022		ug/L	P363904	
		Fenuron	0.016	U	ug/L	P363904	
		Fluridone**	8.0E-04	U	ug/L	P363904	
		Imazapyr**	0.0050	I	ug/L	P363904	
		Hydrocodone**	0.0020	U	ug/L	P363904	
		Ibuprofen**	0.020	U	ug/L	P363904	
		Imidacloprid	0.037		ug/L	P363904	
		Linuron	0.0040	U	ug/L	P363904	
		MCP	0.0047	I	ug/L	P363904	MS

Field ID: G4NW0415

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085855	EPA 8321B	Naproxen**	0.0080	U	ug/L	P363904	
		Primidone**	0.0040	U	ug/L	P363904	
		Pyraclostrobin**	0.0020	U	ug/L	P363904	RPD
		Triclopyr**	0.0040	U	ug/L	P363904	
2085859	EPA 8270D	Aldrin	4.3	U	ng/L	P364035	
		Alpha-BHC	2.1	U	ng/L	P364035	
		Alpha-Chlordane	1.1	U	ng/L	P364035	
		Beta-BHC	11	U	ng/L	P364035	
		Bifenthrin**	4.3	U	ng/L	P364035	
		Delta-BHC	11	U	ng/L	P364035	
		Gamma-BHC	11	U	ng/L	P364035	
		Carbophenothion	13	UJ	ng/L	P364035	CCV
		Chlorothalonil	2.1	UJ	ng/L	P364035	CCV
		Cis-Nonachlor**	1.1	U	ng/L	P364035	
		Cypermethrin	21	U	ng/L	P364035	
		DDD-p,p'	8.5	U	ng/L	P364035	
		DDE-p,p'	8.5	U	ng/L	P364035	
		DDT-p,p'	11	U	ng/L	P364035	
		Dicofol	32	U	ng/L	P364035	
		Dieldrin	4.3	U	ng/L	P364035	
		Endosulfan I	4.3	U	ng/L	P364035	
		Endosulfan II	4.3	U	ng/L	P364035	
		Endosulfan Sulfate	2.1	U	ng/L	P364035	
		Endrin	2.1	U	ng/L	P364035	
		Endrin Aldehyde	2.1	U	ng/L	P364035	
		Endrin Ketone	2.1	U	ng/L	P364035	
		Ethalfuralin**	3.2	U	ng/L	P364035	
		Gamma-Chlordane	1.1	U	ng/L	P364035	
		Heptachlor	1.6	U	ng/L	P364035	
		Heptachlor Epoxide	2.1	U	ng/L	P364035	
		Hexachlorobenzene**	2.1	U	ng/L	P364035	
		Methoxychlor	4.3	U	ng/L	P364035	
		Mirex	2.1	U	ng/L	P364035	
		Permethrin	11	U	ng/L	P364035	
		Trans-Nonachlor**	1.1	U	ng/L	P364035	
		Trifluralin	2.7	U	ng/L	P364035	
		Chlordane	5.3	U	ng/L	P364035	
		Toxaphene	32	U	ng/L	P364035	
2085860	EPA 8270E	Acetochlor	0.28	U	ng/L	P364341	
		Alachlor	0.28	U	ng/L	P364341	
		Ametryn	0.67	U	ng/L	P364341	
		Atrazine	270		ng/L	P364341	
		Atrazine Desethyl	14		ng/L	P364341	
		Azinphos Methyl	5.6	U	ng/L	P364341	
		Bromacil	4.7		ng/L	P364341	

Field ID: G4NW0415

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085860	EPA 8270E	Butylate	0.45	U	ng/L	P364341	
		Chlorpyrifos Ethyl	0.28	U	ng/L	P364341	
		Chlorpyrifos Methyl	0.11	UJ	ng/L	P364341	LCS
		Cyanazine	3.6	U	ng/L	P364341	
		Demeton	7.8	UJ	ng/L	P364341	LCS
		Diazinon	0.14	U	ng/L	P364341	
		Dimethenamid**	0.11	U	ng/L	P364341	
		Disulfoton	0.56	UJ	ng/L	P364341	LCS
		Dithiopyr**	0.47		ng/L	P364341	
		EPTC	1.4	UJ	ng/L	P364341	RPD
		Ethion	0.17	U	ng/L	P364341	
		Ethoprop	0.11	U	ng/L	P364341	
		Fenamiphos	0.56	UJ	ng/L	P364341	LCS, RPD
		Fipronil	3.5		ng/L	P364341	
		Fipronil Desulfinyl**	0.80		ng/L	P364341	
		Fipronil Sulfide	0.84		ng/L	P364341	
		Fipronil Sulfone	5.3	J	ng/L	P364341	LCS
		Fonofos	0.22	U	ng/L	P364341	
		Hexazinone	0.56	UJ	ng/L	P364341	LCS, MS, RPD
		Malathion	0.39	U	ng/L	P364341	
		Metalaxyl	0.34	UJ	ng/L	P364341	LCS, MS, RPD
		Metolachlor	2.5		ng/L	P364341	
		Metribuzin	0.84	U	ng/L	P364341	
		Mevinphos	0.56	U	ng/L	P364341	
		Molinate	0.34	U	ng/L	P364341	
		Norflurazon	0.56	U	ng/L	P364341	
		Oxadiazon**	0.42	I	ng/L	P364341	
		Parathion Ethyl	0.28	U	ng/L	P364341	
		Parathion Methyl	0.61	U	ng/L	P364341	
		Pendimethalin	1.1	U	ng/L	P364341	
		Phorate	0.28	UJ	ng/L	P364341	LCS
		Prodiamine**	0.92	J	ng/L	P364341	CCV
		Prometon	1.0	UJ	ng/L	P364341	LCS, RPD
		Prometryn	0.22	U	ng/L	P364341	
		Simazine	7.6		ng/L	P364341	
		Tebuconazole**	1.9	I	ng/L	P364341	
		Terbufos	0.11	UJ	ng/L	P364341	LCS
		Terbuthylazine	0.77	I	ng/L	P364341	
2085861	EPA 200.7 Rev. 4.4	Barium	17.1		ug/L	P364002	
		Calcium	8.64		mg/L	P364002	
		Iron	590		ug/L	P364002	
		Magnesium	1.40		mg/L	P364002	
		Potassium	0.71	I	mg/L	P364002	
		Sodium	3.2		mg/L	P364002	

Field ID: G4NW0415

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085861	EPA 200.7 Rev. 4.4	Zinc	5.4	I	ug/L	P364002	
	EPA 200.8 Rev. 5.4	Aluminum	302		ug/L	P364002	
		Antimony	0.13	I	ug/L	P364002	
		Arsenic	0.46		ug/L	P364002	
		Boron**	16.0		ug/L	P364002	
		Cadmium	0.020	U	ug/L	P364002	
		Chromium	0.47	I	ug/L	P364002	
		Copper	1.26		ug/L	P364002	
		Lead	0.94		ug/L	P364002	
		Nickel	0.50	U	ug/L	P364002	
		Selenium	0.20	U	ug/L	P364002	
		Silver	0.010	U	ug/L	P364002	
		Thallium	0.10	U	ug/L	P364002	

Ref. Method and Comment:

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

EPA 350.1 Rev. 2.0: Sample appears to have been preserved with nitric acid and sulfuric acid.

EPA 351.2 Rev. 2.0: Sample appears to have been preserved with nitric acid and sulfuric acid.

EPA 353.2 Rev. 2.0: Sample appears to have been preserved with nitric acid and sulfuric acid.

EPA 365.1 Rev. 2.0: Total-P: Sample appears to have been preserved with nitric acid and sulfuric acid.

SM 5310 B-00: Sample appears to have been preserved with nitric acid and sulfuric acid.

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

EPA 8276: Refer to the narrative for an explanation of QC Codes.

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

EPA 200.8 Rev. 5.4: The lead result was confirmed on 06/03/2019.

Sample Location: Rest Area Run below Beaver Pond Creek

Collection Date/Time: 05/13/2019 13:30

Field ID: G5NW0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085824	EPA 180.1 Rev. 2.0	Turbidity	65		NTU	P363958	
	EPA 300.0 Rev. 2.1	Chloride	7.1		mg Cl/L	P364028	
		Sulfate	2.6		mg SO4/L	P364030	
	SM 2120 B	Color (true)	110	A	PCU	P363943	
	SM 2320 B-97	Total Alkalinity	13		mg CaCO3/L	P364261	
	SM 2540 C-97	TDS	64		mg/L	P364389	
	SM 2540 D-97	TSS	22		mg/L	P364395	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P364266	
2085826	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P364152	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.74		mg N/L	P364294	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.087		mg N/L	P364213	
	EPA 365.1 Rev. 2.0	Total-P	0.056		mg P/L	P364186	
	SM 5310 B-00	Organic Carbon	14		mg C/L	P364410	
2085828	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P363935	

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: Ten Mile Creek upstream of Pine Forest Road Collection Date/Time: 05/13/2019 14:15

Field ID: G5NW0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085858	EPA 8321B	2,4-D	0.067		ug/L	P363904	
		Acesulfame K**	0.10	U	ug/L	P364011	
		AMPA**	0.18	I	ug/L	P364011	MS
		Sucralose**	0.21		ug/L	P364011	
		Acetaminophen**	0.0080	U	ug/L	P363904	
		Endothall**	0.25	U	ug/L	P364011	
		Glufosinate**	0.10	U	ug/L	P364011	
		Bentazon	8.0E-04	U	ug/L	P363904	
		Glyphosate**	0.10	U	ug/L	P364011	
		Carbamazepine**	8.0E-04	U	ug/L	P363904	
		Diuron	0.0020	U	ug/L	P363904	
		Fenuron	0.016	U	ug/L	P363904	
		Fluridone**	8.0E-04	U	ug/L	P363904	
		Imazapyr**	0.013	I	ug/L	P363904	
		Hydrocodone**	0.0020	U	ug/L	P363904	
		Ibuprofen**	0.020	U	ug/L	P363904	
		Imidacloprid	0.011		ug/L	P363904	
		Linuron	0.0040	U	ug/L	P363904	
		MCPP	0.0088		ug/L	P363904	MS
		Naproxen**	0.0080	U	ug/L	P363904	
		Primidone**	0.0040	U	ug/L	P363904	
		Pyraclostrobin**	0.0020	U	ug/L	P363904	RPD
		Triclopyr**	0.0040	U	ug/L	P363904	

Sample Location: Direct Runoff-Graveyard Branch @ Tradewinds Dr. **Collection Date/Time: 05/13/2019 14:50**

Field ID: G4NW0176

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2085825	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P363956	
	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P364028	
		Sulfate	4.9		mg SO4/L	P364030	
	SM 2120 B	Color (true)	29		PCU	P363940	
	SM 2320 B-97	Total Alkalinity	29		mg CaCO3/L	P364261	
	SM 2540 C-97	TDS	60		mg/L	P364389	
	SM 2540 D-97	TSS	2	I	mg/L	P364395	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P364266	
2085827	EPA 350.1 Rev. 2.0	Ammonia-N	0.032		mg N/L	P364152	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35		mg N/L	P364294	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P364213	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P364186	
	SM 5310 B-00	Organic Carbon	3.1		mg C/L	P364410	
2085829	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P363935	

Ref. Method and Comment:

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

Non-Conformance Report

NCR ID: 7676

Event(s)

NW-DIST-2019-05-14-02

Job(s)

TLH-2019-05-14-44

Sample(s)

2085861

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2. (for metals analysis)

Resolution: Sample preserved in the laboratory with nitric acid 05/14/2019 at 11:47.
HNO3 Lot# NA8197080 | Expiration Date: 07/16/2019
Data will be qualified as appropriate.

Authorized by/Date: Joshua Ayres 5/22/2019

NCR ID: 7694

Event(s)

NW-DIST-2019-05-14-02

Job(s)

TLH-2019-05-14-33

Sample(s)

2085816

Test(s)

NCR Type: SAMPLING

NCR Category: Improper Preservation

Observation: Sample appears to be preserved with both nitric acid and sulfuric acid. It has a nitrite/nitrate concentration of 460 mg N/L and there is approximately 0.4394 mg N/L in the unpreserved aliquot(laboratory ID 2085815).

Resolution: Results for the NO₂NO₃-N and Kjeldahl Nitrogen components were reported as the non numeric qualifier O.
Results for other affected components were qualified with a Y qualifier for improper preservation.

Authorized by/Date: Peter D. Kaus 5/31/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.

Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P363956

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P363958

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P363918

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 200.7 Rev. 4.4
Batch ID: P364002

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: P363918

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P364002

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: P364028

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364030

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364152

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364294

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364338

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364682

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364212

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364213

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364186

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P363935

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

Reference Method: EPA 8270D
Batch ID: P364035

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	12	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	8.0	U	ng/L
DDE-p,p'	8.0	U	ng/L
DDT-p,p'	10	U	ng/L
Delta-BHC	10	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	10	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270D
Batch ID: P364035

Component	Result	Code	Units
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: P364341

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P364341

Component	Result	Code	Units
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P364035

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

Reference Method: EPA 8321B
Batch ID: P363904

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Bentazon	8.0E-04	U	ug/L
Carbamazepine	8.0E-04	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
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P363978

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

Reference Method: EPA 8321B
Batch ID: P364011

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P364011

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

Reference Method: SM 2120 B
Batch ID: P363940

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P363943

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P364261

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

Reference Method: SM 2540 C-97
Batch ID: P364389

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P364395

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P364266

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P364107

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

Reference Method: SM 5310 B-00
Batch ID: P364410

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-00
Batch ID: P364410

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: P363918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	101		P	85 - 115
Calcium	109		P	85 - 115
Iron	106		P	85 - 115
Magnesium	113		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P364002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	99.1		P	85 - 115
Calcium	94.5		P	85 - 115
Iron	99.0		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	97.3		P	85 - 115
Sodium	90.7		P	85 - 115
Zinc	97.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	105		P	85 - 115
Boron	101		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	101		P	85 - 115
Copper	104		P	85 - 115
Lead	93.9		P	85 - 115
Nickel	104		P	85 - 115
Selenium	104		P	85 - 115
Silver	103		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P364002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.1		P	85 - 115
Antimony	96.9		P	85 - 115
Arsenic	102		P	85 - 115
Boron	96.6		P	85 - 115
Cadmium	99.5		P	85 - 115
Chromium	99.8		P	85 - 115
Copper	99.8		P	85 - 115
Lead	99.9		P	85 - 115
Nickel	101		P	85 - 115
Selenium	99.8		P	85 - 115
Silver	97.9		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P364002

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364028

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364030

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364152

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: P364294

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364338

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364682

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364212

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364213

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P364186

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P363935

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

Reference Method: EPA 8270D
 Batch ID: P364035

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	51.7	51.1	P/P	20 - 93.0
Alpha-BHC	91.2	87.9	P/P	57 - 119
Alpha-Chlordane	77.9	76.3	P/P	58 - 112
Beta-BHC	119	118	P/P	56 - 149
Bifenthrin	74.8	72.7	P/P	50 - 130
Carbophenothion	132	129	P/P	26 - 147
Chlorothalonil	56.5	50.4	P/P	20 - 155
Cis-Nonachlor	78.0	75.5	P/P	50 - 130
Cypermethrin	73.0	67.5	P/P	40 - 137
DDD-p,p'	86.0	83.0	P/P	65 - 129
DDE-p,p'	79.5	79.3	P/P	57 - 116
DDT-p,p'	89.3	88.6	P/P	53 - 133
Delta-BHC	131	124	P/P	59 - 163
Dicofol	89.0	80.8	P/P	24 - 138
Dieldrin	79.4	79.3	P/P	60 - 120
Endosulfan I	84.1	79.9	P/P	64 - 118
Endosulfan II	92.6	89.9	P/P	58 - 142
Endosulfan Sulfate	78.6	76.4	P/P	60 - 127
Endrin	85.7	88.5	P/P	59 - 122
Endrin Aldehyde	87.7	84.6	P/P	49 - 132
Endrin Ketone	80.5	77.4	P/P	64 - 121
Ethalfuralin	83.4	76.4	P/P	50 - 130
Gamma-BHC	116	111	P/P	56 - 141
Gamma-Chlordane	74.5	73.7	P/P	56 - 110
Heptachlor	62.5	60.9	P/P	46 - 96.0
Heptachlor Epoxide	81.1	78.9	P/P	61 - 112
Hexachlorobenzene	69.1	66.9	P/P	50 - 130
Methoxychlor	99.1	97.1	P/P	63 - 134
Mirex	58.6	58.2	P/P	45 - 100
Permethrin	67.9	63.6	P/P	53 - 115
Trans-Nonachlor	73.3	70.8	P/P	50 - 130
Trifluralin	81.4	80.6	P/P	39 - 142

Reference Method: EPA 8270E
 Batch ID: P364341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	103	98.3	P/P	71 - 121
Alachlor	102	95.3	P/P	72 - 119
Ametryn	93.7	83.4	P/P	47 - 144

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P364341

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine	105	95.5	P/P	75 - 123
Atrazine Desethyl	57.5	51.1	P/P	45 - 133
Azinphos Methyl	95.5	85.3	P/P	66 - 165
Bromacil	59.3	45.9	P/P	43 - 123
Butylate	71.3	53.6	P/P	27 - 83.0
Chlorpyrifos Ethyl	77.5	82.3	P/P	70 - 117
Chlorpyrifos Methyl	64.2	71.0	F/P	71 - 120
Cyanazine	81.6	72.2	P/P	34 - 264
Demeton	34.3	34.5	F/F	41 - 122
Diazinon	95.6	89.5	P/P	70 - 127
Dimethenamid	103	99.7	P/P	66 - 123
Disulfoton	33.3	36.9	F/F	56 - 127
Dithiopyr	101	93.7	P/P	67 - 125
EPTC	69.0	46.1	P/P	24 - 84.0
Ethion	105	103	P/P	53 - 132
Ethoprop	103	90.4	P/P	57 - 117
Fenamiphos	16.4	6.14	F/F	55 - 136
Fipronil	95.6	85.2	P/P	64 - 126
Fipronil Desulfinyl	98.2	92.4	P/P	47 - 114
Fipronil Sulfide	104	96.8	P/P	57 - 120
Fipronil Sulfone	125	96.2	F/P	52 - 115
Fonofos	70.9	61.6	P/P	61 - 121
Hexazinone	66.3	44.8	P/F	62 - 131
Malathion	100	98.2	P/P	67 - 126
Metalaxyl	5.36	10.5	F/F	54 - 128
Metolachlor	104	98.1	P/P	71 - 118
Metribuzin	78.1	81.1	P/P	42 - 221
Mevinphos	51.7	45.0	P/P	45 - 114
Molinate	84.3	65.4	P/P	33 - 91.0
Norflurazon	88.2	67.6	P/P	60 - 123
Oxadiazon	107	106	P/P	66 - 121
Parathion Ethyl	89.9	88.7	P/P	73 - 111
Parathion Methyl	94.0	88.4	P/P	74 - 126
Pendimethalin	80.6	83.1	P/P	63 - 131
Phorate	39.8	39.6	F/F	54 - 115
Prodiamine	91.2	90.1	P/P	38 - 140
Prometon	70.7	45.5	P/F	61 - 120
Prometryn	90.9	86.6	P/P	62 - 126
Simazine	99.0	90.0	P/P	75 - 126
Tebuconazole	42.8	34.8	P/P	21 - 115
Terbufos	59.3	61.0	F/F	65 - 116
Terbutylazine	104	99.0	P/P	73 - 117

Reference Method: EPA 8276
Batch ID: P364035

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	76.1	71.5	P/P	43 - 128
Toxaphene	54.5	54.4	P/P	38 - 140

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P363904

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	114		P	40 - 150
Acetaminophen	88.5		P	30 - 150
Bentazon	125		P	30 - 150
Carbamazepine	95.9		P	40 - 150
Diuron	88.9		P	40 - 150
Fenuron	103		P	40 - 150
Fluridone	106		P	40 - 150
Hydrocodone	90.5		P	40 - 150
Ibuprofen	89.0		P	40 - 150
Imazapyr	99.6		P	40 - 150
Imidacloprid	96.8		P	40 - 150
Linuron	78.6		P	40 - 150
MCPP	128		P	40 - 150
Naproxen	99.7		P	40 - 150
Primidone	90.9		P	40 - 150
Pyraclostrobin	83.2		P	40 - 150
Triclopyr	87.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P363978

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	61.6		P	40 - 150
Aldicarb	78.5		P	30 - 150
Aldicarb Sulfone	87.1		P	40 - 150
Aldicarb Sulfoxide	77.0		P	40 - 150
Carbaryl	72.5		P	40 - 150
Carbofuran	69.7		P	40 - 150
Methiocarb	69.5		P	40 - 150
Methomyl	75.0		P	40 - 150
Oxamyl	90.7		P	40 - 150
Propoxur	71.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P364011

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	93.7		P	40 - 150
AMPA	124		P	40 - 150
Endothall	77.8		P	40 - 150
Glufosinate	107		P	40 - 150
Glyphosate	99.1		P	40 - 140
Sucralose	102		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P363940

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B
Batch ID: P363943

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.1		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P364261

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P364266

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P364107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.4		P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P364410

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P363918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085213	Barium	101		P	80 - 120
2085213	Calcium	104		P	80 - 120
2085213	Iron	109		P	80 - 120
2085213	Magnesium	103		P	80 - 120
2085213	Potassium	99.7		P	80 - 120
2085213	Sodium	101		P	80 - 120
2085213	Zinc	101		P	80 - 120
2085651	Barium	101	101	P/P	80 - 120
2085651	Calcium	107	107	P/P	80 - 120
2085651	Iron	106	105	P/P	80 - 120
2085651	Magnesium	111	110	P/P	80 - 120
2085651	Potassium	106	106	P/P	80 - 120
2085651	Sodium	103	104	P/P	80 - 120
2085651	Zinc	101	101	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P364002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085989	Barium	96.8		P	80 - 120
2085989	Calcium	92.4		P	80 - 120
2085989	Iron	101		P	80 - 120
2085989	Magnesium	95.0		P	80 - 120
2085989	Potassium	92.6		P	80 - 120
2085989	Sodium	91.1		P	80 - 120
2085989	Zinc	98.2		P	80 - 120
2086093	Barium	96.6	95.5	P/P	80 - 120
2086093	Calcium	95.2		P	80 - 120
2086093	Iron	98.5	97.3	P/P	80 - 120
2086093	Magnesium	100	99.8	P/P	80 - 120
2086093	Potassium	92.7	92.1	P/P	80 - 120
2086093	Sodium	95.4		P	80 - 120
2086093	Zinc	99.8	98.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085213	Aluminum	99.9		P	80 - 120
2085213	Antimony	102		P	80 - 120
2085213	Arsenic	103		P	80 - 120
2085213	Boron	103		P	80 - 120
2085213	Cadmium	104		P	80 - 120
2085213	Chromium	99.9		P	80 - 120
2085213	Copper	99.4		P	80 - 120
2085213	Lead	97.0		P	80 - 120
2085213	Nickel	100		P	80 - 120
2085213	Selenium	101		P	80 - 120
2085213	Silver	101		P	80 - 120
2085213	Thallium	106		P	80 - 120
2085651	Aluminum	111	108	P/P	80 - 120
2085651	Antimony	110	107	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085651	Arsenic	111	109	P/P	80 - 120
2085651	Boron	116	114	P/P	80 - 120
2085651	Cadmium	113	111	P/P	80 - 120
2085651	Chromium	112	110	P/P	80 - 120
2085651	Copper	111	110	P/P	80 - 120
2085651	Lead	110	107	P/P	80 - 120
2085651	Nickel	112	110	P/P	80 - 120
2085651	Selenium	109	105	P/P	80 - 120
2085651	Silver	112	110	P/P	80 - 120
2085651	Thallium	120	116	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P364002

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085989	Aluminum	93.5		P	80 - 120
2085989	Antimony	97.4		P	80 - 120
2085989	Arsenic	103		P	80 - 120
2085989	Boron	93.6		P	80 - 120
2085989	Cadmium	99.4		P	80 - 120
2085989	Chromium	99.2		P	80 - 120
2085989	Copper	101		P	80 - 120
2085989	Lead	101		P	80 - 120
2085989	Nickel	100		P	80 - 120
2085989	Selenium	99.8		P	80 - 120
2085989	Silver	96.0		P	80 - 120
2085989	Thallium	104		P	80 - 120
2086093	Aluminum	93.1	91.6	P/P	80 - 120
2086093	Antimony	95.6	95.2	P/P	80 - 120
2086093	Arsenic	101	100	P/P	80 - 120
2086093	Boron	109	105	P/P	80 - 120
2086093	Cadmium	97.6	96.6	P/P	80 - 120
2086093	Chromium	95.1	94.8	P/P	80 - 120
2086093	Copper	98.3	97.1	P/P	80 - 120
2086093	Lead	98.9	98.4	P/P	80 - 120
2086093	Nickel	99.2	97.4	P/P	80 - 120
2086093	Selenium	98.5	97.6	P/P	80 - 120
2086093	Silver	94.9	94.4	P/P	80 - 120
2086093	Thallium	101	101	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085618	Chloride	99.2		P	90 - 110
2085821	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085618	Sulfate	99.4		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P364030

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085821	Sulfate	100		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P364152

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085799	Ammonia-N	104	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P364294

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085826	Kjeldahl Nitrogen	90.4	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P364338

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085819	Kjeldahl Nitrogen	101	106	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P364682

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2086861	Kjeldahl Nitrogen	98.7	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P364212

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085767	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P364213

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085826	NO2NO3-N	100	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P364186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085819	Total-P	97.3	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P363935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085820	O-Phosphate-P	96.8	97.9	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P364035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2086314	Aldrin	53.0	51.9	P/P	25 - 92.0
2086314	Alpha-BHC	109	112	P/P	49 - 130
2086314	Alpha-Chlordane	81.7	76.3	P/P	50 - 115
2086314	Beta-BHC	149	140	P/P	43 - 157
2086314	Bifenthrin	66.6	75.0	P/P	50 - 130
2086314	Carbophenothion	157	152	P/P	27 - 180
2086314	Chlorothalonil	96.3	78.1	P/P	10 - 216
2086314	Cis-Nonachlor	82.0	76.9	P/P	50 - 130
2086314	Cypermethrin	66.8	63.7	P/P	40 - 153
2086314	DDD-p,p'	93.7	89.2	P/P	53 - 128
2086314	DDE-p,p'	77.4	65.3	P/P	48 - 116
2086314	DDT-p,p'	95.4	97.2	P/P	47 - 128
2086314	Delta-BHC	158	191	P/P	51 - 196
2086314	Dicofol	97.5	101	P/P	10 - 147
2086314	Dieldrin	90.5	87.0	P/P	48 - 128
2086314	Endosulfan I	93.2	83.7	P/P	58 - 126
2086314	Endosulfan II	101	95.9	P/P	50 - 150
2086314	Endosulfan Sulfate	98.8	95.7	P/P	56 - 130
2086314	Endrin	96.4	88.1	P/P	50 - 126
2086314	Endrin Aldehyde	89.9	81.7	P/P	12 - 145
2086314	Endrin Ketone	95.2	97.5	P/P	59 - 132
2086314	Ethalfuralin	93.0	93.8	P/P	50 - 130
2086314	Gamma-BHC	139	128	P/P	50 - 155
2086314	Gamma-Chlordane	77.7	71.9	P/P	50 - 112
2086314	Heptachlor	62.4	61.4	P/P	41 - 98.0
2086314	Heptachlor Epoxide	87.4	81.8	P/P	55 - 117
2086314	Hexachlorobenzene	67.9	67.0	P/P	50 - 130
2086314	Methoxychlor	101	103	P/P	55 - 133
2086314	Mirex	53.7	51.2	P/P	44 - 101
2086314	Permethrin	63.8	66.4	P/P	52 - 124
2086314	Trans-Nonachlor	75.6	69.4	P/P	50 - 130
2086314	Trifluralin	89.6	87.2	P/P	10 - 201

Reference Method: EPA 8270E
Batch ID: P364341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085860	Acetochlor	91.9	101	P/P	63 - 129
2085860	Alachlor	89.5	96.2	P/P	65 - 127
2085860	Ametryn	106	105	P/P	40 - 164
2085860	Atrazine Desethyl	61.8	58.6	P/P	14 - 157
2085860	Azinphos Methyl	86.1	92.2	P/P	49 - 180
2085860	Bromacil	77.2	93.3	P/P	48 - 130
2085860	Butylate	31.6	25.9	P/P	10 - 94.0
2085860	Chlorpyrifos Ethyl	86.4	87.9	P/P	58 - 123
2085860	Chlorpyrifos Methyl	80.3	85.2	P/P	58 - 125
2085860	Cyanazine	81.0	79.4	P/P	24 - 253
2085860	Demeton	42.9	46.5	P/P	25 - 149
2085860	Diazinon	80.0	88.8	P/P	59 - 144
2085860	Dimethenamid	94.9	102	P/P	46 - 139
2085860	Disulfoton	61.2	66.4	P/P	54 - 132
2085860	Dithiopyr	85.6	94.0	P/P	64 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P364341

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085860	EPTC	30.8	25.9	P/P	10 - 92.0
2085860	Ethion	94.5	98.5	P/P	30 - 148
2085860	Ethoprop	73.6	80.5	P/P	50 - 130
2085860	Fenamiphos	102	89.6	P/P	49 - 142
2085860	Fipronil	90.4	103	P/P	46 - 140
2085860	Fipronil Desulfinyl	94.8	103	P/P	30 - 121
2085860	Fipronil Sulfide	94.4	98.7	P/P	31 - 136
2085860	Fonofos	59.3	70.4	P/P	55 - 129
2085860	Hexazinone	166	154	F/F	56 - 141
2085860	Malathion	95.8	102	P/P	56 - 135
2085860	Metalaxyl	129	32.4	P/F	54 - 135
2085860	Metolachlor	89.6	98.8	P/P	51 - 140
2085860	Metribuzin	94.3	95.7	P/P	45 - 254
2085860	Mevinphos	76.3	76.4	P/P	33 - 131
2085860	Molinate	40.1	39.1	P/P	14 - 98.0
2085860	Norflurazon	86.9	92.1	P/P	34 - 136
2085860	Oxadiazon	88.6	95.0	P/P	67 - 116
2085860	Parathion Ethyl	91.0	98.8	P/P	66 - 118
2085860	Parathion Methyl	93.1	101	P/P	64 - 136
2085860	Pendimethalin	88.7	94.8	P/P	59 - 144
2085860	Phorate	55.1	56.4	P/P	42 - 130
2085860	Prodiamine	108	107	P/P	42 - 148
2085860	Prometon	103	118	P/P	59 - 134
2085860	Prometryn	90.8	97.8	P/P	54 - 135
2085860	Tebuconazole	89.9	84.8	P/P	10 - 131
2085860	Terbufos	66.9	73.7	P/P	57 - 131
2085860	Terbutylazine	93.8	99.9	P/P	68 - 125

Reference Method: EPA 8276
Batch ID: P364035

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2087008	Chlordane	91.2	91.7	P/P	34 - 136
2087008	Toxaphene	59.7	63.1	P/P	22 - 152

Reference Method: EPA 8321B
Batch ID: P363904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2086016	2,4-D	130	120	P/P	40 - 150
2086016	Acetaminophen	73.4	61.5	P/P	30 - 150
2086016	Bentazon	89.0	45.7	P/P	30 - 150
2086016	Carbamazepine	77.4	69.3	P/P	40 - 150
2086016	Diuron	73.0	66.2	P/P	40 - 150
2086016	Fenuron	68.3	58.9	P/P	40 - 150
2086016	Fluridone	110	96.9	P/P	40 - 150
2086016	Hydrocodone	75.0	65.8	P/P	40 - 150
2086016	Ibuprofen	95.6	82.4	P/P	40 - 150
2086016	Imazapyr	116	87.8	P/P	40 - 150
2086016	Imidacloprid	137	121	P/P	40 - 150
2086016	Linuron	76.3	72.8	P/P	40 - 150
2086016	MCP	176	147	F/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P363904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2086016	Naproxen	98.0	86.0	P/P	40 - 150
2086016	Primidone	83.8	69.9	P/P	40 - 150
2086016	Pyraclostrobin	103	72.1	P/P	40 - 150
2086016	Triclopyr	121	115	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P363978

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085811	3-Hydroxycarbofuran	64.0	72.6	P/P	40 - 150
2085811	Aldicarb	72.3	75.2	P/P	30 - 150
2085811	Aldicarb Sulfone	79.8	86.5	P/P	40 - 150
2085811	Aldicarb Sulfoxide	33.4	42.0	F/P	40 - 150
2085811	Carbaryl	53.7	58.8	P/P	40 - 150
2085811	Carbofuran	55.1	58.6	P/P	40 - 150
2085811	Methiocarb	52.6	57.1	P/P	40 - 150
2085811	Methomyl	65.6	72.5	P/P	40 - 150
2085811	Oxamyl	76.7	87.9	P/P	40 - 150
2085811	Propoxur	50.1	59.8	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P364011

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085812	Acesulfame K	111	106	P/P	40 - 150
2085812	AMPA	36.6	37.1	F/F	40 - 150
2085812	Endothall	69.2	76.6	P/P	40 - 150
2085812	Glufosinate	64.9	63.5	P/P	40 - 150
2085812	Glyphosate	53.5	58.3	P/P	40 - 140
2085812	Sucralose	97.8	108	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P364266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085804	Fluoride	98.8	101	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P364107

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085592	Organic Carbon	95.2	99.0	P/P	85 - 115

Reference Method: SM 5310 B-00
Batch ID: P364410

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2085898	Organic Carbon	99.2	97.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P363956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085804	Turbidity	0.517	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P363958

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085982	Turbidity	1.51	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P363918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085651	Barium	0.0602	Spike	P	0 - 20
2085651	Calcium	0.593	Spike	P	0 - 20
2085651	Iron	0.571	Spike	P	0 - 20
2085651	Magnesium	0.604	Spike	P	0 - 20
2085651	Potassium	0.566	Spike	P	0 - 20
2085651	Sodium	0.473	Spike	P	0 - 20
2085651	Zinc	0.163	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P364002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2086093	Barium	1.16	Spike	P	0 - 20
2086093	Calcium	0.130	Spike	P	0 - 20
2086093	Iron	1.22	Spike	P	0 - 20
2086093	Magnesium	0.482	Spike	P	0 - 20
2086093	Potassium	0.550	Spike	P	0 - 20
2086093	Sodium	0.617	Spike	P	0 - 20
2086093	Zinc	1.05	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085651	Aluminum	2.12	Spike	P	0 - 20
2085651	Antimony	2.69	Spike	P	0 - 20
2085651	Arsenic	1.91	Spike	P	0 - 20
2085651	Boron	1.65	Spike	P	0 - 20
2085651	Cadmium	1.88	Spike	P	0 - 20
2085651	Chromium	1.70	Spike	P	0 - 20
2085651	Copper	0.900	Spike	P	0 - 20
2085651	Lead	3.23	Spike	P	0 - 20
2085651	Nickel	1.79	Spike	P	0 - 20
2085651	Selenium	4.15	Spike	P	0 - 20
2085651	Silver	1.65	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P363918

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085651	Thallium	2.80	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P364002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2086093	Aluminum	1.54	Spike	P	0 - 20
2086093	Antimony	0.421	Spike	P	0 - 20
2086093	Arsenic	1.13	Spike	P	0 - 20
2086093	Boron	2.14	Spike	P	0 - 20
2086093	Cadmium	0.978	Spike	P	0 - 20
2086093	Chromium	0.256	Spike	P	0 - 20
2086093	Copper	1.17	Spike	P	0 - 20
2086093	Lead	0.475	Spike	P	0 - 20
2086093	Nickel	1.85	Spike	P	0 - 20
2086093	Selenium	0.857	Spike	P	0 - 20
2086093	Silver	0.522	Spike	P	0 - 20
2086093	Thallium	0.373	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364028

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085821	Chloride	10.4	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P364030

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085821	Sulfate	9.43	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P364152

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085799	Ammonia-N	1.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364294

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085826	Kjeldahl Nitrogen	6.20	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364338

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085819	Kjeldahl Nitrogen	3.46	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P364682

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2086861	Kjeldahl Nitrogen	2.13	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364212

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085767	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P364213

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085826	NO2NO3-N	1.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P364186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085819	Total-P	4.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P363935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085820	O-Phosphate-P	1.13	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P364035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2086314	Aldrin	2.02	Spike	P	0 - 30
2086314	Alpha-BHC	2.88	Spike	P	0 - 30
2086314	Alpha-Chlordane	6.82	Spike	P	0 - 30
2086314	Beta-BHC	6.54	Spike	P	0 - 30
2086314	Bifenthrin	11.9	Spike	P	0 - 30
2086314	Carbophenothion	3.58	Spike	P	0 - 30
2086314	Chlorothalonil	20.9	Spike	P	0 - 30
2086314	Cis-Nonachlor	6.43	Spike	P	0 - 30
2086314	Cypermethrin	4.82	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P364035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2086314	DDD-p,p'	4.98	Spike	P	0 - 30
2086314	DDE-p,p'	16.9	Spike	P	0 - 30
2086314	DDT-p,p'	1.95	Spike	P	0 - 30
2086314	Delta-BHC	18.7	Spike	P	0 - 30
2086314	Dicofol	3.54	Spike	P	0 - 30
2086314	Dieldrin	3.85	Spike	P	0 - 30
2086314	Endosulfan I	10.7	Spike	P	0 - 30
2086314	Endosulfan II	4.82	Spike	P	0 - 30
2086314	Endosulfan Sulfate	3.16	Spike	P	0 - 30
2086314	Endrin	9.07	Spike	P	0 - 30
2086314	Endrin Aldehyde	9.55	Spike	P	0 - 30
2086314	Endrin Ketone	2.38	Spike	P	0 - 30
2086314	Ethalfuralin	0.789	Spike	P	0 - 30
2086314	Gamma-BHC	8.15	Spike	P	0 - 30
2086314	Gamma-Chlordane	7.70	Spike	P	0 - 30
2086314	Heptachlor	1.61	Spike	P	0 - 30
2086314	Heptachlor Epoxide	6.66	Spike	P	0 - 30
2086314	Hexachlorobenzene	1.43	Spike	P	0 - 30
2086314	Methoxychlor	2.33	Spike	P	0 - 30
2086314	Mirex	4.76	Spike	P	0 - 30
2086314	Permethrin	4.03	Spike	P	0 - 30
2086314	Trans-Nonachlor	8.53	Spike	P	0 - 30
2086314	Trifluralin	2.64	Spike	P	0 - 30
LFB	Aldrin	1.15	LCS	P	0 - 30
LFB	Alpha-BHC	3.76	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.03	LCS	P	0 - 30
LFB	Beta-BHC	0.698	LCS	P	0 - 30
LFB	Bifenthrin	2.87	LCS	P	0 - 30
LFB	Carbophenothion	2.30	LCS	P	0 - 30
LFB	Chlorothalonil	11.4	LCS	P	0 - 30
LFB	Cis-Nonachlor	3.22	LCS	P	0 - 30
LFB	Cypermethrin	7.87	LCS	P	0 - 30
LFB	DDD-p,p'	3.57	LCS	P	0 - 30
LFB	DDE-p,p'	0.249	LCS	P	0 - 30
LFB	DDT-p,p'	0.776	LCS	P	0 - 30
LFB	Delta-BHC	5.42	LCS	P	0 - 30
LFB	Dicofol	9.68	LCS	P	0 - 30
LFB	Dieldrin	0.103	LCS	P	0 - 30
LFB	Endosulfan I	5.16	LCS	P	0 - 30
LFB	Endosulfan II	2.93	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.83	LCS	P	0 - 30
LFB	Endrin	3.25	LCS	P	0 - 30
LFB	Endrin Aldehyde	3.61	LCS	P	0 - 30
LFB	Endrin Ketone	3.95	LCS	P	0 - 30
LFB	Ethalfuralin	8.83	LCS	P	0 - 30
LFB	Gamma-BHC	4.03	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.09	LCS	P	0 - 30
LFB	Heptachlor	2.59	LCS	P	0 - 30
LFB	Heptachlor Epoxide	2.74	LCS	P	0 - 30
LFB	Hexachlorobenzene	3.12	LCS	P	0 - 30
LFB	Methoxychlor	2.04	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P364035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Mirex	0.820	LCS	P	0 - 30
LFB	Permethrin	6.64	LCS	P	0 - 30
LFB	Trans-Nonachlor	3.41	LCS	P	0 - 30
LFB	Trifluralin	0.944	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P364341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085860	Acetochlor	9.88	Spike	P	0 - 30
2085860	Alachlor	7.19	Spike	P	0 - 30
2085860	Ametryn	1.15	Spike	P	0 - 30
2085860	Atrazine	5.98	Spike	P	0 - 30
2085860	Atrazine Desethyl	2.23	Spike	P	0 - 30
2085860	Azinphos Methyl	6.85	Spike	P	0 - 30
2085860	Bromacil	11.7	Spike	P	0 - 30
2085860	Butylate	19.8	Spike	P	0 - 30
2085860	Chlorpyrifos Ethyl	1.76	Spike	P	0 - 30
2085860	Chlorpyrifos Methyl	5.84	Spike	P	0 - 30
2085860	Cyanazine	2.01	Spike	P	0 - 30
2085860	Demeton	8.13	Spike	P	0 - 30
2085860	Diazinon	10.4	Spike	P	0 - 30
2085860	Dimethenamid	7.27	Spike	P	0 - 30
2085860	Disulfoton	8.16	Spike	P	0 - 30
2085860	Dithiopyr	8.34	Spike	P	0 - 30
2085860	EPTC	17.1	Spike	P	0 - 30
2085860	Ethion	4.17	Spike	P	0 - 30
2085860	Ethoprop	8.98	Spike	P	0 - 30
2085860	Fenamiphos	13.4	Spike	P	0 - 30
2085860	Fipronil	7.21	Spike	P	0 - 30
2085860	Fipronil Desulfinyl	6.70	Spike	P	0 - 30
2085860	Fipronil Sulfide	3.21	Spike	P	0 - 30
2085860	Fipronil Sulfone	6.44	Spike	P	0 - 30
2085860	Fonofos	17.2	Spike	P	0 - 30
2085860	Hexazinone	7.89	Spike	P	0 - 30
2085860	Malathion	6.43	Spike	P	0 - 30
2085860	Metalaxyl	120	Spike	F	0 - 30
2085860	Metolachlor	8.16	Spike	P	0 - 30
2085860	Metribuzin	1.51	Spike	P	0 - 30
2085860	Mevinphos	0.138	Spike	P	0 - 30
2085860	Molinate	2.46	Spike	P	0 - 30
2085860	Norflurazon	5.71	Spike	P	0 - 30
2085860	Oxadiazon	6.33	Spike	P	0 - 30
2085860	Parathion Ethyl	8.23	Spike	P	0 - 30
2085860	Parathion Methyl	8.40	Spike	P	0 - 30
2085860	Pendimethalin	6.68	Spike	P	0 - 30
2085860	Phorate	2.16	Spike	P	0 - 30
2085860	Prodiamine	0.504	Spike	P	0 - 30
2085860	Prometon	14.2	Spike	P	0 - 30
2085860	Prometryn	7.49	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P364341

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085860	Simazine	5.34	Spike	P	0 - 30
2085860	Tebuconazole	5.00	Spike	P	0 - 30
2085860	Terbufos	9.76	Spike	P	0 - 30
2085860	Terbutylazine	5.39	Spike	P	0 - 30
LFB	Acetochlor	4.30	LCS	P	0 - 30
LFB	Alachlor	6.48	LCS	P	0 - 30
LFB	Ametryn	11.7	LCS	P	0 - 30
LFB	Atrazine	9.80	LCS	P	0 - 30
LFB	Atrazine Desethyl	11.7	LCS	P	0 - 30
LFB	Azinphos Methyl	11.3	LCS	P	0 - 30
LFB	Bromacil	25.5	LCS	P	0 - 30
LFB	Butylate	28.3	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.01	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	10.0	LCS	P	0 - 30
LFB	Cyanazine	12.2	LCS	P	0 - 30
LFB	Demeton	0.431	LCS	P	0 - 30
LFB	Diazinon	6.62	LCS	P	0 - 30
LFB	Dimethenamid	3.06	LCS	P	0 - 30
LFB	Disulfoton	10.1	LCS	P	0 - 30
LFB	Dithiopyr	7.42	LCS	P	0 - 30
LFB	EPTC	39.8	LCS	F	0 - 30
LFB	Ethion	2.16	LCS	P	0 - 30
LFB	Ethoprop	12.6	LCS	P	0 - 30
LFB	Fenamiphos	91.2	LCS	F	0 - 30
LFB	Fipronil	11.5	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	6.04	LCS	P	0 - 30
LFB	Fipronil Sulfide	7.03	LCS	P	0 - 30
LFB	Fipronil Sulfone	26.1	LCS	P	0 - 30
LFB	Fonofos	14.0	LCS	P	0 - 30
LFB	Hexazinone	38.7	LCS	F	0 - 30
LFB	Malathion	2.14	LCS	P	0 - 30
LFB	Metalaxyl	65.2	LCS	F	0 - 30
LFB	Metolachlor	5.84	LCS	P	0 - 30
LFB	Metribuzin	3.75	LCS	P	0 - 30
LFB	Mevinphos	13.7	LCS	P	0 - 30
LFB	Molinate	25.2	LCS	P	0 - 30
LFB	Norflurazon	26.4	LCS	P	0 - 30
LFB	Oxadiazon	1.36	LCS	P	0 - 30
LFB	Parathion Ethyl	1.31	LCS	P	0 - 30
LFB	Parathion Methyl	6.16	LCS	P	0 - 30
LFB	Pendimethalin	3.12	LCS	P	0 - 30
LFB	Phorate	0.579	LCS	P	0 - 30
LFB	Prodiamine	1.25	LCS	P	0 - 30
LFB	Prometon	43.3	LCS	F	0 - 30
LFB	Prometryn	4.86	LCS	P	0 - 30
LFB	Simazine	9.57	LCS	P	0 - 30
LFB	Tebuconazole	20.5	LCS	P	0 - 30
LFB	Terbufos	2.83	LCS	P	0 - 30
LFB	Terbutylazine	5.25	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P364035

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2087008	Chlordane	0.368	Spike	P	0 - 30
2087008	Toxaphene	5.62	Spike	P	0 - 30
LFB	Chlordane	6.23	LCS	P	0 - 30
LFB	Toxaphene	0.163	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P363904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2086016	2,4-D	7.70	Spike	P	0 - 30
2086016	Acetaminophen	17.7	Spike	P	0 - 30
2086016	Bentazon	17.2	Spike	P	0 - 30
2086016	Carbamazepine	11.1	Spike	P	0 - 30
2086016	Diuron	9.72	Spike	P	0 - 30
2086016	Fenuron	14.8	Spike	P	0 - 30
2086016	Fluridone	13.1	Spike	P	0 - 30
2086016	Hydrocodone	13.1	Spike	P	0 - 30
2086016	Ibuprofen	14.8	Spike	P	0 - 30
2086016	Imazapyr	15.1	Spike	P	0 - 30
2086016	Imidacloprid	11.6	Spike	P	0 - 30
2086016	Linuron	4.62	Spike	P	0 - 30
2086016	MCP	18.0	Spike	P	0 - 30
2086016	Naproxen	13.1	Spike	P	0 - 30
2086016	Primidone	18.1	Spike	P	0 - 30
2086016	Pyraclostrobin	34.8	Spike	F	0 - 30
2086016	Triclopyr	5.51	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P363978

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085811	3-Hydroxycarbofuran	12.5	Spike	P	0 - 30
2085811	Aldicarb	3.90	Spike	P	0 - 30
2085811	Aldicarb Sulfone	8.02	Spike	P	0 - 30
2085811	Aldicarb Sulfoxide	22.9	Spike	P	0 - 30
2085811	Carbaryl	8.97	Spike	P	0 - 30
2085811	Carbofuran	6.19	Spike	P	0 - 30
2085811	Methiocarb	8.20	Spike	P	0 - 30
2085811	Methomyl	9.93	Spike	P	0 - 30
2085811	Oxamyl	13.5	Spike	P	0 - 30
2085811	Propoxur	17.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P364011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085812	Acesulfame K	4.63	Spike	P	0 - 30
2085812	AMPA	0.380	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P364011

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085812	Endothall	10.2	Spike	P	0 - 30
2085812	Glufosinate	2.21	Spike	P	0 - 30
2085812	Glyphosate	1.62	Spike	P	0 - 30
2085812	Sucralose	8.65	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P363940

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085798	Color (true)	1.86	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P363943

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085824	Color (true)	2.69	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P364261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085804	Total Alkalinity	0.262	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P364389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085804	TDS	5.69	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P364266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085804	Fluoride	1.41	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P364107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085592	Organic Carbon	2.29	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P364410

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2085898	Organic Carbon	1.05	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: 2085854
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	79.9	P	30 - 160

Lab Sample ID: 2085855
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	113	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	88.2	P	30 - 160
EPA 8321B	Diuron-d6	80.1	P	30 - 160
EPA 8321B	Endothall-d6	98.1	P	30 - 160
EPA 8321B	Endothall-d6	98.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	99.3	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	96.6	P	30 - 160
EPA 8321B	Sucralose-d6	96.6	P	30 - 160

Lab Sample ID: 2085856
Field Sample ID: G4NW0429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	116	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.4	P	30 - 160
EPA 8321B	Diuron-d6	72.5	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	109	P	30 - 160
EPA 8321B	Ibuprofen-d3	95.8	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	98.4	P	30 - 160
EPA 8321B	Sucralose-d6	98.4	P	30 - 160

Lab Sample ID: 2085857
Field Sample ID: G4NW0430

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	132	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.0	P	30 - 160
EPA 8321B	Diuron-d6	81.9	P	30 - 160
EPA 8321B	Endothall-d6	98.5	P	30 - 160
EPA 8321B	Endothall-d6	98.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	111	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.7	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	96.7	P	30 - 160
EPA 8321B	Sucralose-d6	96.7	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2085858
Field Sample ID: G5NW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	128	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.3	P	30 - 160
EPA 8321B	Diuron-d6	69.3	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	112	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	112	P	30 - 160
EPA 8321B	Ibuprofen-d3	94.6	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	92.5	P	30 - 160
EPA 8321B	Sucralose-d6	92.5	P	30 - 160

Lab Sample ID: 2085859
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Decachlorobiphenyl	64.9	P	39 - 109
EPA 8270D	Tetrachloro-m-xylene	41.1	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	56.2	P	30 - 103
EPA 8276	PCNB	74.9	P	37 - 143

Lab Sample ID: 2085860
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	120	P	68 - 130
EPA 8270E	Terbufos-d10	86.0	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A91404

Included Lab Sample IDs: 2085815, 2085818, 2085821, 2085824, 2085825

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A91415

Included Lab Sample IDs: 2085817, 2085820, 2085823, 2085828, 2085829

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

Reference Method: SM 2120 B

Run ID: A91416

Included Lab Sample IDs: 2085815, 2085818, 2085821, 2085824, 2085825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	101	P/P	90 - 115
Color (true)	103	100	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A91434

Included Lab Sample IDs: 2085815, 2085818, 2085821, 2085824, 2085825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 5310 B-00

Run ID: A91471

Included Lab Sample IDs: 2085816, 2085819

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	95.6	96.3	P/P	90 - 110
Organic Carbon	96.3	93.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A91484

Included Lab Sample IDs: 2085862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.8	99.1	P/P	90 - 110
Calcium	101	100	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	101	102	P/P	90 - 110
Potassium	100	99.6	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Zinc	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A91506

Included Lab Sample IDs: 2085816, 2085819, 2085822, 2085826, 2085827

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	106	107	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A91508

Included Lab Sample IDs: 2085855, 2085856, 2085857, 2085858

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	106	102	P/P	60 - 160
Acesulfame K	90.7	97.4	P/P	60 - 160
Acesulfame K	97.4	95.6	P/P	60 - 160
Endothall	107	110	P/P	60 - 160
Endothall	126	126	P/P	60 - 160
Endothall	89.3	107	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A91517

Included Lab Sample IDs: 2085861

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	98.6	P/P	95 - 105
Calcium	103	99.4	P/P	95 - 105
Iron	104	98.7	P/P	95 - 105
Magnesium	103	98.6	P/P	95 - 105
Potassium	103	97.0	P/P	95 - 105
Sodium	102	95.7	P/P	95 - 105
Zinc	103	100	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A91524

Included Lab Sample IDs: 2085855, 2085856, 2085857, 2085858

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.0	95.9	P/P	50 - 150
2,4-D	95.9	90.0	P/P	50 - 150
Acetaminophen	107	103	P/P	60 - 160
Acetaminophen	109	107	P/P	60 - 160
Bentazon	102	102	P/P	50 - 160
Bentazon	112	102	P/P	50 - 160
Carbamazepine	101	103	P/P	60 - 150
Carbamazepine	103	99.8	P/P	60 - 150
Diuron	103	106	P/P	60 - 150
Diuron	107	103	P/P	60 - 150
Fenuron	100	101	P/P	60 - 150
Fenuron	103	100	P/P	60 - 150
Fluridone	107	109	P/P	60 - 160
Fluridone	112	107	P/P	60 - 160
Hydrocodone	97.3	101	P/P	60 - 150
Hydrocodone	99.7	97.3	P/P	60 - 150
Ibuprofen	108	115	P/P	50 - 160
Ibuprofen	113	108	P/P	50 - 160
Imazapyr	101	93.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A91524

Included Lab Sample IDs: 2085855, 2085856, 2085857, 2085858

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Imazapyr	93.8	99.6	P/P	50 - 150
Imidacloprid	94.8	99.0	P/P	60 - 150
Imidacloprid	99.0	92.5	P/P	60 - 150
Linuron	100	109	P/P	60 - 150
Linuron	109	104	P/P	60 - 150
MCPP	111	112	P/P	50 - 150
MCPP	112	101	P/P	50 - 150
Naproxen	105	108	P/P	50 - 160
Naproxen	108	105	P/P	50 - 160
Primidone	95.3	95.1	P/P	60 - 150
Primidone	98.9	95.3	P/P	60 - 150
Pyraclostrobin	102	105	P/P	60 - 150
Pyraclostrobin	105	106	P/P	60 - 150
Triclopyr	106	97.4	P/P	50 - 150
Triclopyr	97.4	91.7	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A91528

Included Lab Sample IDs: 2085855, 2085856, 2085857, 2085858

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	131	127	P/P	60 - 160
AMPA	95.2	97.1	P/P	60 - 160
Glufosinate	115	105	P/P	60 - 160
Glufosinate	93.8	92.9	P/P	60 - 160
Glyphosate	105	93.1	P/P	60 - 160
Glyphosate	81.7	86.5	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A91529

Included Lab Sample IDs: 2085816, 2085819, 2085822, 2085826, 2085827

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A91542

Included Lab Sample IDs: 2085862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	101	P/P	90 - 110
Antimony	96.2	96.7	P/P	90 - 110
Arsenic	99.4	100	P/P	90 - 110
Boron	106	106	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Chromium	100	102	P/P	90 - 110
Copper	101	101	P/P	90 - 110
Lead	98.6	99.1	P/P	90 - 110
Nickel	100	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A91542

Included Lab Sample IDs: 2085862

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	99.6	99.5	P/P	90 - 110
Silver	101	101	P/P	90 - 110
Thallium	102	101	P/P	90 - 110

Reference Method: EPA 8270D

Run ID: A91543

Included Lab Sample IDs: 2085859

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.6		P	80 - 120
Alpha-BHC	96.3		P	80 - 120
Alpha-Chlordane	97.6		P	80 - 120
Beta-BHC	91.5		P	80 - 120
Bifenthrin	93.6		P	80 - 120
Carbophenothion	150*		F	80 - 120
Chlorothalonil	61.7*		F	80 - 120
Cis-Nonachlor	98.6		P	80 - 120
Cypermethrin	86.1		P	80 - 120
DDD-p,p'	99.4		P	80 - 120
DDE-p,p'	98.4		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	88.0		P	80 - 120
Dicofol	99.8		P	80 - 120
Dieldrin	96.2		P	80 - 120
Endosulfan I	93.3		P	80 - 120
Endosulfan II	95.0		P	80 - 120
Endosulfan Sulfate	92.6		P	80 - 120
Endrin	97.7		P	80 - 120
Endrin Aldehyde	90.6		P	80 - 120
Endrin Ketone	93.3		P	80 - 120
Ethalfuralin	95.8		P	80 - 120
Gamma-BHC	95.4		P	80 - 120
Gamma-Chlordane	95.6		P	80 - 120
Heptachlor	98.9		P	80 - 120
Heptachlor Epoxide	95.8		P	80 - 120
Hexachlorobenzene	95.7		P	80 - 120
Methoxychlor	98.9		P	80 - 120
Mirex	96.4		P	80 - 120
Permethrin	91.3		P	80 - 120
Trans-Nonachlor	96.9		P	80 - 120
Trifluralin	94.5		P	80 - 120

Reference Method: SM 2320 B-97

Run ID: A91544

Included Lab Sample IDs: 2085815, 2085818, 2085821, 2085824, 2085825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A91544

Included Lab Sample IDs: 2085815, 2085818, 2085821, 2085824, 2085825

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A91561

Included Lab Sample IDs: 2085861

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	94.0	91.1	P/P	90 - 110
Antimony	94.6	93.7	P/P	90 - 110
Arsenic	96.6	97.1	P/P	90 - 110
Boron	93.7	90.7	P/P	90 - 110
Cadmium	95.4	93.8	P/P	90 - 110
Chromium	96.9	95.8	P/P	90 - 110
Copper	97.2	97.3	P/P	90 - 110
Lead	96.8	96.2	P/P	90 - 110
Nickel	96.5	96.9	P/P	90 - 110
Selenium	94.4	95.9	P/P	90 - 110
Silver	93.5	92.4	P/P	90 - 110
Thallium	93.6	93.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91570

Included Lab Sample IDs: 2085826

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A91572

Included Lab Sample IDs: 2085816, 2085819, 2085822, 2085827

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

Reference Method: SM 5310 B-00

Run ID: A91605

Included Lab Sample IDs: 2085822, 2085826, 2085827

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.8	98.6	P/P	90 - 110
Organic Carbon	99.1	97.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A91610

Included Lab Sample IDs: 2085854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	80.5	88.5	P/P	60 - 150
Aldicarb	89.0	92.8	P/P	60 - 150
Aldicarb Sulfone	99.7	104	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A91610

Included Lab Sample IDs: 2085854

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldicarb Sulfoxide	74.0	95.5	P/P	50 - 150
Carbaryl	100	96.6	P/P	60 - 150
Carbofuran	103	96.5	P/P	50 - 150
Methiocarb	106	101	P/P	50 - 150
Methomyl	98.8	86.4	P/P	50 - 150
Oxamyl	103	94.4	P/P	50 - 150
Propoxur	102	99.6	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91618

Included Lab Sample IDs: 2085819, 2085822

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A91625

Included Lab Sample IDs: 2085826, 2085827

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

Reference Method: EPA 8276

Run ID: A91671

Included Lab Sample IDs: 2085859

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 8321B

Run ID: A91690

Included Lab Sample IDs: 2085855, 2085856, 2085857, 2085858

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	95.9	99.9	P/P	60 - 160

Reference Method: EPA 8270E

Run ID: A91710

Included Lab Sample IDs: 2085860

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	104		P	80 - 120
Ametryn	100		P	80 - 120
Atrazine Desethyl	94.3		P	80 - 120
Azinphos Methyl	80.8		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	97.9		P	80 - 120
Chlorpyrifos Ethyl	90.4		P	80 - 120
Chlorpyrifos Methyl	94.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A91710
Included Lab Sample IDs: 2085860

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cyanazine	94.5		P	80 - 120
Demeton	96.5		P	80 - 120
Diazinon	100		P	80 - 120
Dimethenamid	101		P	80 - 120
Disulfoton	92.7		P	80 - 120
Dithiopyr	99.1		P	80 - 120
EPTC	98.5		P	80 - 120
Ethion	93.2		P	80 - 120
Ethoprop	99.1		P	80 - 120
Fenamiphos	98.7		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	94.8		P	80 - 120
Fipronil Sulfone	96.4		P	80 - 120
Fonofos	95.1		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	90.7		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	85.6		P	80 - 120
Mevinphos	96.9		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	93.9		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	94.6		P	80 - 120
Parathion Methyl	92.4		P	80 - 120
Pendimethalin	89.9		P	80 - 120
Phorate	95.4		P	80 - 120
Prodiamine	77.9*		F	80 - 120
Prometon	102		P	80 - 120
Prometryn	98.8		P	80 - 120
Simazine	94.9		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	92.8		P	80 - 120
Terbuthylazine	99.3		P	80 - 120

Reference Method: EPA 8270E
Run ID: A91742
Included Lab Sample IDs: 2085860

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	98.2		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A91745
Included Lab Sample IDs: 2085816

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.6	95.5	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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							0.517	
	Turbidity							1.51	
EPA 200.7 Rev. 4.4	Barium	101		101	101	101			0.0602
	Barium	99.1		96.8	96.6	95.5			1.16
	Calcium	109		104	107	107			0.593
	Calcium	94.5		92.4	95.2				0.130
	Iron	106		109	106	105			0.571
	Iron	99.0		101	98.5	97.3			1.22
	Magnesium	113		103	111	110			0.604
	Magnesium	105		95.0	100	99.8			0.482
	Potassium	102		99.7	106	106			0.566
	Potassium	97.3		92.6	92.7	92.1			0.550
	Sodium	102		101	103	104			0.473
	Sodium	90.7		91.1	95.4				0.617
	Zinc	100		101	101	101			0.163
	Zinc	97.8		98.2	99.8	98.8			1.05
EPA 200.8 Rev. 5.4	Aluminum	101		99.9	111	108			2.12
	Aluminum	96.1		93.5	93.1	91.6			1.54
	Antimony	101		102	110	107			2.69
	Antimony	96.9		97.4	95.6	95.2			0.421
	Arsenic	105		103	111	109			1.91
	Arsenic	102		103	101	100			1.13
	Boron	101		103	116	114			1.65
	Boron	96.6		93.6	109	105			2.14
	Cadmium	104		104	113	111			1.88
	Cadmium	99.5		99.4	97.6	96.6			0.978
	Chromium	101		99.9	112	110			1.70
	Chromium	99.8		99.2	95.1	94.8			0.256
	Copper	104		99.4	111	110			0.900
	Copper	99.8		101	98.3	97.1			1.17
	Lead	93.9		97.0	110	107			3.23
	Lead	99.9		101	98.9	98.4			0.475
	Nickel	104		100	112	110			1.79
	Nickel	101		100	99.2	97.4			1.85
	Selenium	104		101	109	105			4.15
	Selenium	99.8		99.8	98.5	97.6			0.857
	Silver	103		101	112	110			1.65
	Silver	97.9		96.0	94.9	94.4			0.522
	Thallium	101		106	120	116			2.80
	Thallium	102		104	101	101			0.373
EPA 300.0 Rev. 2.1	Chloride	99.3		101	99.2			10.4	
	Sulfate	100		100	99.4			9.43	
EPA 350.1 Rev. 2.0	Ammonia-N	102		104	105				1.12
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	99.1		90.4	100				6.20
	Kjeldahl Nitrogen	99.4		101	106				3.46
	Kjeldahl Nitrogen	103		98.7	102				2.13
EPA 353.2 Rev. 2.0	NO2NO3-N	101		102	101				0.494
	NO2NO3-N	102		100	98.4				1.40
EPA 365.1 Rev. 2.0	Total-P	100		97.3	102				4.22
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.9		96.8	97.9				1.13
EPA 8270D	Aldrin	51.7	51.1	53.0	51.9	1.15			2.02
	Alpha-BHC	87.9	91.2	109	112	3.76			2.88
	Alpha-Chlordane	76.3	77.9	81.7	76.3	2.03			6.82
	Beta-BHC	118	119	149	140	0.698			6.54

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270D	Bifenthrin	72.7	74.8	66.6	75.0	2.87	11.9
	Carbophenothion	129	132	157	152	2.30	3.58
	Chlorothalonil	50.4	56.5	96.3	78.1	11.4	20.9
	Cis-Nonachlor	75.5	78.0	82.0	76.9	3.22	6.43
	Cypermethrin	67.5	73.0	66.8	63.7	7.87	4.82
	DDD-p,p'	83.0	86.0	93.7	89.2	3.57	4.98
	DDE-p,p'	79.3	79.5	77.4	65.3	0.249	16.9
	DDT-p,p'	88.6	89.3	95.4	97.2	0.776	1.95
	Delta-BHC	124	131	158	191	5.42	18.7
	Dicofol	80.8	89.0	97.5	101	9.68	3.54
	Dieldrin	79.3	79.4	90.5	87.0	0.103	3.85
	Endosulfan I	79.9	84.1	93.2	83.7	5.16	10.7
	Endosulfan II	89.9	92.6	101	95.9	2.93	4.82
	Endosulfan Sulfate	76.4	78.6	98.8	95.7	2.83	3.16
	Endrin	88.5	85.7	96.4	88.1	3.25	9.07
	Endrin Aldehyde	84.6	87.7	89.9	81.7	3.61	9.55
	Endrin Ketone	77.4	80.5	95.2	97.5	3.95	2.38
	Ethalfuralin	76.4	83.4	93.0	93.8	8.83	0.789
	Gamma-BHC	111	116	139	128	4.03	8.15
	Gamma-Chlordane	73.7	74.5	77.7	71.9	1.09	7.70
	Heptachlor	60.9	62.5	62.4	61.4	2.59	1.61
	Heptachlor Epoxide	78.9	81.1	87.4	81.8	2.74	6.66
	Hexachlorobenzene	66.9	69.1	67.9	67.0	3.12	1.43
	Methoxychlor	97.1	99.1	101	103	2.04	2.33
	Mirex	58.2	58.6	53.7	51.2	0.820	4.76
	Permethrin	63.6	67.9	63.8	66.4	6.64	4.03
	Trans-Nonachlor	70.8	73.3	75.6	69.4	3.41	8.53
	Trifluralin	80.6	81.4	89.6	87.2	0.944	2.64
EPA 8270E	Acetochlor	103	98.3	91.9	101	4.30	9.88
	Alachlor	102	95.3	89.5	96.2	6.48	7.19
	Ametryn	93.7	83.4	106	105	11.7	1.15
	Atrazine	105	95.5			9.80	5.98
	Atrazine Desethyl	57.5	51.1	61.8	58.6	11.7	2.23
	Azinphos Methyl	95.5	85.3	86.1	92.2	11.3	6.85
	Bromacil	59.3	45.9	77.2	93.3	25.5	11.7
	Butylate	71.3	53.6	31.6	25.9	28.3	19.8
	Chlorpyrifos Ethyl	77.5	82.3	86.4	87.9	6.01	1.76
	Chlorpyrifos Methyl	64.2	71.0	80.3	85.2	10.0	5.84
	Cyanazine	81.6	72.2	81.0	79.4	12.2	2.01
	Demeton	34.3	34.5	42.9	46.5	0.431	8.13
	Diazinon	95.6	89.5	80.0	88.8	6.62	10.4
	Dimethenamid	103	99.7	94.9	102	3.06	7.27
	Disulfoton	33.3	36.9	61.2	66.4	10.1	8.16
	Dithiopyr	101	93.7	85.6	94.0	7.42	8.34
	EPTC	69.0	46.1	30.8	25.9	39.8	17.1
	Ethion	105	103	94.5	98.5	2.16	4.17
	Ethoprop	103	90.4	73.6	80.5	12.6	8.98
	Fenamiphos	16.4	6.14	102	89.6	91.2	13.4
	Fipronil	95.6	85.2	90.4	103	11.5	7.21
	Fipronil Desulfinyl	98.2	92.4	94.8	103	6.04	6.70
	Fipronil Sulfide	104	96.8	94.4	98.7	7.03	3.21
	Fipronil Sulfone	125	96.2			26.1	6.44
	Fonofos	70.9	61.6	59.3	70.4	14.0	17.2
	Hexazinone	66.3	44.8	166	154	38.7	7.89

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Malathion	100	98.2	95.8	102	2.14	6.43
	Metalaxyl	5.36	10.5	129	32.4	65.2	120
	Metolachlor	104	98.1	89.6	98.8	5.84	8.16
	Metribuzin	78.1	81.1	94.3	95.7	3.75	1.51
	Mevinphos	51.7	45.0	76.3	76.4	13.7	0.138
	Molinate	84.3	65.4	40.1	39.1	25.2	2.46
	Norflurazon	88.2	67.6	86.9	92.1	26.4	5.71
	Oxadiazon	107	106	88.6	95.0	1.36	6.33
	Parathion Ethyl	89.9	88.7	91.0	98.8	1.31	8.23
	Parathion Methyl	94.0	88.4	93.1	101	6.16	8.40
	Pendimethalin	80.6	83.1	88.7	94.8	3.12	6.68
	Phorate	39.8	39.6	55.1	56.4	0.579	2.16
	Prodiamine	91.2	90.1	108	107	1.25	0.504
	Prometon	70.7	45.5	103	118	43.3	14.2
	Prometryn	90.9	86.6	90.8	97.8	4.86	7.49
	Simazine	99.0	90.0			9.57	5.34
	Tebuconazole	42.8	34.8	89.9	84.8	20.5	5.00
	Terbufos	59.3	61.0	66.9	73.7	2.83	9.76
	Terbuthylazine	104	99.0	93.8	99.9	5.25	5.39
	Chlordane	76.1	71.5	91.2	91.7	6.23	0.368
EPA 8276	Toxaphene	54.5	54.4	59.7	63.1	0.163	5.62
EPA 8321B	2,4-D	114		130	120		7.70
	3-Hydroxycarbofuran	61.6		64.0	72.6		12.5
	Acesulfame K	93.7		111	106		4.63
	Acetaminophen	88.5		73.4	61.5		17.7
	Aldicarb	78.5		72.3	75.2		3.90
	Aldicarb Sulfone	87.1		79.8	86.5		8.02
	Aldicarb Sulfoxide	77.0		33.4	42.0		22.9
	AMPA	124		36.6	37.1		0.380
	Bentazon	125		89.0	45.7		17.2
	Carbamazepine	95.9		77.4	69.3		11.1
	Carbaryl	72.5		53.7	58.8		8.97
	Carbofuran	69.7		55.1	58.6		6.19
	Diuron	88.9		73.0	66.2		9.72
	Endothall	77.8		69.2	76.6		10.2
	Fenuron	103		68.3	58.9		14.8
	Fluridone	106		110	96.9		13.1
	Glufosinate	107		64.9	63.5		2.21
	Glyphosate	99.1		53.5	58.3		1.62
	Hydrocodone	90.5		75.0	65.8		13.1
	Ibuprofen	89.0		95.6	82.4		14.8
	Imazapyr	99.6		116	87.8		15.1
	Imidacloprid	96.8		137	121		11.6
	Linuron	78.6		76.3	72.8		4.62
	MCPP	128		176	147		18.0
	Methiocarb	69.5		52.6	57.1		8.20
	Methomyl	75.0		65.6	72.5		9.93
	Naproxen	99.7		98.0	86.0		13.1
	Oxamyl	90.7		76.7	87.9		13.5
	Primidone	90.9		83.8	69.9		18.1
	Propoxur	71.2		50.1	59.8		17.8
	Pyraclostrobin	83.2		103	72.1		34.8
	Sucralose	102		97.8	108		8.65
	Triclopyr	87.5		121	115		5.51

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
SM 2120 B	Color (true)	100			1.86	
	Color (true)	98.1			2.69	
SM 2320 B-97	Total Alkalinity	102			0.262	
SM 2540 C-97	TDS				5.69	
SM 4500 F-C-97	Fluoride	97.9	98.8	101		1.41
SM 5310 B-00	Organic Carbon	93.4	95.2	99.0		2.29
	Organic Carbon	96.8	99.2	97.4		1.05

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2085815, 2085818, 2085821, 2085824, 2085825
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2085861, 2085862
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2085861, 2085862
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2085815, 2085818, 2085821, 2085824, 2085825
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2085815, 2085818, 2085821, 2085824, 2085825
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2085816, 2085819, 2085822, 2085826, 2085827
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2085816, 2085819, 2085822, 2085826, 2085827
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2085816, 2085819, 2085822, 2085826, 2085827
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2085816, 2085819, 2085822, 2085826, 2085827
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2085817, 2085820, 2085823, 2085828, 2085829
EPA 8270D / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2085859
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2085860
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2085859
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2085854
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2085855, 2085856, 2085857, 2085858
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2085855, 2085856, 2085857, 2085858
SM 2120 B / E31780	True Color measured at 450 nm	2085815, 2085818, 2085821, 2085824, 2085825
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2085815, 2085818, 2085821, 2085824, 2085825
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2085815, 2085818, 2085821, 2085824, 2085825
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2085815, 2085818, 2085821, 2085824, 2085825
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2085815, 2085818, 2085821, 2085824, 2085825
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2085816, 2085819, 2085822, 2085826, 2085827

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	05/14/2019			05/14/2019 16:44	Sima Feizi	2085815, 2085818, 2085821, 2085824, 2085825
EPA 200.7 Rev. 4.4	05/14/2019	05/14/2019 13:50	Elliott D. Healy	05/15/2019 17:54	Betina Topolski	2085862
	05/14/2019	05/15/2019 17:15	Elliott D. Healy	05/17/2019 12:20	Betina Topolski	2085861
EPA 200.8 Rev. 5.4	05/14/2019	05/14/2019 13:50	Elliott D. Healy	05/20/2019 19:03	Robert K Palmer	2085862
	05/14/2019	05/15/2019 17:15	Elliott D. Healy	05/20/2019 22:58	Martin Acosta	2085861
EPA 300.0 Rev. 2.1	05/14/2019			05/15/2019 21:07	Lipi Saha	2085821
	05/14/2019			05/16/2019 00:09	Lipi Saha	2085815
	05/14/2019			05/16/2019 00:21	Lipi Saha	2085818
	05/14/2019			05/16/2019 00:33	Lipi Saha	2085824
	05/14/2019			05/16/2019 00:45	Lipi Saha	2085825
EPA 350.1 Rev. 2.0	05/14/2019			05/16/2019 12:15	Ping Hua	2085819
	05/14/2019			05/16/2019 12:19	Ping Hua	2085816
	05/14/2019			05/16/2019 12:21	Ping Hua	2085822
	05/14/2019			05/16/2019 12:22	Ping Hua	2085826
	05/14/2019			05/16/2019 12:24	Ping Hua	2085827
EPA 351.2 Rev. 2.0	05/14/2019	05/21/2019 12:30	Adrian Shelby	05/23/2019 10:10	Joseph Suarez	2085819
	05/14/2019	05/21/2019 12:30	Adrian Shelby	05/23/2019 10:15	Joseph Suarez	2085822
	05/14/2019	05/21/2019 13:07	Jhamieka S. Greenwood	05/23/2019 12:17	Joseph Suarez	2085826
	05/14/2019	05/21/2019 13:07	Jhamieka S. Greenwood	05/23/2019 12:22	Joseph Suarez	2085827
	05/14/2019	05/29/2019 14:15	Adrian Shelby	05/30/2019 10:06	Joseph Suarez	2085816
EPA 353.2 Rev. 2.0	05/14/2019			05/20/2019 10:32	Beverly Y. Sanders	2085826
	05/14/2019			05/20/2019 10:36	Beverly Y. Sanders	2085822
	05/14/2019			05/20/2019 10:37	Beverly Y. Sanders	2085827
	05/14/2019			05/20/2019 12:30	Beverly Y. Sanders	2085819
	05/14/2019			05/20/2019 12:44	Beverly Y. Sanders	2085816
EPA 365.1 Rev. 2.0	05/14/2019	05/20/2019 08:30	Joseph Suarez	05/21/2019 15:58	Rosalyn Ballman	2085826
	05/14/2019	05/20/2019 08:30	Joseph Suarez	05/21/2019 18:19	Rosalyn Ballman	2085816
	05/14/2019	05/20/2019 08:30	Joseph Suarez	05/21/2019 18:20	Rosalyn Ballman	2085819
	05/14/2019	05/20/2019 08:30	Joseph Suarez	05/21/2019 18:21	Rosalyn Ballman	2085822
	05/14/2019	05/20/2019 08:30	Joseph Suarez	05/21/2019 18:29	Rosalyn Ballman	2085827
EPA 365.1 Rev. 2.0 dissolved	05/14/2019			05/14/2019 14:10	Jhamieka S. Greenwood	2085820
	05/14/2019			05/14/2019 14:33	Jhamieka S. Greenwood	2085817
	05/14/2019			05/14/2019 14:34	Jhamieka S. Greenwood	2085823
	05/14/2019			05/14/2019 14:35	Jhamieka S. Greenwood	2085828
	05/14/2019			05/14/2019 14:36	Jhamieka S. Greenwood	2085829
EPA 8270D	05/14/2019	05/17/2019 09:00	Fe-Val Siddell	05/21/2019 01:38	Arthur Maknenko	2085859
EPA 8270E	05/14/2019	05/20/2019 09:00	Julie Wi	05/22/2019 14:17	Vandana T. Nagar	2085860
	05/14/2019	05/20/2019 09:00	Julie Wi	05/23/2019 13:02	Vandana T. Nagar	2085860
EPA 8276	05/14/2019	05/17/2019 09:00	Fe-Val Siddell	05/25/2019 02:15	Dinesh Mishra	2085859

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	05/14/2019	05/15/2019 14:00	Hoor Shaik	05/19/2019 00:32	Juyoung Kim	2085855
	05/14/2019	05/15/2019 14:00	Hoor Shaik	05/19/2019 01:06	Juyoung Kim	2085856
	05/14/2019	05/15/2019 14:00	Hoor Shaik	05/19/2019 02:16	Juyoung Kim	2085857
	05/14/2019	05/15/2019 14:00	Hoor Shaik	05/19/2019 02:50	Juyoung Kim	2085858
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/16/2019 16:50	Rebecca Ware	2085856
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/16/2019 17:04	Rebecca Ware	2085857
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/16/2019 17:31	Rebecca Ware	2085858
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/17/2019 10:22	Rebecca Ware	2085855
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/17/2019 17:59	Rebecca Ware	2085856
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/17/2019 18:10	Rebecca Ware	2085857
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/17/2019 18:21	Rebecca Ware	2085858
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/20/2019 09:19	Rebecca Ware	2085855
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/23/2019 14:57	Rebecca Ware	2085855
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/23/2019 15:09	Rebecca Ware	2085856
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/23/2019 15:21	Rebecca Ware	2085857
	05/14/2019	05/16/2019 14:00	Rebecca Ware	05/23/2019 15:32	Rebecca Ware	2085858
	05/14/2019	05/20/2019 09:00	Hoor Shaik	05/22/2019 19:09	Juyoung Kim	2085854
SM 2120 B	05/14/2019			05/14/2019 15:30	Madeline Funaro	2085815
	05/14/2019			05/14/2019 15:31	Madeline Funaro	2085818
	05/14/2019			05/14/2019 15:32	Madeline Funaro	2085821
	05/14/2019			05/14/2019 15:33	Madeline Funaro	2085825
	05/14/2019			05/14/2019 16:02	Madeline Funaro	2085824
SM 2320 B-97	05/14/2019			05/18/2019 19:11	Dale L. Simmons	2085815
	05/14/2019			05/18/2019 19:24	Dale L. Simmons	2085818
	05/14/2019			05/18/2019 19:36	Dale L. Simmons	2085821
	05/14/2019			05/18/2019 19:48	Dale L. Simmons	2085824
	05/14/2019			05/18/2019 20:00	Dale L. Simmons	2085825
SM 2540 C-97	05/14/2019			05/16/2019 15:31	Yijie Li	2085815, 2085818, 2085821, 2085824, 2085825
SM 2540 D-97	05/14/2019			05/16/2019 15:31	Yijie Li	2085815, 2085818, 2085821, 2085824, 2085825
SM 4500 F-C-97	05/14/2019			05/18/2019 19:11	Dale L. Simmons	2085815
	05/14/2019			05/18/2019 19:24	Dale L. Simmons	2085818
	05/14/2019			05/18/2019 19:36	Dale L. Simmons	2085821
	05/14/2019			05/18/2019 19:48	Dale L. Simmons	2085824
	05/14/2019			05/18/2019 20:00	Dale L. Simmons	2085825
SM 5310 B-00	05/14/2019			05/16/2019 06:29	Julia Storbeck	2085816
	05/14/2019			05/16/2019 07:10	Julia Storbeck	2085819
	05/14/2019			05/21/2019 05:45	Julia Storbeck	2085822
	05/14/2019			05/21/2019 05:58	Julia Storbeck	2085826

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	05/14/2019			05/21/2019 06:38	Julia Storbeck	2085827