

Chemical Analysis Report

NW-DIST-2019-11-08-01

Florida Department of Environmental Protection
Central Laboratory
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DOH Accreditation E31780

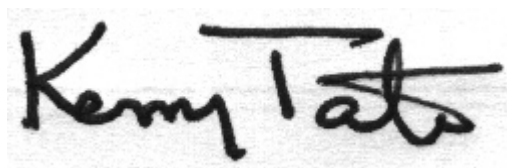
Event Description: **NW RUN**
Request ID: **RQ-2019-11-04-55**
Customer: **NW-DIST**
Project ID: **SMP**

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FL Dept. of Environmental Protection
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 04-DEC-2019 12:29

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Little Pine Barren Creek above CR99

Collection Date/Time: 11/07/2019 10:00

Field ID: G4NW0420

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134969	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P373948	
	EPA 300.0 Rev. 2.1	Chloride	7.0		mg Cl/L	P374326	
		Sulfate	0.55	I	mg SO4/L	P374328	
	SM 2120 B	Color (true)	16	A	PCU	P373951	
	SM 2320 B-97	Total Alkalinity	5.7		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	35		mg/L	P374415	RPD
	SM 2540 D-97	TSS	2	I	mg/L	P374417	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
2134972	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P374261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.11	I	mg N/L	P374411	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.95		mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.007		mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	1.6		mg C/L	P374270	
2134975	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374008	

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: Big Escambia Creek downstream of Fannie Rd Collection Date/Time: 11/07/2019 10:45

Field ID: G4NW0421

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134970	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P373948	
	EPA 300.0 Rev. 2.1	Chloride	4.7		mg Cl/L	P374326	
		Sulfate	1.6		mg SO4/L	P374328	
	SM 2120 B	Color (true)	18		PCU	P373951	
	SM 2320 B-97	Total Alkalinity	3.8		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	27		mg/L	P374415	RPD
	SM 2540 D-97	TSS	5	I	mg/L	P374417	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
2134973	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P374261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P374411	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.58		mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	2.2		mg C/L	P374270	
2134976	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374008	

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: Wiggins Branch below Highway 29

Collection Date/Time: 11/07/2019 13:20

Field ID: G4NW0163

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134971	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P373948	
	EPA 300.0 Rev. 2.1	Chloride	4.2		mg Cl/L	P374326	
		Sulfate	2.0		mg SO4/L	P374328	
	SM 2120 B	Color (true)	28		PCU	P373951	
	SM 2320 B-97	Total Alkalinity	5.0		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	29		mg/L	P374416	
	SM 2540 D-97	TSS	4	I	mg/L	P374418	
	SM 4500 F-C-97	Fluoride	0.037	I	mg F/L	P374497	
2134974	EPA 350.1 Rev. 2.0	Ammonia-N	0.041		mg N/L	P374261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P374411	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.40		mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	2.9		mg C/L	P374270	
2134977	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374008	

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: Big Coldwater Creek West Fork upstream of Walling Road

Collection Date/Time: 11/07/2019 14:15

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134978	EPA 180.1 Rev. 2.0	Turbidity	2.4		NTU	P373949	
	EPA 300.0 Rev. 2.1	Chloride	6.8		mg Cl/L	P374326	
		Sulfate	1.6		mg SO4/L	P374328	
	SM 2120 B	Color (true)	14		PCU	P373951	
	SM 2320 B-97	Total Alkalinity	3.3		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	44		mg/L	P374416	
	SM 2540 D-97	TSS	2	I	mg/L	P374418	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
2134979	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P374261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P374783	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.9		mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	2.0		mg C/L	P374270	
2134980	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374008	
2134997	EPA 8321B	Aldicarb	0.020	U	ug/L	P374121	
		Aldicarb Sulfone	0.0020	U	ug/L	P374121	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P374121	
		Carbaryl	0.0020	U	ug/L	P374121	
		Carbofuran	0.0020	U	ug/L	P374121	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P374121	
		Methiocarb	0.0020	U	ug/L	P374121	
		Methomyl	0.0020	U	ug/L	P374121	
		Oxamyl	0.0020	U	ug/L	P374121	
		Propoxur	0.0020	U	ug/L	P374121	
		2,4-D	0.0020	U	ug/L	P373857	
		Acesulfame K**	0.10	U	ug/L	P373995	
2134998		AMPA**	0.10	U	ug/L	P373995	
		Sucralose**	0.034	I	ug/L	P373995	
		Acetaminophen**	0.0080	U	ug/L	P373857	
		Acetamiprid**	0.0020	U	ug/L	P373857	
		Endothal**	0.25	U	ug/L	P373995	
		Glufosinate**	0.10	U	ug/L	P373995	
		Glyphosate**	0.10	U	ug/L	P373995	
		Afidopyropen**	0.0020	UJ	ug/L	P373857	
		Bentazon	0.0036		ug/L	P373857	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P373857	
		Carbamazepine**	8.0E-04	U	ug/L	P373857	
		Clothianidin**	0.0026	I	ug/L	P373857	
		Dinotefuran**	0.0020	U	ug/L	P373857	
		Diuron	0.0020	U	ug/L	P373857	
		Fenuron	0.016	U	ug/L	P373857	
		Fluridone**	8.0E-04	U	ug/L	P373857	

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134998	EPA 8321B	Imazapyr**	0.0040	U	ug/L	P373857	MS
		Hydrocodone**	0.0020	U	ug/L	P373857	
		Ibuprofen**	0.020	U	ug/L	P373857	
		Imidacloprid	0.0020	UJ	ug/L	P373857	
		Linuron	0.0040	U	ug/L	P373857	
		Mandestrobin**	0.0020	UJ	ug/L	P373857	
		MCPP	0.0020	U	ug/L	P373857	
		Naproxen**	0.0080	U	ug/L	P373857	
		Primidone**	0.0040	U	ug/L	P373857	
		Pyraclostrobin**	0.0020	U	ug/L	P373857	
		Thiamethoxam**	0.0020	U	ug/L	P373857	
		Tolfenpyrad**	0.0020	U	ug/L	P373857	
		Triclopyr**	0.0040	U	ug/L	P373857	
2134999	EPA 8270E	Aldrin	4.5	U	ng/L	P374124	MS
		Alpha-BHC	2.3	U	ng/L	P374124	
		Alpha-Chlordane	1.1	U	ng/L	P374124	
		Beta-BHC	11	U	ng/L	P374124	
		Bifenthrin**	4.5	U	ng/L	P374124	
		Delta-BHC	9.0	U	ng/L	P374124	
		Gamma-BHC	9.0	U	ng/L	P374124	
		Carbophenothion	11	U	ng/L	P374124	
		Chlorothalonil	2.3	U	ng/L	P374124	
		Cis-Nonachlor**	1.1	U	ng/L	P374124	
		Cypermethrin	23	U	ng/L	P374124	
		DDD-p,p'	6.8	U	ng/L	P374124	
		DDE-p,p'	6.8	U	ng/L	P374124	
		DDT-p,p'	7.9	U	ng/L	P374124	
		Dicofol	34	U	ng/L	P374124	
		Dieldrin	4.5	U	ng/L	P374124	
		Endosulfan I	4.5	U	ng/L	P374124	
		Endosulfan II	4.5	U	ng/L	P374124	
		Endosulfan Sulfate	2.3	U	ng/L	P374124	
		Endrin	2.3	U	ng/L	P374124	
		Endrin Aldehyde	2.3	U	ng/L	P374124	
		Endrin Ketone	2.3	U	ng/L	P374124	
		Ethalfuralin**	3.4	UJ	ng/L	P374124	
		Gamma-Chlordane	1.1	U	ng/L	P374124	
		Heptachlor	1.7	U	ng/L	P374124	
		Heptachlor Epoxide	2.3	U	ng/L	P374124	
		Hexachlorobenzene	2.3	U	ng/L	P374124	
		Methoxychlor	4.5	U	ng/L	P374124	
		Mirex	2.3	U	ng/L	P374124	
		Permethrin	11	U	ng/L	P374124	
		Trans-Nonachlor**	1.1	UJ	ng/L	P374124	
		Trifluralin	2.8	U	ng/L	P374124	

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134999	EPA 8276	Chlordane	5.7	U	ng/L	P374124	
		Toxaphene	34	U	ng/L	P374124	
2135000	EPA 8270E	Acetochlor	0.26	U	ng/L	P373996	
		Alachlor	0.26	U	ng/L	P373996	
		Ametryn	0.62	U	ng/L	P373996	
		Atrazine	0.41	I	ng/L	P373996	
		Atrazine Desethyl	1.5	U	ng/L	P373996	
		Azinphos Methyl	5.2	U	ng/L	P373996	
		Bromacil	1.4	I	ng/L	P373996	
		Butylate	0.41	U	ng/L	P373996	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P373996	
		Chlorpyrifos Methyl	0.10	U	ng/L	P373996	
		Cyanazine	3.4	U	ng/L	P373996	
		Demeton	7.2	U	ng/L	P373996	
		Diazinon	0.13	U	ng/L	P373996	
		Dimethenamid**	0.10	U	ng/L	P373996	
		Disulfoton	0.52	U	ng/L	P373996	
		Dithiopyr**	0.21	IV	ng/L	P373996	
		EPTC	1.3	U	ng/L	P373996	
		Ethion	0.15	U	ng/L	P373996	
		Ethoprop	0.10	U	ng/L	P373996	
		Fenamiphos	0.52	UJ	ng/L	P373996	RPD
		Fipronil	0.26	U	ng/L	P373996	
		Fipronil Desulfinyl**	0.13	U	ng/L	P373996	
		Fipronil Sulfide	0.15	U	ng/L	P373996	
		Fipronil Sulfone	0.15	U	ng/L	P373996	
		Fonofos	0.21	U	ng/L	P373996	
		Hexazinone	3.2		ng/L	P373996	
		Malathion	0.36	U	ng/L	P373996	
		Metalaxyl	0.31	U	ng/L	P373996	
		Metolachlor	8.6		ng/L	P373996	
		Metribuzin	0.77	UJ	ng/L	P373996	CCV, LCS, MS
		Mevinphos	0.52	U	ng/L	P373996	
		Molinate	0.31	U	ng/L	P373996	
		Norflurazon	1.6	I	ng/L	P373996	
		Oxadiazon**	0.10	U	ng/L	P373996	
		Parathion Ethyl	0.26	U	ng/L	P373996	
		Parathion Methyl	0.57	U	ng/L	P373996	
		Pendimethalin	1.0	U	ng/L	P373996	
		Phorate	0.26	U	ng/L	P373996	
		Prodiamine**	0.18	U	ng/L	P373996	
		Prometon	0.93	U	ng/L	P373996	
		Prometryn	0.21	U	ng/L	P373996	
		Simazine	0.52	U	ng/L	P373996	

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135000	EPA 8270E	Tebuconazole**	0.52	UJ	ng/L	P373996	RPD
		Terbufos	0.10	U	ng/L	P373996	
		Terbuthylazine	0.44	U	ng/L	P373996	
2135015	EPA 200.7 Rev. 4.4	Calcium	2.86		mg/L	P374022	
		Iron	280		ug/L	P374022	
		Magnesium	2.34		mg/L	P374022	
		Potassium	1.2	I	mg/L	P374022	
		Sodium	2.8		mg/L	P374022	
		Zinc	5.0	U	ug/L	P374022	
	EPA 200.8 Rev. 5.4	Aluminum	89		ug/L	P374022	
		Antimony	0.050	U	ug/L	P374022	
		Arsenic	0.21		ug/L	P374022	
		Boron**	13.1		ug/L	P374022	
		Cadmium	0.020	U	ug/L	P374022	
		Chromium	0.40	U	ug/L	P374022	
		Copper	0.40	U	ug/L	P374022	
		Lead	0.20	U	ug/L	P374022	
		Nickel	0.63	I	ug/L	P374022	
		Selenium	0.20	U	ug/L	P374022	
		Silver	0.010	U	ug/L	P374022	
		Thallium	0.10	U	ug/L	P374022	

Ref. Method and Comment:

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

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

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8270E: V - Due to the presence of dithiopyr in both the Method Blank and the sample. The re-extraction result for dithiopyr was inconclusive due to persistent blank contamination. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.8 Rev. 5.4: The copper result was confirmed in the undigested sample on 12/02/2019.

Sample Location: Big Coldwater Creek West Fork upstream of
Walling Road

Collection Date/Time: 11/07/2019 14:20

Field ID: G4NW0436_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134981	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P373949	
	EPA 300.0 Rev. 2.1	Chloride	6.8		mg Cl/L	P374326	
		Sulfate	1.6		mg SO4/L	P374328	
	SM 2120 B	Color (true)	13		PCU	P373951	
	SM 2320 B-97	Total Alkalinity	3.3		mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	41		mg/L	P374416	
	SM 2540 D-97	TSS	2	I	mg/L	P374418	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
2134982	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P374261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	mg N/L	P374783	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.7		mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	2.0		mg C/L	P374270	
2134983	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374008	
2135001	EPA 8270E	Acetochlor	0.26	U	ng/L	P373996	
		Alachlor	0.26	U	ng/L	P373996	
		Ametryn	0.61	U	ng/L	P373996	
		Atrazine	0.43	I	ng/L	P373996	
		Atrazine Desethyl	1.5	U	ng/L	P373996	
		Azinphos Methyl	5.1	U	ng/L	P373996	
		Bromacil	1.5	I	ng/L	P373996	
		Butylate	0.41	U	ng/L	P373996	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P373996	
		Chlorpyrifos Methyl	0.10	U	ng/L	P373996	
		Cyanazine	3.3	U	ng/L	P373996	
		Demeton	7.2	U	ng/L	P373996	
		Diazinon	0.13	U	ng/L	P373996	
		Dimethenamid**	0.10	U	ng/L	P373996	
		Disulfoton	0.51	U	ng/L	P373996	
		Dithiopyr**	0.24	IV	ng/L	P373996	
		EPTC	1.3	U	ng/L	P373996	
		Ethion	0.15	U	ng/L	P373996	
		Ethoprop	0.10	U	ng/L	P373996	
		Fenamiphos	0.51	U	ng/L	P373996	
		Fipronil	0.26	U	ng/L	P373996	
		Fipronil Desulfinyl**	0.13	U	ng/L	P373996	
		Fipronil Sulfide	0.15	U	ng/L	P373996	
		Fipronil Sulfone	0.15	U	ng/L	P373996	
		Fonofos	0.20	U	ng/L	P373996	
		Hexazinone	3.3		ng/L	P373996	
		Malathion	0.36	U	ng/L	P373996	
		Metalaxyl	0.31	U	ng/L	P373996	

RPD

Field ID: G4NW0436_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135001	EPA 8270E	Metolachlor	9.1		ng/L	P373996	CCV, LCS, MS
		Metribuzin	0.77	UJ	ng/L	P373996	
		Mevinphos	0.51	U	ng/L	P373996	
		Molinate	0.31	U	ng/L	P373996	
		Norflurazon	1.7	I	ng/L	P373996	
		Oxadiazon**	0.10	U	ng/L	P373996	
		Parathion Ethyl	0.26	U	ng/L	P373996	
		Parathion Methyl	0.56	U	ng/L	P373996	
		Pendimethalin	1.0	U	ng/L	P373996	
		Phorate	0.26	U	ng/L	P373996	
		Prodiamine**	0.18	U	ng/L	P373996	
		Prometon	0.92	U	ng/L	P373996	
		Prometryn	0.20	U	ng/L	P373996	
		Simazine	0.51	U	ng/L	P373996	
		Tebuconazole**	0.51	UJ	ng/L	P373996	RPD
		Terbufos	0.10	U	ng/L	P373996	
		Terbuthylazine	0.43	U	ng/L	P373996	
2135016	EPA 200.7 Rev. 4.4	Calcium	2.90		mg/L	P374022	
		Iron	290		ug/L	P374022	
		Magnesium	2.34		mg/L	P374022	
		Potassium	1.2		mg/L	P374022	
		Sodium	2.8		mg/L	P374022	
		Zinc	5.0	U	ug/L	P374022	
	EPA 200.8 Rev. 5.4	Aluminum	90		ug/L	P374022	
		Antimony	0.050	U	ug/L	P374022	
		Arsenic	0.21		ug/L	P374022	
		Boron**	13.0		ug/L	P374022	
		Cadmium	0.020	U	ug/L	P374022	
		Chromium	0.40	U	ug/L	P374022	
		Copper	1.93		ug/L	P374022	
		Lead	0.20	U	ug/L	P374022	
		Nickel	0.80	I	ug/L	P374022	
		Selenium	0.20	U	ug/L	P374022	
		Silver	0.010	U	ug/L	P374022	
		Thallium	0.10	U	ug/L	P374022	

Ref. Method and Comment:

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

EPA 8270E: V - Due to the presence of dithiopyr in both the Method Blank and the sample. The re-extraction result for dithiopyr was inconclusive due to persistent blank contamination. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 200.8 Rev. 5.4: The copper result was confirmed on 11/26/2019.

Sample Location: Big Coldwater Creek West Fork upstream of Walling Road

Collection Date/Time: 11/07/2019 14:25

Field ID: FB_07112019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2134984	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P373949	RPD
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P374326	
		Sulfate	0.20	U	mg SO4/L	P374328	
	SM 2120 B	Color (true)	2.5	U	PCU	P373951	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P374493	
	SM 2540 C-97	TDS	15	U	mg/L	P374415	
	SM 2540 D-97	TSS	2	U	mg/L	P374417	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P374497	
2134985	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P374261	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P374783	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P374239	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P374425	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P374270	
2134986	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P374008	
2135002	EPA 8270E	Acetochlor	0.25	U	ng/L	P373996	RPD
		Alachlor	0.25	U	ng/L	P373996	
		Ametryn	0.60	U	ng/L	P373996	
		Atrazine	0.25	U	ng/L	P373996	
		Atrazine Desethyl	1.5	U	ng/L	P373996	
		Azinphos Methyl	5.0	U	ng/L	P373996	
		Bromacil	0.50	U	ng/L	P373996	
		Butylate	0.40	U	ng/L	P373996	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P373996	
		Chlorpyrifos Methyl	0.10	U	ng/L	P373996	
		Cyanazine	3.2	U	ng/L	P373996	
		Demeton	7.0	U	ng/L	P373996	
		Diazinon	0.12	U	ng/L	P373996	
		Dimethenamid**	0.10	U	ng/L	P373996	
		Disulfoton	0.50	U	ng/L	P373996	
		Dithiopyr**	0.20	IV	ng/L	P373996	
		EPTC	1.2	U	ng/L	P373996	
		Ethion	0.15	U	ng/L	P373996	
		Ethoprop	0.10	U	ng/L	P373996	
		Fenamiphos	0.50	U	ng/L	P373996	
		Fipronil	0.25	U	ng/L	P373996	
		Fipronil Desulfanyl**	0.12	U	ng/L	P373996	
		Fipronil Sulfide	0.15	U	ng/L	P373996	
		Fipronil Sulfone	0.15	U	ng/L	P373996	
		Fonofos	0.20	U	ng/L	P373996	
		Hexazinone	0.50	U	ng/L	P373996	
		Malathion	0.35	U	ng/L	P373996	
		Metalaxyl	0.30	U	ng/L	P373996	

Field ID: FB_07112019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2135002	EPA 8270E	Metolachlor	0.50	U	ng/L	P373996	CCV, LCS, MS
		Metribuzin	0.75	UJ	ng/L	P373996	
		Mevinphos	0.50	U	ng/L	P373996	
		Molinate	0.30	U	ng/L	P373996	
		Norflurazon	0.50	U	ng/L	P373996	
		Oxadiazon**	0.10	U	ng/L	P373996	
		Parathion Ethyl	0.25	U	ng/L	P373996	
		Parathion Methyl	0.55	U	ng/L	P373996	
		Pendimethalin	1.0	U	ng/L	P373996	
		Phorate	0.25	U	ng/L	P373996	
		Prodiamine**	0.17	U	ng/L	P373996	
		Prometon	0.90	U	ng/L	P373996	
		Prometryn	0.20	U	ng/L	P373996	
		Simazine	0.50	U	ng/L	P373996	
		Tebuconazole**	0.50	UJ	ng/L	P373996	RPD
		Terbufos	0.10	U	ng/L	P373996	
		Terbutylazine	0.42	U	ng/L	P373996	
2135017	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P374022	
		Iron	30	U	ug/L	P374022	
		Magnesium	0.040	U	mg/L	P374022	
		Potassium	0.30	U	mg/L	P374022	
		Sodium	0.50	U	mg/L	P374022	
		Zinc	5.0	U	ug/L	P374022	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P374022	
		Antimony	0.050	U	ug/L	P374022	
		Arsenic	0.050	U	ug/L	P374022	
		Boron**	2.0	U	ug/L	P374022	
		Cadmium	0.020	U	ug/L	P374022	
		Chromium	0.40	U	ug/L	P374022	
		Copper	0.40	U	ug/L	P374022	
		Lead	0.20	U	ug/L	P374022	
		Nickel	0.50	U	ug/L	P374022	
		Selenium	0.20	U	ug/L	P374022	
		Silver	0.010	U	ug/L	P374022	
		Thallium	0.10	U	ug/L	P374022	

Ref. Method and Comment:

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

EPA 8270E: V - Due to the presence of dithiopyr in both the Method Blank and the sample. The re-extraction result for dithiopyr was inconclusive due to persistent blank contamination. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373948

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373949

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374022

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374022

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: P374326

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374261

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374261

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374411

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374239

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374425

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374008

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

Reference Method: EPA 8270E
Batch ID: P373996

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	0.24	I	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P373996

Component	Result	Code	Units
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.30	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8270E
Batch ID: P374124

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	10	U	ng/L
Bifenthrin	4.0	U	ng/L
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L
Cypermethrin	20	U	ng/L
DDD-p,p'	6.0	U	ng/L
DDE-p,p'	6.0	U	ng/L
DDT-p,p'	7.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P374124

Component	Result	Code	Units
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	8.0	U	ng/L
Gamma-Chlordane	1.0	U	ng/L
Heptachlor	1.5	U	ng/L
Heptachlor Epoxide	2.0	U	ng/L
Hexachlorobenzene	2.0	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P374124

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

Reference Method: EPA 8321B
Batch ID: P373857

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P373995

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

Reference Method: EPA 8321B
Batch ID: P374121

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

Reference Method: SM 2120 B
Batch ID: P373951

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P374493

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

Reference Method: SM 2540 C-97
Batch ID: P374415

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P374416

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P374417

Component	Result	Code	Units
TSS	2	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P374418

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P374497

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P374270

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: P374022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	101		P	85 - 115
Iron	100		P	85 - 115
Magnesium	102		P	85 - 115
Potassium	104		P	85 - 115
Sodium	97.8		P	85 - 115
Zinc	97.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374022

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	95.1		P	85 - 115
Antimony	98.7		P	85 - 115
Arsenic	100		P	85 - 115
Boron	97.3		P	85 - 115
Cadmium	93.7		P	85 - 115
Chromium	100		P	85 - 115
Copper	102		P	85 - 115
Lead	92.3		P	85 - 115
Nickel	99.1		P	85 - 115
Selenium	100		P	85 - 115
Silver	96.2		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374326

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374261

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374411

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

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

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374239

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374425

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374008

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

Reference Method: EPA 8270E
Batch ID: P373996

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	83.2	85.4	P/P	69 - 122
Alachlor	86.3	86.5	P/P	71 - 120
Ametryn	74.5	68.7	P/P	47 - 138
Atrazine	108	108	P/P	74 - 124
Atrazine Desethyl	112	136	P/P	38 - 138
Azinphos Methyl	84.8	92.5	P/P	69 - 154
Bromacil	79.1	76.4	P/P	39 - 121
Butylate	58.6	63.7	P/P	27 - 87.0
Chlorpyrifos Ethyl	79.1	74.9	P/P	69 - 118
Chlorpyrifos Methyl	90.4	89.0	P/P	70 - 120
Cyanazine	183	208	P/P	20 - 250
Demeton	79.2	82.7	P/P	39 - 118
Diazinon	101	105	P/P	68 - 127
Dimethenamid	79.4	70.0	P/P	66 - 125
Disulfoton	97.7	98.6	P/P	52 - 126
Dithiopyr	88.0	87.8	P/P	67 - 127
EPTC	54.5	62.0	P/P	24 - 88.0
Ethion	89.6	88.0	P/P	51 - 132
Ethoprop	99.4	106	P/P	58 - 117
Fenamiphos	57.0	53.3	P/P	38 - 139
Fipronil	80.0	86.5	P/P	61 - 124
Fipronil Desulfinyl	96.6	101	P/P	47 - 120
Fipronil Sulfide	83.4	84.2	P/P	56 - 119
Fipronil Sulfone	82.0	69.6	P/P	50 - 117
Fonofos	104	104	P/P	60 - 121
Hexazinone	103	94.9	P/P	55 - 137
Malathion	123	98.4	P/P	66 - 126
Metalaxyl	81.4	77.5	P/P	33 - 140

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P373996

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Metolachlor	88.1	86.2	P/P	69 - 119
Metribuzin	232	258	P/F	31 - 238
Mevinphos	89.3	73.7	P/P	42 - 113
Molinate	61.9	74.6	P/P	32 - 96.0
Norflurazon	87.2	91.3	P/P	54 - 123
Oxadiazon	81.2	79.4	P/P	63 - 128
Parathion Ethyl	93.2	101	P/P	72 - 111
Parathion Methyl	104	116	P/P	74 - 126
Pendimethalin	96.2	97.2	P/P	61 - 131
Phorate	92.7	98.3	P/P	51 - 115
Prodiamine	95.4	93.3	P/P	38 - 144
Prometon	95.1	91.2	P/P	54 - 119
Prometryn	87.4	90.8	P/P	63 - 120
Simazine	108	114	P/P	75 - 126
Tebuconazole	59.2	41.9	P/P	20 - 119
Terbufos	105	110	P/P	64 - 116
Terbutylazine	99.3	103	P/P	73 - 117

Reference Method: EPA 8270E
Batch ID: P374124

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	40.2	35.5	P/P	20 - 93.0
Alpha-BHC	77.2	66.8	P/P	55 - 133
Alpha-Chlordane	68.1	62.4	P/P	58 - 112
Beta-BHC	79.4	71.7	P/P	54 - 168
Bifenthrin	79.4	67.5	P/P	30 - 134
Carbophenothion	79.2	74.9	P/P	26 - 147
Chlorothalonil	65.9	62.1	P/P	20 - 155
Cis-Nonachlor	71.6	65.2	P/P	54 - 115
Cypermethrin	86.2	74.9	P/P	40 - 137
DDD-p,p'	76.4	71.9	P/P	65 - 129
DDE-p,p'	69.7	60.4	P/P	57 - 116
DDT-p,p'	70.9	66.7	P/P	53 - 133
Delta-BHC	90.3	77.6	P/P	59 - 178
Dicofol	83.8	75.9	P/P	24 - 138
Dieldrin	75.1	70.9	P/P	60 - 120
Endosulfan I	73.0	69.3	P/P	64 - 118
Endosulfan II	77.0	76.0	P/P	58 - 142
Endosulfan Sulfate	82.1	76.1	P/P	60 - 127
Endrin	73.2	69.7	P/P	59 - 122
Endrin Aldehyde	74.6	70.0	P/P	49 - 132
Endrin Ketone	81.9	77.1	P/P	64 - 121
Ethalfuralin	72.2	69.4	P/P	60 - 126
Gamma-BHC	82.6	75.1	P/P	57 - 154
Gamma-Chlordane	64.2	58.1	P/P	56 - 110
Heptachlor	63.3	58.0	P/P	46 - 96.0
Heptachlor Epoxide	72.9	68.6	P/P	61 - 112
Hexachlorobenzene	67.7	63.9	P/P	44 - 98.0
Methoxychlor	86.2	82.1	P/P	63 - 134
Mirex	62.8	56.1	P/P	45 - 100
Permethrin	77.2	67.7	P/P	53 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P374124

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Trans-Nonachlor	67.5	61.5	P/P	47 - 110
Trifluralin	75.9	72.5	P/P	39 - 142

Reference Method: EPA 8276
Batch ID: P374124

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	84.6	77.0	P/P	43 - 128
Toxaphene	75.9	73.5	P/P	38 - 140

Reference Method: EPA 8321B
Batch ID: P373857

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	100		P	30 - 160
Acetamiprid	81.3		P	40 - 160
Afidopyropen	81.8		P	40 - 160
Bentazon	83.5		P	30 - 160
Benzovindiflupyr	92.3		P	40 - 160
Carbamazepine	110		P	40 - 160
Clothianidin	95.4		P	40 - 160
Dinotefuran	84.5		P	40 - 160
Diuron	87.1		P	40 - 160
Fenuron	98.6		P	40 - 160
Fluridone	92.5		P	40 - 160
Hydrocodone	103		P	40 - 160
Ibuprofen	84.0		P	30 - 160
Imazapyr	80.7		P	40 - 160
Imidacloprid	93.4		P	40 - 160
Linuron	88.8		P	40 - 160
Mandestrobin	92.2		P	40 - 160
MCPP	135		P	40 - 160
Naproxen	69.0		P	40 - 160
Primidone	91.3		P	40 - 160
Pyraclostrobin	79.4		P	30 - 160
Thiamethoxam	101		P	40 - 160
Tolfenpyrad	51.2		P	40 - 160
Triclopyr	99.9		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P373995

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	115		P	40 - 150
AMPA	123		P	40 - 150
Endothall	103		P	40 - 150
Glufosinate	110		P	40 - 150
Glyphosate	107		P	40 - 140
Sucralose	89.8		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P374121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	81.1		P	40 - 160
Aldicarb	66.3		P	30 - 160
Aldicarb Sulfone	93.8		P	40 - 160
Aldicarb Sulfoxide	77.7		P	40 - 160
Carbaryl	69.6		P	40 - 160
Carbofuran	72.7		P	40 - 160
Methiocarb	64.3		P	40 - 160
Methomyl	40.0		P	40 - 160
Oxamyl	69.9		P	40 - 160
Propoxur	74.6		P	40 - 160

Reference Method: SM 2120 B
Batch ID: P373951

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

Reference Method: SM 2320 B-97
Batch ID: P374493

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P374497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.2		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P374270

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134873	Calcium	97.9		P	80 - 120
2134873	Iron	95.9	96.9	P/P	80 - 120
2134873	Magnesium	96.8		P	80 - 120
2134873	Potassium	99.2	99.7	P/P	80 - 120
2134873	Sodium	98.6		P	80 - 120
2134873	Zinc	93.0	93.9	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134873	Aluminum	93.8	95.1	P/P	80 - 120
2134873	Antimony	103	102	P/P	80 - 120
2134873	Arsenic	99.6	98.6	P/P	80 - 120
2134873	Boron	101	97.5	P/P	80 - 120
2134873	Cadmium	98.8	98.2	P/P	80 - 120
2134873	Chromium	98.7	102	P/P	80 - 120
2134873	Copper	94.6	94.7	P/P	80 - 120
2134873	Lead	94.1	94.0	P/P	80 - 120
2134873	Nickel	92.1	93.5	P/P	80 - 120
2134873	Selenium	95.1	92.5	P/P	80 - 120
2134873	Silver	98.7	97.6	P/P	80 - 120
2134873	Thallium	104	106	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134921	Chloride	98.8		P	90 - 110
2135287	Chloride	98.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134921	Sulfate	99.1		P	90 - 110
2135287	Sulfate	97.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134972	Ammonia-N	96.8	96.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134916	Kjeldahl Nitrogen	98.6	94.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P374783

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135374	Kjeldahl Nitrogen	94.1	96.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P374239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134913	NO2NO3-N	97.8	98.3	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P374425

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134922	Total-P	104	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P374008

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134975	O-Phosphate-P	99.4	99.5	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P373996

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135000	Acetochlor	76.7	88.4	P/P	63 - 129
2135000	Alachlor	85.8	103	P/P	65 - 127
2135000	Ametryn	80.6	82.3	P/P	40 - 164
2135000	Atrazine	103	110	P/P	66 - 135
2135000	Atrazine Desethyl	137	129	P/P	14 - 157
2135000	Azinphos Methyl	89.4	76.8	P/P	49 - 180
2135000	Bromacil	69.3	70.7	P/P	48 - 130
2135000	Butylate	74.7	71.0	P/P	10 - 94.0
2135000	Chlorpyrifos Ethyl	72.7	81.7	P/P	58 - 123
2135000	Chlorpyrifos Methyl	85.6	93.5	P/P	58 - 125
2135000	Cyanazine	222	222	P/P	24 - 253
2135000	Demeton	86.3	89.1	P/P	25 - 149
2135000	Diazinon	104	110	P/P	59 - 144
2135000	Dimethenamid	63.5	84.8	P/P	46 - 139
2135000	Disulfoton	103	111	P/P	54 - 132
2135000	Dithiopyr	81.4	87.8	P/P	64 - 130
2135000	EPTC	73.5	73.2	P/P	10 - 92.0
2135000	Ethion	89.3	96.6	P/P	30 - 148
2135000	Ethoprop	110	111	P/P	50 - 130
2135000	Fenamiphos	66.6	91.0	P/P	49 - 142
2135000	Fipronil	78.4	80.9	P/P	46 - 140
2135000	Fipronil Desulfinyl	94.7	98.3	P/P	30 - 121
2135000	Fipronil Sulfide	78.1	81.3	P/P	31 - 136
2135000	Fipronil Sulfone	61.8	70.6	P/P	16 - 136
2135000	Fonofos	110	103	P/P	55 - 129
2135000	Hexazinone	106	109	P/P	56 - 141
2135000	Malathion	90.7	75.5	P/P	56 - 135
2135000	Metalaxyl	72.4	73.0	P/P	54 - 135

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P373996

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135000	Metolachlor	73.2	84.3	P/P	51 - 140
2135000	Metribuzin	281	230	F/P	45 - 254
2135000	Mevinphos	72.5	74.8	P/P	33 - 131
2135000	Molinate	87.0	80.6	P/P	14 - 98.0
2135000	Norflurazon	82.8	89.7	P/P	34 - 136
2135000	Oxadiazon	71.5	78.3	P/P	67 - 116
2135000	Parathion Ethyl	96.1	97.6	P/P	66 - 118
2135000	Parathion Methyl	115	117	P/P	64 - 136
2135000	Pendimethalin	93.0	102	P/P	59 - 144
2135000	Phorate	112	98.1	P/P	42 - 130
2135000	Prodiamine	89.5	98.0	P/P	42 - 148
2135000	Prometon	101	100	P/P	59 - 134
2135000	Prometryn	86.8	90.1	P/P	54 - 135
2135000	Simazine	111	119	P/P	53 - 156
2135000	Tebuconazole	41.5	52.5	P/P	10 - 131
2135000	Terbufos	116	119	P/P	57 - 131
2135000	Terbutylazine	98.0	104	P/P	68 - 125

Reference Method: EPA 8270E
Batch ID: P374124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134999	Aldrin	40.5	46.9	P/P	25 - 92.0
2134999	Alpha-BHC	90.7	87.9	P/P	48 - 150
2134999	Alpha-Chlordane	50.6	53.4	P/P	50 - 115
2134999	Beta-BHC	80.9	85.0	P/P	39 - 184
2134999	Bifenthrin	71.4	74.7	P/P	46 - 116
2134999	Carbophenothion	68.3	74.0	P/P	27 - 180
2134999	Chlorothalonil	105	87.4	P/P	10 - 216
2134999	Cis-Nonachlor	56.3	57.2	P/P	55 - 112
2134999	Cypermethrin	86.6	84.4	P/P	40 - 153
2134999	DDD-p,p'	60.0	60.5	P/P	53 - 128
2134999	DDE-p,p'	48.4	53.0	P/P	48 - 116
2134999	DDT-p,p'	60.1	59.3	P/P	47 - 128
2134999	Delta-BHC	99.6	95.2	P/P	48 - 221
2134999	Dicofol	75.5	77.0	P/P	10 - 147
2134999	Dieldrin	63.8	63.5	P/P	48 - 128
2134999	Endosulfan I	65.1	63.1	P/P	58 - 126
2134999	Endosulfan II	72.0	72.1	P/P	50 - 150
2134999	Endosulfan Sulfate	80.5	71.7	P/P	56 - 130
2134999	Endrin	60.0	63.3	P/P	50 - 126
2134999	Endrin Aldehyde	66.4	60.3	P/P	12 - 145
2134999	Endrin Ketone	96.5	90.5	P/P	59 - 132
2134999	Ethalfuralin	56.2	59.5	F/F	65 - 122
2134999	Gamma-BHC	108	105	P/P	40 - 190
2134999	Gamma-Chlordane	50.6	51.8	P/P	50 - 112
2134999	Heptachlor	52.8	52.3	P/P	41 - 98.0
2134999	Heptachlor Epoxide	62.1	61.1	P/P	55 - 117
2134999	Hexachlorobenzene	53.9	57.3	P/P	47 - 91.0
2134999	Methoxychlor	71.6	71.0	P/P	55 - 133
2134999	Mirex	54.1	54.5	P/P	44 - 101
2134999	Permethrin	68.7	60.3	P/P	52 - 124

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P374124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134999	Trans-Nonachlor	50.6	52.4	F/F	53 - 99.0
2134999	Trifluralin	58.6	62.7	P/P	10 - 201

Reference Method: EPA 8276
 Batch ID: P374124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2135771	Chlordane	86.4	96.2	P/P	34 - 136
2135771	Toxaphene	74.8	84.6	P/P	22 - 152

Reference Method: EPA 8321B
 Batch ID: P373857

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134998	2,4-D	128	133	P/P	40 - 160
2134998	Acetaminophen	104	97.0	P/P	30 - 160
2134998	Acetamiprid	89.7	88.1	P/P	40 - 160
2134998	Afidopyropen	96.6	92.1	P/P	40 - 160
2134998	Bentazon	71.9	77.1	P/P	30 - 160
2134998	Benzovindiflupyr	99.1	89.9	P/P	40 - 160
2134998	Carbamazepine	102	93.3	P/P	40 - 160
2134998	Clothianidin	95.0	87.9	P/P	40 - 160
2134998	Dinotefuran	99.5	101	P/P	40 - 160
2134998	Diuron	79.8	80.0	P/P	40 - 160
2134998	Fenuron	102	98.8	P/P	40 - 160
2134998	Fluridone	93.0	96.4	P/P	40 - 160
2134998	Hydrocodone	111	111	P/P	40 - 160
2134998	Ibuprofen	84.8	82.7	P/P	30 - 160
2134998	Imazapyr	125	100	P/P	40 - 160
2134998	Imidacloprid	164	137	F/P	40 - 160
2134998	Linuron	85.9	86.9	P/P	40 - 160
2134998	Mandestrobin	92.4	91.8	P/P	40 - 160
2134998	MCP	134	138	P/P	40 - 160
2134998	Naproxen	67.3	59.1	P/P	40 - 160
2134998	Primidone	97.4	107	P/P	40 - 160
2134998	Pyraclostrobin	79.2	75.9	P/P	30 - 160
2134998	Thiamethoxam	140	128	P/P	40 - 160
2134998	Tolfenpyrad	53.2	62.7	P/P	40 - 160
2134998	Triclopyr	106	113	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P373995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134903	Acesulfame K	125	118	P/P	40 - 150
2134903	AMPA	106	117	P/P	40 - 150
2134903	Endothall	126	127	P/P	40 - 150
2134903	Glufosinate	122	109	P/P	40 - 150
2134903	Glyphosate	96.3	101	P/P	40 - 140
2134903	Sucralose	107	92.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P374121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134997	3-Hydroxycarbofuran	77.8	89.3	P/P	40 - 160
2134997	Aldicarb	75.6	69.2	P/P	30 - 160
2134997	Aldicarb Sulfone	97.6	106	P/P	40 - 160
2134997	Aldicarb Sulfoxide	55.6	58.9	P/P	40 - 160
2134997	Carbaryl	74.5	69.2	P/P	40 - 160
2134997	Carbofuran	72.2	71.5	P/P	40 - 160
2134997	Methiocarb	64.2	66.6	P/P	40 - 160
2134997	Methomyl	71.9	76.8	P/P	40 - 160
2134997	Oxamyl	89.6	95.6	P/P	40 - 160
2134997	Propoxur	75.5	77.7	P/P	40 - 160

Reference Method: SM 4500 F-C-97

Batch ID: P374497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134912	Fluoride	97.7	97.1	P/P	89 - 106

Reference Method: SM 5310 B-00

Batch ID: P374270

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2134974	Organic Carbon	103	104	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134945	Turbidity	6.64	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P373949

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135084	Turbidity	1.57	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P374022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134873	Calcium	2.03	Spike	P	0 - 20
2134873	Iron	0.853	Spike	P	0 - 20
2134873	Magnesium	2.15	Spike	P	0 - 20
2134873	Potassium	0.400	Spike	P	0 - 20
2134873	Sodium	1.66	Spike	P	0 - 20
2134873	Zinc	0.925	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P374022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134873	Aluminum	1.35	Spike	P	0 - 20
2134873	Antimony	0.930	Spike	P	0 - 20
2134873	Arsenic	0.901	Spike	P	0 - 20
2134873	Boron	2.85	Spike	P	0 - 20
2134873	Cadmium	0.568	Spike	P	0 - 20
2134873	Chromium	2.89	Spike	P	0 - 20
2134873	Copper	0.100	Spike	P	0 - 20
2134873	Lead	0.130	Spike	P	0 - 20
2134873	Nickel	1.32	Spike	P	0 - 20
2134873	Selenium	2.77	Spike	P	0 - 20
2134873	Silver	1.14	Spike	P	0 - 20
2134873	Thallium	1.52	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134921	Chloride	0.353	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P374328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134921	Sulfate	0.131	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P374261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134972	Ammonia-N	0.446	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374411

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134916	Kjeldahl Nitrogen	2.49	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P374783

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135374	Kjeldahl Nitrogen	1.23	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P374239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134913	NO2NO3-N	0.447	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P374425

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134922	Total-P	2.68	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P374008

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134975	O-Phosphate-P	0.101	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P373996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135000	Acetochlor	14.2	Spike	P	0 - 30
2135000	Alachlor	18.4	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P373996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135000	Ametryn	2.01	Spike	P	0 - 30
2135000	Atrazine	6.14	Spike	P	0 - 30
2135000	Atrazine Desethyl	5.96	Spike	P	0 - 30
2135000	Azinphos Methyl	15.2	Spike	P	0 - 30
2135000	Bromacil	1.64	Spike	P	0 - 30
2135000	Butylate	5.09	Spike	P	0 - 30
2135000	Chlorpyrifos Ethyl	11.6	Spike	P	0 - 30
2135000	Chlorpyrifos Methyl	8.86	Spike	P	0 - 30
2135000	Cyanazine	0.222	Spike	P	0 - 30
2135000	Demeton	3.19	Spike	P	0 - 30
2135000	Diazinon	5.68	Spike	P	0 - 30
2135000	Dimethenamid	28.8	Spike	P	0 - 30
2135000	Disulfoton	7.09	Spike	P	0 - 30
2135000	Dithiopyr	7.10	Spike	P	0 - 30
2135000	EPTC	0.432	Spike	P	0 - 30
2135000	Ethion	7.77	Spike	P	0 - 30
2135000	Ethoprop	0.825	Spike	P	0 - 30
2135000	Fenamiphos	31.0	Spike	F	0 - 30
2135000	Fipronil	3.09	Spike	P	0 - 30
2135000	Fipronil Desulfinyl	3.67	Spike	P	0 - 30
2135000	Fipronil Sulfide	3.94	Spike	P	0 - 30
2135000	Fipronil Sulfone	13.2	Spike	P	0 - 30
2135000	Fonofos	6.99	Spike	P	0 - 30
2135000	Hexazinone	2.44	Spike	P	0 - 30
2135000	Malathion	18.3	Spike	P	0 - 30
2135000	Metalaxyl	0.821	Spike	P	0 - 30
2135000	Metolachlor	7.49	Spike	P	0 - 30
2135000	Metribuzin	20.0	Spike	P	0 - 30
2135000	Mevinphos	3.06	Spike	P	0 - 30
2135000	Molinate	7.62	Spike	P	0 - 30
2135000	Norflurazon	7.04	Spike	P	0 - 30
2135000	Oxadiazon	9.12	Spike	P	0 - 30
2135000	Parathion Ethyl	1.54	Spike	P	0 - 30
2135000	Parathion Methyl	1.30	Spike	P	0 - 30
2135000	Pendimethalin	8.79	Spike	P	0 - 30
2135000	Phorate	13.3	Spike	P	0 - 30
2135000	Prodiamine	9.05	Spike	P	0 - 30
2135000	Prometon	1.01	Spike	P	0 - 30
2135000	Prometryn	3.78	Spike	P	0 - 30
2135000	Simazine	6.55	Spike	P	0 - 30
2135000	Tebuconazole	23.3	Spike	P	0 - 30
2135000	Terbufos	2.40	Spike	P	0 - 30
2135000	Terbutylazine	6.12	Spike	P	0 - 30
LFB	Acetochlor	2.69	LCS	P	0 - 30
LFB	Alachlor	0.211	LCS	P	0 - 30
LFB	Ametryn	8.05	LCS	P	0 - 30
LFB	Atrazine	0.430	LCS	P	0 - 30
LFB	Atrazine Desethyl	19.5	LCS	P	0 - 30
LFB	Azinphos Methyl	8.69	LCS	P	0 - 30
LFB	Bromacil	3.43	LCS	P	0 - 30
LFB	Butylate	8.33	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P373996

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorpyrifos Ethyl	5.48	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	1.55	LCS	P	0 - 30
LFB	Cyanazine	12.7	LCS	P	0 - 30
LFB	Demeton	4.30	LCS	P	0 - 30
LFB	Diazinon	3.85	LCS	P	0 - 30
LFB	Dimethenamid	12.5	LCS	P	0 - 30
LFB	Disulfoton	0.936	LCS	P	0 - 30
LFB	Dithiopyr	0.211	LCS	P	0 - 30
LFB	EPTC	12.8	LCS	P	0 - 30
LFB	Ethion	1.88	LCS	P	0 - 30
LFB	Ethoprop	6.03	LCS	P	0 - 30
LFB	Fenamiphos	6.70	LCS	P	0 - 30
LFB	Fipronil	7.78	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	4.55	LCS	P	0 - 30
LFB	Fipronil Sulfide	0.837	LCS	P	0 - 30
LFB	Fipronil Sulfone	16.2	LCS	P	0 - 30
LFB	Fonofos	0.221	LCS	P	0 - 30
LFB	Hexazinone	8.50	LCS	P	0 - 30
LFB	Malathion	22.4	LCS	P	0 - 30
LFB	Metalaxyl	4.93	LCS	P	0 - 30
LFB	Metolachlor	2.16	LCS	P	0 - 30
LFB	Metribuzin	10.6	LCS	P	0 - 30
LFB	Mevinphos	19.2	LCS	P	0 - 30
LFB	Molinate	18.6	LCS	P	0 - 30
LFB	Norflurazon	4.60	LCS	P	0 - 30
LFB	Oxadiazon	2.18	LCS	P	0 - 30
LFB	Parathion Ethyl	8.10	LCS	P	0 - 30
LFB	Parathion Methyl	11.2	LCS	P	0 - 30
LFB	Pendimethalin	1.03	LCS	P	0 - 30
LFB	Phorate	5.91	LCS	P	0 - 30
LFB	Prodiamine	2.20	LCS	P	0 - 30
LFB	Prometon	4.15	LCS	P	0 - 30
LFB	Prometryn	3.82	LCS	P	0 - 30
LFB	Simazine	5.28	LCS	P	0 - 30
LFB	Tebuconazole	34.3	LCS	F	0 - 30
LFB	Terbufos	5.23	LCS	P	0 - 30
LFB	Terbutylazine	3.52	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P374124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134999	Aldrin	14.7	Spike	P	0 - 30
2134999	Alpha-BHC	3.05	Spike	P	0 - 30
2134999	Alpha-Chlordane	5.43	Spike	P	0 - 30
2134999	Beta-BHC	4.92	Spike	P	0 - 30
2134999	Bifenthrin	4.50	Spike	P	0 - 30
2134999	Carbophenothion	8.04	Spike	P	0 - 30
2134999	Chlorothalonil	18.4	Spike	P	0 - 30
2134999	Cis-Nonachlor	1.50	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P374124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134999	Cypermethrin	2.59	Spike	P	0 - 30
2134999	DDD-p,p'	0.889	Spike	P	0 - 30
2134999	DDE-p,p'	8.98	Spike	P	0 - 30
2134999	DDT-p,p'	1.39	Spike	P	0 - 30
2134999	Delta-BHC	4.57	Spike	P	0 - 30
2134999	Dicofol	1.97	Spike	P	0 - 30
2134999	Dieldrin	0.543	Spike	P	0 - 30
2134999	Endosulfan I	3.08	Spike	P	0 - 30
2134999	Endosulfan II	0.121	Spike	P	0 - 30
2134999	Endosulfan Sulfate	11.5	Spike	P	0 - 30
2134999	Endrin	5.33	Spike	P	0 - 30
2134999	Endrin Aldehyde	9.64	Spike	P	0 - 30
2134999	Endrin Ketone	6.46	Spike	P	0 - 30
2134999	Ethalfuralin	5.78	Spike	P	0 - 30
2134999	Gamma-BHC	2.88	Spike	P	0 - 30
2134999	Gamma-Chlordane	2.38	Spike	P	0 - 30
2134999	Heptachlor	0.833	Spike	P	0 - 30
2134999	Heptachlor Epoxide	1.61	Spike	P	0 - 30
2134999	Hexachlorobenzene	6.06	Spike	P	0 - 30
2134999	Methoxychlor	0.861	Spike	P	0 - 30
2134999	Mirex	0.804	Spike	P	0 - 30
2134999	Permethrin	11.8	Spike	P	0 - 30
2134999	Trans-Nonachlor	3.47	Spike	P	0 - 30
2134999	Trifluralin	6.75	Spike	P	0 - 30
LFB	Aldrin	12.4	LCS	P	0 - 30
LFB	Alpha-BHC	14.4	LCS	P	0 - 30
LFB	Alpha-Chlordane	8.72	LCS	P	0 - 30
LFB	Beta-BHC	10.2	LCS	P	0 - 30
LFB	Bifenthrin	16.2	LCS	P	0 - 30
LFB	Carbophenothion	5.54	LCS	P	0 - 30
LFB	Chlorothalonil	5.87	LCS	P	0 - 30
LFB	Cis-Nonachlor	9.39	LCS	P	0 - 30
LFB	Cypermethrin	14.0	LCS	P	0 - 30
LFB	DDD-p,p'	5.95	LCS	P	0 - 30
LFB	DDE-p,p'	14.3	LCS	P	0 - 30
LFB	DDT-p,p'	6.20	LCS	P	0 - 30
LFB	Delta-BHC	15.1	LCS	P	0 - 30
LFB	Dicofol	9.88	LCS	P	0 - 30
LFB	Dieldrin	5.81	LCS	P	0 - 30
LFB	Endosulfan I	5.11	LCS	P	0 - 30
LFB	Endosulfan II	1.20	LCS	P	0 - 30
LFB	Endosulfan Sulfate	7.55	LCS	P	0 - 30
LFB	Endrin	4.84	LCS	P	0 - 30
LFB	Endrin Aldehyde	6.40	LCS	P	0 - 30
LFB	Endrin Ketone	5.94	LCS	P	0 - 30
LFB	Ethalfuralin	3.97	LCS	P	0 - 30
LFB	Gamma-BHC	9.45	LCS	P	0 - 30
LFB	Gamma-Chlordane	9.96	LCS	P	0 - 30
LFB	Heptachlor	8.76	LCS	P	0 - 30
LFB	Heptachlor Epoxide	6.13	LCS	P	0 - 30
LFB	Hexachlorobenzene	5.84	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P374124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Methoxychlor	4.83	LCS	P	0 - 30
LFB	Mirex	11.4	LCS	P	0 - 30
LFB	Permethrin	13.1	LCS	P	0 - 30
LFB	Trans-Nonachlor	9.30	LCS	P	0 - 30
LFB	Trifluralin	4.56	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P374124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2135771	Chlordane	10.7	Spike	P	0 - 30
2135771	Toxaphene	12.3	Spike	P	0 - 30
LFB	Chlordane	9.33	LCS	P	0 - 30
LFB	Toxaphene	3.18	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P373857

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134998	2,4-D	3.68	Spike	P	0 - 30
2134998	Acetaminophen	7.22	Spike	P	0 - 30
2134998	Acetamiprid	1.82	Spike	P	0 - 30
2134998	Afidopyropen	4.77	Spike	P	0 - 30
2134998	Bentazon	5.65	Spike	P	0 - 30
2134998	Benzovindiflupyr	9.78	Spike	P	0 - 30
2134998	Carbamazepine	8.53	Spike	P	0 - 30
2134998	Clothianidin	7.46	Spike	P	0 - 30
2134998	Dinotefuran	1.87	Spike	P	0 - 30
2134998	Diuron	0.273	Spike	P	0 - 30
2134998	Fenuron	3.09	Spike	P	0 - 30
2134998	Fluridone	3.52	Spike	P	0 - 30
2134998	Hydrocodone	0.456	Spike	P	0 - 30
2134998	Ibuprofen	2.51	Spike	P	0 - 30
2134998	Imazapyr	22.3	Spike	P	0 - 30
2134998	Imidacloprid	18.0	Spike	P	0 - 30
2134998	Linuron	1.17	Spike	P	0 - 30
2134998	Mandestrobin	0.630	Spike	P	0 - 30
2134998	MCP	3.28	Spike	P	0 - 30
2134998	Naproxen	13.0	Spike	P	0 - 30
2134998	Primidone	9.72	Spike	P	0 - 30
2134998	Pyraclostrobin	4.33	Spike	P	0 - 30
2134998	Thiamethoxam	9.00	Spike	P	0 - 30
2134998	Tolfenpyrad	16.3	Spike	P	0 - 30
2134998	Triclopyr	5.99	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P373995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134903	Acesulfame K	5.62	Spike	P	0 - 30
2134903	AMPA	10.3	Spike	P	0 - 30
2134903	Endothall	1.17	Spike	P	0 - 30
2134903	Glufosinate	11.6	Spike	P	0 - 30
2134903	Glyphosate	4.77	Spike	P	0 - 30
2134903	Sucralose	14.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P374121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134997	3-Hydroxycarbofuran	13.7	Spike	P	0 - 30
2134997	Aldicarb	8.85	Spike	P	0 - 30
2134997	Aldicarb Sulfone	8.45	Spike	P	0 - 30
2134997	Aldicarb Sulfoxide	5.76	Spike	P	0 - 30
2134997	Carbaryl	7.35	Spike	P	0 - 30
2134997	Carbofuran	0.907	Spike	P	0 - 30
2134997	Methiocarb	3.71	Spike	P	0 - 30
2134997	Methomyl	6.69	Spike	P	0 - 30
2134997	Oxamyl	6.49	Spike	P	0 - 30
2134997	Propoxur	2.95	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P373951

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134969	Color (true)	4.07	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P374493

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134912	Total Alkalinity	2.22	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P374415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134912	TDS	12.5	Sample	F	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P374416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134921	TDS	2.88	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-97
Batch ID: P374497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134912	Fluoride	0.495	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P374270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2134974	Organic Carbon	0.465	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2134997
Field Sample ID: G4NW0436

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	78.9	P	30 - 160

Lab Sample ID: 2134998
Field Sample ID: G4NW0436

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	140	P	30 - 160
EPA 8321B	Acetaminophen-d4	112	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	87.9	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	122	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	122	P	30 - 160
EPA 8321B	Ibuprofen-d3	136	P	30 - 160
EPA 8321B	Primidone-d5	100	P	30 - 160
EPA 8321B	Sucralose-d6	97.2	P	30 - 160
EPA 8321B	Sucralose-d6	97.2	P	30 - 160

Lab Sample ID: 2134999
Field Sample ID: G4NW0436

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	61.6	P	43 - 111
EPA 8270E	Tetrachloro-m-xylene	57.2	P	35 - 106
EPA 8276	Decachlorobiphenyl	54.5	P	30 - 103
EPA 8276	PCNB	87.7	P	37 - 143

Lab Sample ID: 2135000
Field Sample ID: G4NW0436

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	106	P	68 - 130
EPA 8270E	Terbufos-d10	107	P	61 - 136

Lab Sample ID: 2135001
Field Sample ID: G4NW0436_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	120	P	68 - 130
EPA 8270E	Terbufos-d10	113	P	61 - 136

Lab Sample ID: 2135002
Field Sample ID: FB_07112019

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	105	P	68 - 130
EPA 8270E	Terbufos-d10	112	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A95599

Included Lab Sample IDs: 2134969, 2134970, 2134971, 2134978, 2134981, 2134984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.5	P/P	95 - 105
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: SM 2120 B

Run ID: A95600

Included Lab Sample IDs: 2134969, 2134970, 2134971, 2134978, 2134981, 2134984

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A95628

Included Lab Sample IDs: 2134975, 2134976, 2134977, 2134980, 2134983, 2134986

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.5	98.6	P/P	90 - 110
O-Phosphate-P	98.6	98.4	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A95693

Included Lab Sample IDs: 2135015, 2135016, 2135017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	99.8	P/P	90 - 110
Calcium	100	100	P/P	95 - 105
Iron	98.1	98.3	P/P	95 - 105
Iron	98.3	99.7	P/P	90 - 110
Magnesium	101	101	P/P	95 - 105
Magnesium	101	103	P/P	90 - 110
Potassium	95.1	95.3	P/P	95 - 105
Potassium	95.3	96.0	P/P	90 - 110
Sodium	97.1	97.4	P/P	95 - 105
Sodium	97.4	97.3	P/P	90 - 110
Zinc	102	102	P/P	95 - 105
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A95734

Included Lab Sample IDs: 2134972, 2134973, 2134974, 2134979, 2134982, 2134985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	101	P/P	90 - 110
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A95747

Included Lab Sample IDs: 2134972, 2134973, 2134974, 2134979, 2134982, 2134985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	99.8	P/P	90 - 110
Ammonia-N	99.8	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A95750

Included Lab Sample IDs: 2134972, 2134973, 2134974, 2134979, 2134982, 2134985

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	105	108	P/P	90 - 110
Organic Carbon	105	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A95765

Included Lab Sample IDs: 2134969, 2134970, 2134971, 2134978, 2134981, 2134984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	99.0	P/P	90 - 110
Chloride	99.5	99.3	P/P	90 - 110
Sulfate	99.5	99.0	P/P	90 - 110
Sulfate	99.7	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A95768

Included Lab Sample IDs: 2134998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	102	P/P	60 - 160
Glufosinate	119	118	P/P	60 - 160
Glyphosate	131	121	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95769

Included Lab Sample IDs: 2134998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	98.6	85.9	P/P	60 - 160
Endothall	96.6	108	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A95779

Included Lab Sample IDs: 2134998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.8	101	P/P	50 - 150
3-Hydroxycarbofuran	101	101	P/P	60 - 150
Acetaminophen	91.6	108	P/P	60 - 160
Acetamiprid	108	105	P/P	50 - 150
Afidopyropen	107	112	P/P	50 - 150
Aldicarb	85.0	90.1	P/P	60 - 150
Aldicarb Sulfone	89.5	100	P/P	50 - 150
Aldicarb Sulfoxide	96.1	106	P/P	50 - 150
Bentazon	106	106	P/P	50 - 160
Benzovindiflupyr	109	115	P/P	50 - 150
Carbamazepine	116	116	P/P	60 - 150
Carbaryl	80.3	112	P/P	60 - 150
Carbofuran	106	107	P/P	50 - 150
Clothianidin	104	85.4	P/P	60 - 150
Dinotefuran	92.0	94.7	P/P	50 - 150
Diuron	107	108	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A95779
Included Lab Sample IDs: 2134998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fenuron	113	116	P/P	60 - 150
Fluridone	108	112	P/P	60 - 160
Hydrocodone	105	109	P/P	60 - 150
Ibuprofen	96.1	89.4	P/P	50 - 160
Imazapyr	99.8	105	P/P	50 - 150
Imidacloprid	101	106	P/P	60 - 150
Linuron	109	114	P/P	60 - 150
Mandestrobin	107	114	P/P	50 - 150
MCPP	102	103	P/P	50 - 150
Methiocarb	109	107	P/P	50 - 150
Methomyl	101	115	P/P	50 - 150
Naproxen	102	109	P/P	50 - 160
Oxamyl	94.1	101	P/P	50 - 150
Primidone	96.5	102	P/P	60 - 150
Propoxur	104	108	P/P	50 - 150
Pyraclostrobin	96.1	88.9	P/P	60 - 150
Thiamethoxam	96.7	99.6	P/P	50 - 150
Tolfenpyrad	95.3	89.3	P/P	60 - 150
Triclopyr	98.4	94.3	P/P	50 - 150

Reference Method: EPA 8276
Run ID: A95782
Included Lab Sample IDs: 2134999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	104		P	80 - 120
Toxaphene	100		P	80 - 120

Reference Method: EPA 8270E
Run ID: A95805
Included Lab Sample IDs: 2134999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	94.3		P	80 - 120
Alpha-BHC	104		P	80 - 120
Alpha-Chlordane	94.0		P	80 - 120
Beta-BHC	108		P	80 - 120
Bifenthrin	98.4		P	80 - 120
Carbophenothion	97.5		P	80 - 120
Chlorothalonil	90.4		P	80 - 120
Cis-Nonachlor	94.6		P	80 - 120
Cypermethrin	93.9		P	80 - 120
DDD-p,p'	97.1		P	80 - 120
DDE-p,p'	97.6		P	80 - 120
DDT-p,p'	99.5		P	80 - 120
Delta-BHC	101		P	80 - 120
Dicofol	97.3		P	80 - 120
Dieldrin	94.0		P	80 - 120
Endosulfan I	91.1		P	80 - 120
Endosulfan II	96.5		P	80 - 120
Endosulfan Sulfate	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A95805

Included Lab Sample IDs: 2134999

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin	91.8		P	80 - 120
Endrin Aldehyde	94.3		P	80 - 120
Endrin Ketone	99.3		P	80 - 120
Ethalfuralin	99.5		P	80 - 120
Gamma-BHC	107		P	80 - 120
Gamma-Chlordane	93.1		P	80 - 120
Heptachlor	91.4		P	80 - 120
Heptachlor Epoxide	94.0		P	80 - 120
Hexachlorobenzene	99.9		P	80 - 120
Methoxychlor	101		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	96.7		P	80 - 120
Trans-Nonachlor	93.9		P	80 - 120
Trifluralin	99.2		P	80 - 120

Reference Method: SM 2320 B-97

Run ID: A95843

Included Lab Sample IDs: 2134969, 2134970, 2134971, 2134978, 2134981, 2134984

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.0	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A95843

Included Lab Sample IDs: 2134969, 2134970, 2134971, 2134978, 2134981, 2134984

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

Reference Method: EPA 8321B

Run ID: A95849

Included Lab Sample IDs: 2134998

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.0	89.1	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95851

Included Lab Sample IDs: 2134972, 2134973, 2134974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	102	107	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A95867

Included Lab Sample IDs: 2135000, 2135001, 2135002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	99.3		P	80 - 120
Alachlor	99.9		P	80 - 120
Ametryn	98.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A95867

Included Lab Sample IDs: 2135000, 2135001, 2135002

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	99.8		P	80 - 120
Atrazine Desethyl	103		P	80 - 120
Azinphos Methyl	95.4		P	80 - 120
Bromacil	97.5		P	80 - 120
Butylate	103		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	100		P	80 - 120
Cyanazine	106		P	80 - 120
Demeton	99.1		P	80 - 120
Diazinon	97.5		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	99.1		P	80 - 120
Dithiopyr	101		P	80 - 120
EPTC	101		P	80 - 120
Ethion	96.7		P	80 - 120
Ethoprop	99.1		P	80 - 120
Fenamiphos	91.6		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	99.7		P	80 - 120
Fipronil Sulfide	99.2		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fonofos	99.4		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	100		P	80 - 120
Metaxyl	99.8		P	80 - 120
Metolachlor	106		P	80 - 120
Metribuzin	120*		F	80 - 120
Mevinphos	89.3		P	80 - 120
Molinate	105		P	80 - 120
Norflurazon	96.7		P	80 - 120
Oxadiazon	101		P	80 - 120
Parathion Ethyl	99.5		P	80 - 120
Parathion Methyl	98.6		P	80 - 120
Pendimethalin	101		P	80 - 120
Phorate	97.1		P	80 - 120
Prodiamine	97.1		P	80 - 120
Prometon	99.9		P	80 - 120
Prometryn	99.8		P	80 - 120
Simazine	102		P	80 - 120
Tebuconazole	97.1		P	80 - 120
Terbufos	97.4		P	80 - 120
Terbutylazine	100		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95873

Included Lab Sample IDs: 2135015, 2135016, 2135017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	101	P/P	90 - 110
Antimony	100	100	P/P	90 - 110
Antimony	98.2	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95873

Included Lab Sample IDs: 2135015, 2135016, 2135017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	102	102	P/P	90 - 110
Arsenic	104	102	P/P	90 - 110
Boron	103	103	P/P	90 - 110
Boron	106	103	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Cadmium	98.7	101	P/P	90 - 110
Copper	104	105	P/P	90 - 110
Copper	106	104	P/P	90 - 110
Lead	95.4	95.4	P/P	90 - 110
Lead	95.4	96.3	P/P	90 - 110
Nickel	102	104	P/P	90 - 110
Nickel	103	102	P/P	90 - 110
Selenium	101	99.0	P/P	90 - 110
Selenium	99.6	101	P/P	90 - 110
Silver	98.1	99.7	P/P	90 - 110
Silver	99.7	99.6	P/P	90 - 110
Thallium	95.4	97.7	P/P	90 - 110
Thallium	97.7	96.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95926

Included Lab Sample IDs: 2135015, 2135016, 2135017

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95929

Included Lab Sample IDs: 2134974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.8	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A95931

Included Lab Sample IDs: 2134972, 2134973, 2134979, 2134982, 2134985

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A95998

Included Lab Sample IDs: 2135017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.4	98.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A95999

Included Lab Sample IDs: 2134979, 2134982, 2134985

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

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						6.64	
	Turbidity						1.57	
EPA 200.7 Rev. 4.4	Calcium	101		97.9				2.03
	Iron	100		95.9	96.9			0.853
	Magnesium	102		96.8				2.15
	Potassium	104		99.2	99.7			0.400
	Sodium	97.8		98.6				1.66
	Zinc	97.4		93.0	93.9			0.925
EPA 200.8 Rev. 5.4	Aluminum	95.1		93.8	95.1			1.35
	Antimony	98.7		103	102			0.930
	Arsenic	100		99.6	98.6			0.901
	Boron	97.3		101	97.5			2.85
	Cadmium	93.7		98.8	98.2			0.568
	Chromium	100		98.7	102			2.89
	Copper	102		94.6	94.7			0.100
	Lead	92.3		94.1	94.0			0.130
	Nickel	99.1		92.1	93.5			1.32
	Selenium	100		95.1	92.5			2.77
	Silver	96.2		98.7	97.6			1.14
	Thallium	100		104	106			1.52
EPA 300.0 Rev. 2.1	Chloride	98.0		98.8	98.9		0.353	
	Sulfate	97.8		99.1	97.1		0.131	
EPA 350.1 Rev. 2.0	Ammonia-N	99.5		96.8	96.2			0.446
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	110		98.6	94.2			2.49
	Kjeldahl Nitrogen	98.4		94.1	96.0			1.23
EPA 353.2 Rev. 2.0	NO2NO3-N	100		97.8	98.3			0.447
EPA 365.1 Rev. 2.0	Total-P	102		104	101			2.68
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	96.7		99.4	99.5			0.101
EPA 8270E	Acetochlor	83.2	85.4	76.7	88.4	2.69		14.2
	Alachlor	86.3	86.5	85.8	103	0.211		18.4
	Aldrin	40.2	35.5	40.5	46.9	12.4		14.7
	Alpha-BHC	77.2	66.8	90.7	87.9	14.4		3.05
	Alpha-Chlordane	68.1	62.4	50.6	53.4	8.72		5.43
	Ametryn	74.5	68.7	80.6	82.3	8.05		2.01
	Atrazine	108	108	103	110	0.430		6.14
	Atrazine Desethyl	112	136	137	129	19.5		5.96
	Azinphos Methyl	84.8	92.5	89.4	76.8	8.69		15.2
	Beta-BHC	79.4	71.7	80.9	85.0	10.2		4.92
	Bifenthrin	79.4	67.5	71.4	74.7	16.2		4.50
	Bromacil	79.1	76.4	69.3	70.7	3.43		1.64
	Butylate	58.6	63.7	74.7	71.0	8.33		5.09
	Carbophenothion	79.2	74.9	68.3	74.0	5.54		8.04
	Chlorothalonil	65.9	62.1	105	87.4	5.87		18.4
	Chlorpyrifos Ethyl	79.1	74.9	72.7	81.7	5.48		11.6
	Chlorpyrifos Methyl	90.4	89.0	85.6	93.5	1.55		8.86
	Cis-Nonachlor	71.6	65.2	56.3	57.2	9.39		1.50
	Cyanazine	183	208	222	222	12.7		0.222
	Cypermethrin	86.2	74.9	86.6	84.4	14.0		2.59
	DDD-p,p'	76.4	71.9	60.0	60.5	5.95		0.889
	DDE-p,p'	69.7	60.4	48.4	53.0	14.3		8.98
	DDT-p,p'	70.9	66.7	60.1	59.3	6.20		1.39
	Delta-BHC	90.3	77.6	99.6	95.2	15.1		4.57
	Demeton	79.2	82.7	86.3	89.1	4.30		3.19
	Diazinon	101	105	104	110	3.85		5.68

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Dicofol	83.8	75.9	75.5	77.0	9.88	1.97
	Dieldrin	75.1	70.9	63.8	63.5	5.81	0.543
	Dimethenamid	79.4	70.0	63.5	84.8	12.5	28.8
	Disulfoton	97.7	98.6	103	111	0.936	7.09
	Dithiopyr	88.0	87.8	81.4	87.8	0.211	7.10
	Endosulfan I	73.0	69.3	65.1	63.1	5.11	3.08
	Endosulfan II	77.0	76.0	72.0	72.1	1.20	0.121
	Endosulfan Sulfate	82.1	76.1	80.5	71.7	7.55	11.5
	Endrin	73.2	69.7	60.0	63.3	4.84	5.33
	Endrin Aldehyde	74.6	70.0	66.4	60.3	6.40	9.64
	Endrin Ketone	81.9	77.1	96.5	90.5	5.94	6.46
	EPTC	54.5	62.0	73.5	73.2	12.8	0.432
	Ethalfuralin	72.2	69.4	56.2	59.5	3.97	5.78
	Ethion	89.6	88.0	89.3	96.6	1.88	7.77
	Ethoprop	99.4	106	110	111	6.03	0.825
	Fenamiphos	57.0	53.3	66.6	91.0	6.70	31.0
	Fipronil	80.0	86.5	78.4	80.9	7.78	3.09
	Fipronil Desulfinyl	96.6	101	94.7	98.3	4.55	3.67
	Fipronil Sulfide	83.4	84.2	78.1	81.3	0.837	3.94
	Fipronil Sulfone	82.0	69.6	61.8	70.6	16.2	13.2
	Fonofos	104	104	110	103	0.221	6.99
	Gamma-BHC	82.6	75.1	108	105	9.45	2.88
	Gamma-Chlordane	64.2	58.1	50.6	51.8	9.96	2.38
	Heptachlor	63.3	58.0	52.8	52.3	8.76	0.833
	Heptachlor Epoxide	72.9	68.6	62.1	61.1	6.13	1.61
	Hexachlorobenzene	67.7	63.9	53.9	57.3	5.84	6.06
	Hexazinone	103	94.9	106	109	8.50	2.44
	Malathion	123	98.4	90.7	75.5	22.4	18.3
	Metalaxyl	81.4	77.5	72.4	73.0	4.93	0.821
	Methoxychlor	86.2	82.1	71.6	71.0	4.83	0.861
	Metolachlor	88.1	86.2	73.2	84.3	2.16	7.49
	Metribuzin	232	258	281	230	10.6	20.0
	Mevinphos	89.3	73.7	72.5	74.8	19.2	3.06
	Mirex	62.8	56.1	54.1	54.5	11.4	0.804
	Molinate	61.9	74.6	87.0	80.6	18.6	7.62
	Norflurazon	87.2	91.3	82.8	89.7	4.60	7.04
	Oxadiazon	81.2	79.4	71.5	78.3	2.18	9.12
	Parathion Ethyl	93.2	101	96.1	97.6	8.10	1.54
	Parathion Methyl	104	116	115	117	11.2	1.30
	Pendimethalin	96.2	97.2	93.0	102	1.03	8.79
	Permethrin	77.2	67.7	68.7	60.3	13.1	11.8
	Phorate	92.7	98.3	112	98.1	5.91	13.3
	Prodiamine	95.4	93.3	89.5	98.0	2.20	9.05
	Prometon	95.1	91.2	101	100	4.15	1.01
	Prometryn	87.4	90.8	86.8	90.1	3.82	3.78
	Simazine	108	114	111	119	5.28	6.55
	Tebuconazole	59.2	41.9	41.5	52.5	34.3	23.3
	Terbufos	105	110	116	119	5.23	2.40
	Terbutylazine	99.3	103	98.0	104	3.52	6.12
	Trans-Nonachlor	67.5	61.5	50.6	52.4	9.30	3.47
	Trifluralin	75.9	72.5	58.6	62.7	4.56	6.75
EPA 8276	Chlordane	84.6	77.0	86.4	96.2	9.33	10.7
	Toxaphene	75.9	73.5	74.8	84.6	3.18	12.3
EPA 8321B	2,4-D	133		128	133		3.68

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	3-Hydroxycarbofuran	81.1	77.8	89.3			13.7
	Acesulfame K	115	125	118			5.62
	Acetaminophen	100	104	97.0			7.22
	Acetamiprid	81.3	89.7	88.1			1.82
	Afidopyropen	81.8	96.6	92.1			4.77
	Aldicarb	66.3	75.6	69.2			8.85
	Aldicarb Sulfone	93.8	97.6	106			8.45
	Aldicarb Sulfoxide	77.7	55.6	58.9			5.76
	AMPA	123	106	117			10.3
	Bentazon	83.5	71.9	77.1			5.65
	Benzovindiflupyr	92.3	99.1	89.9			9.78
	Carbamazepine	110	102	93.3			8.53
	Carbaryl	69.6	69.2	74.5			7.35
	Carbofuran	72.7	71.5	72.2			0.907
	Clothianidin	95.4	95.0	87.9			7.46
	Dinotefuran	84.5	99.5	101			1.87
	Diuron	87.1	79.8	80.0			0.273
	Endothall	103	126	127			1.17
	Fenuron	98.6	102	98.8			3.09
	Fluridone	92.5	93.0	96.4			3.52
	Glufosinate	110	122	109			11.6
	Glyphosate	107	96.3	101			4.77
	Hydrocodone	103	111	111			0.456
	Ibuprofen	84.0	84.8	82.7			2.51
	Imazapyr	80.7	125	100			22.3
	Imidacloprid	93.4	164	137			18.0
	Linuron	88.8	85.9	86.9			1.17
	Mandestrobin	92.2	92.4	91.8			0.630
	MCPP	135	134	138			3.28
	Methiocarb	64.3	66.6	64.2			3.71
	Methomyl	40.0	71.9	76.8			6.69
	Naproxen	69.0	67.3	59.1			13.0
	Oxamyl	69.9	89.6	95.6			6.49
	Primidone	91.3	97.4	107			9.72
	Propoxur	74.6	75.5	77.7			2.95
	Pyraclostrobin	79.4	79.2	75.9			4.33
	Sucralose	89.8	107	92.3			14.4
	Thiamethoxam	101	140	128			9.00
	Tolfenpyrad	51.2	53.2	62.7			16.3
	Triclopyr	99.9	106	113			5.99
SM 2120 B	Color (true)	100				4.07	
SM 2320 B-97	Total Alkalinity	101				2.22	
SM 2540 C-97	TDS					12.5	
	TDS					2.88	
SM 4500 F-C-97	Fluoride	97.2	97.7	97.1			0.495
SM 5310 B-00	Organic Carbon	103	103	104			0.465

Reference Method Descriptions

Method / DoH Cert #
EPA 180.1 Rev. 2.0 /
E31780

Description
Turbidity in aqueous matrices

Associated Samples
2134969, 2134970, 2134971, 2134978,
2134981, 2134984

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2135015, 2135016, 2135017
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2135015, 2135016, 2135017
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2134972, 2134973, 2134974, 2134979, 2134982, 2134985
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2134972, 2134973, 2134974, 2134979, 2134982, 2134985
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2134972, 2134973, 2134974, 2134979, 2134982, 2134985
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2134972, 2134973, 2134974, 2134979, 2134982, 2134985
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2134975, 2134976, 2134977, 2134980, 2134983, 2134986
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2134999
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2135000, 2135001, 2135002
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2134999
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2134997
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2134998
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2134998
SM 2120 B / E31780	True Color measured at 450 nm	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2134972, 2134973, 2134974, 2134979, 2134982, 2134985

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	11/08/2019			11/08/2019 14:40	Samantha Davila	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
EPA 200.7 Rev. 4.4	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/13/2019 12:09	Betina Topolski	2135017
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/13/2019 13:21	Betina Topolski	2135015
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/13/2019 13:25	Betina Topolski	2135016
EPA 200.8 Rev. 5.4	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/21/2019 00:23	Justin Cutchin	2135017
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/21/2019 02:30	Justin Cutchin	2135015
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/21/2019 02:40	Justin Cutchin	2135016
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/23/2019 00:23	Justin Cutchin	2135017
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/23/2019 01:07	Justin Cutchin	2135015
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/23/2019 01:13	Justin Cutchin	2135016
	11/08/2019	11/12/2019 13:00	Elliott D. Healy	11/26/2019 19:25	Robert K Palmer	2135017
EPA 300.0 Rev. 2.1	11/08/2019			11/15/2019 15:30	Lipi Saha	2134969
	11/08/2019			11/15/2019 15:42	Lipi Saha	2134970
	11/08/2019			11/15/2019 15:54	Lipi Saha	2134971
	11/08/2019			11/15/2019 16:06	Lipi Saha	2134978
	11/08/2019			11/15/2019 16:42	Lipi Saha	2134981
	11/08/2019			11/15/2019 16:55	Lipi Saha	2134984
EPA 350.1 Rev. 2.0	11/08/2019			11/14/2019 12:55	Ping Hua	2134972
	11/08/2019			11/14/2019 13:11	Ping Hua	2134973
	11/08/2019			11/14/2019 13:13	Ping Hua	2134974
	11/08/2019			11/14/2019 13:14	Ping Hua	2134979
	11/08/2019			11/14/2019 13:16	Ping Hua	2134982
	11/08/2019			11/14/2019 13:17	Ping Hua	2134985
EPA 351.2 Rev. 2.0	11/08/2019	11/19/2019 11:15	Sima Feizi	11/20/2019 13:07	Jhamieka S. Greenwood	2134972
	11/08/2019	11/19/2019 11:15	Sima Feizi	11/20/2019 13:09	Jhamieka S. Greenwood	2134973
	11/08/2019	11/19/2019 11:15	Sima Feizi	11/20/2019 13:10	Jhamieka S. Greenwood	2134974
	11/08/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 17:38	Jhamieka S. Greenwood	2134979
	11/08/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 17:40	Jhamieka S. Greenwood	2134982
	11/08/2019	11/25/2019 16:50	Jhamieka S. Greenwood	11/26/2019 17:41	Jhamieka S. Greenwood	2134985
EPA 353.2 Rev. 2.0	11/08/2019			11/14/2019 10:54	Beverly Y. Sanders	2134974
	11/08/2019			11/14/2019 12:26	Beverly Y. Sanders	2134972
	11/08/2019			11/14/2019 12:27	Beverly Y. Sanders	2134973
	11/08/2019			11/14/2019 12:32	Beverly Y. Sanders	2134979
	11/08/2019			11/14/2019 12:33	Beverly Y. Sanders	2134982
	11/08/2019			11/14/2019 12:34	Beverly Y. Sanders	2134985
EPA 365.1 Rev. 2.0	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:35	Benjamin T. Nordmann	2134972
	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:36	Benjamin T. Nordmann	2134973
	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:37	Benjamin T. Nordmann	2134979
	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:38	Benjamin T. Nordmann	2134982

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 13:49	Benjamin T. Nordmann	2134985
	11/08/2019	11/19/2019 12:09	Yen Ta	11/22/2019 17:30	Benjamin T. Nordmann	2134974
EPA 365.1 Rev. 2.0 dissolved	11/08/2019			11/08/2019 14:56	Virginia P. Brown	2134975
	11/08/2019			11/08/2019 15:11	Virginia P. Brown	2134976
	11/08/2019			11/08/2019 15:12	Virginia P. Brown	2134977
	11/08/2019			11/08/2019 15:13	Virginia P. Brown	2134980
	11/08/2019			11/08/2019 15:14	Virginia P. Brown	2134983
	11/08/2019			11/08/2019 15:15	Virginia P. Brown	2134986
EPA 8270E	11/08/2019	11/13/2019 09:00	Fe-Val Siddell	11/14/2019 16:10	Vandana T. Nagar	2135000
	11/08/2019	11/13/2019 09:00	Fe-Val Siddell	11/14/2019 16:36	Vandana T. Nagar	2135001
	11/08/2019	11/13/2019 09:00	Fe-Val Siddell	11/14/2019 17:02	Vandana T. Nagar	2135002
	11/08/2019	11/14/2019 08:00	Fe-Val Siddell	11/18/2019 19:38	Arthur Maknenko	2134999
EPA 8276	11/08/2019	11/14/2019 08:00	Fe-Val Siddell	11/16/2019 05:10	Julie Wi	2134999
EPA 8321B	11/08/2019	11/12/2019 10:00	Rebecca Ware	11/12/2019 13:42	Rebecca Ware	2134998
	11/08/2019	11/12/2019 10:00	Rebecca Ware	11/12/2019 16:57	Rebecca Ware	2134998
	11/08/2019	11/12/2019 10:00	Rebecca Ware	11/19/2019 12:56	Rebecca Ware	2134998
	11/08/2019	11/13/2019 10:00	Hoor Shaik	11/15/2019 00:37	Juyoung Kim	2134998
	11/08/2019	11/14/2019 14:00	Hoor Shaik	11/15/2019 20:13	Juyoung Kim	2134997
SM 2120 B	11/08/2019			11/08/2019 16:11	Madeline Funaro	2134969
	11/08/2019			11/08/2019 16:12	Madeline Funaro	2134970, 2134971
	11/08/2019			11/08/2019 16:13	Madeline Funaro	2134978
	11/08/2019			11/08/2019 16:14	Madeline Funaro	2134981
	11/08/2019			11/08/2019 16:15	Madeline Funaro	2134984
SM 2320 B-97	11/08/2019			11/15/2019 21:59	Dale L. Simmons	2134969
	11/08/2019			11/15/2019 22:11	Dale L. Simmons	2134970
	11/08/2019			11/15/2019 22:23	Dale L. Simmons	2134971
	11/08/2019			11/15/2019 22:36	Dale L. Simmons	2134978
	11/08/2019			11/15/2019 22:49	Dale L. Simmons	2134981
	11/08/2019			11/15/2019 23:00	Dale L. Simmons	2134984
SM 2540 C-97	11/08/2019			11/13/2019 11:56	Yijie Li	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 2540 D-97	11/08/2019			11/13/2019 11:56	Yijie Li	2134969, 2134970, 2134971, 2134978, 2134981, 2134984
SM 4500 F-C-97	11/08/2019			11/15/2019 21:59	Dale L. Simmons	2134969
	11/08/2019			11/15/2019 22:11	Dale L. Simmons	2134970
	11/08/2019			11/15/2019 22:23	Dale L. Simmons	2134971
	11/08/2019			11/15/2019 22:36	Dale L. Simmons	2134978
	11/08/2019			11/15/2019 22:49	Dale L. Simmons	2134981
	11/08/2019			11/15/2019 23:00	Dale L. Simmons	2134984
SM 5310 B-00	11/08/2019			11/14/2019 15:19	Madeline Funaro	2134974

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 5310 B-00	11/08/2019			11/14/2019 18:02	Madeline Funaro	2134972
	11/08/2019			11/14/2019 18:14	Madeline Funaro	2134973
	11/08/2019			11/14/2019 18:26	Madeline Funaro	2134979
	11/08/2019			11/14/2019 18:38	Madeline Funaro	2134982
	11/08/2019			11/14/2019 18:50	Madeline Funaro	2134985