

Chemical Analysis Report

TLH-ROC-2021-01-21-01

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

Event Description: **Run 9**
Request ID: **RQ-2021-01-11-51**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 12-FEB-2021 10:40



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: Apalachicola Rover .8 Miles Upstream Owl Creek

Collection Date/Time: 01/21/2021 10:05

Field ID: G2TLHR0042

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220607	EPA 180.1 Rev. 2.0	Turbidity	9.3		NTU	P392717	
	EPA 300.0 Rev. 2.1	Chloride	5.5		mg Cl/L	P392954	
		Sulfate	5.1		mg SO4/L	P392956	
		Color (true)	36		PCU	P392712	
	SM 2320 B-2011	Total Alkalinity	39		mg CaCO3/L	P392864	
	SM 2540 C-2011	TDS	74		mg/L	P393351	
	SM 2540 D-2011	TSS	5	I	mg/L	P393294	
2220608	SM 4500 F-C-2011	Fluoride	0.059	I	mg F/L	P392868	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P393454	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P393128	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.64		mg N/L	P392882	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P393243	
2220609	SM 5310 B-2011	Organic Carbon	3.4		mg C/L	P392986	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P392704	
2220621	EPA 200.7 Rev. 4.4	Barium	19.1		ug/L	P392838	
		Calcium	14.4		mg/L	P392838	
		Iron	630		ug/L	P392838	
		Magnesium	1.99		mg/L	P392838	
		Manganese	26.8		ug/L	P392838	
		Potassium	1.7		mg/L	P392838	
		Sodium	5.6		mg/L	P392838	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P392838	
		Aluminum	216		ug/L	P392838	
		Antimony	0.053	I	ug/L	P392838	
		Arsenic	0.31		ug/L	P392838	
		Beryllium	0.024	I	ug/L	P392838	
		Boron**	15.7		ug/L	P392838	
		Cadmium	0.020	U	ug/L	P392838	
		Chromium	0.51	I	ug/L	P392838	
		Copper	0.59	I	ug/L	P392838	
		Lead	0.27	I	ug/L	P392838	
		Nickel	0.50	U	ug/L	P392838	
		Selenium	0.20	U	ug/L	P392838	
		Silver	0.010	U	ug/L	P392838	
		Thallium	0.10	U	ug/L	P392838	
		Hardness	44.1		mg/L	P392838	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Fort Gadsden Creek Near SR65

Collection Date/Time: 01/21/2021 10:40

Field ID: G2TLHR0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220604	EPA 180.1 Rev. 2.0	Turbidity	2.2		NTU	P392717	
	EPA 300.0 Rev. 2.1	Chloride	4.6		mg Cl/L	P392954	
		Sulfate	0.50	I	mg SO4/L	P392956	
	SM 2120 B-2011	Color (true)	180		PCU	P392712	
	SM 2320 B-2011	Total Alkalinity	4.1		mg CaCO3/L	P392864	
	SM 2540 C-2011	TDS	47		mg/L	P393351	
	SM 2540 D-2011	TSS	2	I	mg/L	P393294	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P392868	
2220605	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P393454	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P393127	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P392882	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P393243	
	SM 5310 B-2011	Organic Carbon	18		mg C/L	P392986	
2220606	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P392704	
2220615	EPA 8321B	2,4-D	0.0020	U	ug/L	P392677	
		Acesulfame K	0.10	U	ug/L	P392662	MS
		AMPA	0.10	U	ug/L	P392662	
		Sucralose	0.010	U	ug/L	P392662	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Endothall	0.25	U	ug/L	P392662	
		Glufosinate	0.10	U	ug/L	P392662	
		Glyphosate	0.10	U	ug/L	P392662	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	8.0E-04	U	ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0020	U	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	8.0E-04	U	ug/L	P392677	
		Imazapyr**	0.0040	U	ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0020	U	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPD	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	

Field ID: G2TLHR0012

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220615	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	
2220620	EPA 200.7 Rev. 4.4	Barium	5.2		ug/L	P392838	
		Calcium	4.85		mg/L	P392838	
		Iron	580		ug/L	P392838	
		Magnesium	0.83		mg/L	P392838	
		Manganese	6.4		ug/L	P392838	
		Potassium	0.30	U	mg/L	P392838	
		Sodium	2.7		mg/L	P392838	
		Zinc	5.0	U	ug/L	P392838	
	EPA 200.8 Rev. 5.4	Aluminum	478		ug/L	P392838	
		Antimony	0.050	U	ug/L	P392838	
		Arsenic	0.20		ug/L	P392838	
		Beryllium	0.023	I	ug/L	P392838	
		Boron**	8.8		ug/L	P392838	
		Cadmium	0.020	U	ug/L	P392838	
		Chromium	0.59	I	ug/L	P392838	
		Copper	0.40	U	ug/L	P392838	
		Lead	0.36	I	ug/L	P393314	
		Nickel	0.50	U	ug/L	P392838	
		Selenium	0.20	U	ug/L	P392838	
		Silver	0.010	U	ug/L	P392838	
		Thallium	0.10	U	ug/L	P392838	
	SM 2340B	Hardness	15.6		mg/L	P392838	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Brothers River @ Mouth

Collection Date/Time: 01/21/2021 11:20

Field ID: G2TLHR0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220616	EPA 8321B	Aldicarb	0.020	U	ug/L	P392877	
		Aldicarb Sulfone	0.0020	U	ug/L	P392877	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P392877	
		Carbaryl	0.0020	U	ug/L	P392877	
		Carbofuran	0.0020	U	ug/L	P392877	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P392877	
		Methiocarb	0.0020	U	ug/L	P392877	
		Methomyl	0.0020	U	ug/L	P392877	
		Oxamyl	0.0020	U	ug/L	P392877	
		Propoxur	0.0020	U	ug/L	P392877	
2220617		2,4-D	0.0074	I	ug/L	P392677	
		Acesulfame K	0.10	U	ug/L	P392662	MS
		AMPA	0.10	U	ug/L	P392662	
		Sucralose	0.75		ug/L	P392662	
		Acetaminophen**	0.0080	U	ug/L	P392677	
		Acetamiprid**	0.0020	U	ug/L	P392677	
		Endothall	0.25	U	ug/L	P392662	
		Glufosinate	0.10	U	ug/L	P392662	
		Glyphosate	0.10	U	ug/L	P392662	
		Afidopyropen**	0.0020	U	ug/L	P392677	
		Bentazon	8.9E-04	I	ug/L	P392677	
		Benzovindiflupyr**	0.0020	U	ug/L	P392677	
		Carbamazepine**	8.0E-04	U	ug/L	P392677	
		Clothianidin**	0.0020	U	ug/L	P392677	
		Dinotefuran**	0.0022	I	ug/L	P392677	
		Diuron	0.0020	U	ug/L	P392677	
		Fenuron	0.016	U	ug/L	P392677	
		Fluridone**	8.0E-04	U	ug/L	P392677	
		Imazapyr**	0.035		ug/L	P392677	
		Hydrocodone**	0.0020	U	ug/L	P392677	
		Ibuprofen**	0.020	U	ug/L	P392677	
		Imidacloprid	0.0039	I	ug/L	P392677	
		Linuron	0.0040	U	ug/L	P392677	
		Mandestrobin**	0.0020	U	ug/L	P392677	
		MCPP	0.0020	U	ug/L	P392677	
		Naproxen**	0.0080	U	ug/L	P392677	
		Primidone**	0.0040	U	ug/L	P392677	
		Pyraclostrobin**	0.0020	U	ug/L	P392677	
		Thiamethoxam**	0.0020	U	ug/L	P392677	
		Tolfenpyrad**	0.0020	U	ug/L	P392677	
		Triclopyr**	0.0040	U	ug/L	P392677	
2220618	EPA 8270E	Aldrin	0.85	U	ng/L	P392729	
		Dieldrin	0.47	I	ng/L	P392729	
		Alpha-BHC	2.3	U	ng/L	P392729	

Field ID: G2TLHR0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220618	EPA 8270E	Kepone**	6.2	UJ	ng/L	P392729	CCV
		Alpha-Chlordane	1.1	U	ng/L	P392729	
		Beta-BHC	9.0	U	ng/L	P392729	
		Beta-Cyfluthrin**	17	U	ng/L	P392729	
		Bifenthrin**	4.5	U	ng/L	P392729	
		Delta-BHC	9.0	U	ng/L	P392729	
		Gamma-BHC	9.0	U	ng/L	P392729	
		Carbophenothion	11	U	ng/L	P392729	
		Chlorothalonil	2.3	U	ng/L	P392729	
		Cis-Nonachlor**	1.1	U	ng/L	P392729	
		Cypermethrin	23	U	ng/L	P392729	
		Dacthal**	1.1	U	ng/L	P392729	
		DDD-p,p'	5.6	U	ng/L	P392729	
		DDE-p,p'	5.6	U	ng/L	P392729	
		DDT-p,p'	6.8	U	ng/L	P392729	
		Deltamethrin**	23	U	ng/L	P392729	
		Dicofol	34	U	ng/L	P392729	
		Endosulfan I	4.5	U	ng/L	P392729	
		Endosulfan II	4.5	U	ng/L	P392729	
		Endosulfan Sulfate	2.3	U	ng/L	P392729	
		Endrin	2.3	U	ng/L	P392729	
		Endrin Aldehyde	2.3	U	ng/L	P392729	
		Endrin Ketone	2.3	U	ng/L	P392729	
		Ethalfuralin**	3.4	U	ng/L	P392729	
		Gamma-Chlordane	1.1	U	ng/L	P392729	
		Dichlobenil**	2.3	U	ng/L	P392729	
		Esfenvalerate**	23	U	ng/L	P392729	
		Fenpropathrin**	11	U	ng/L	P392729	
		Heptachlor	1.7	U	ng/L	P392729	
		Heptachlor Epoxide	2.3	U	ng/L	P392729	
		Hexachlorobenzene	2.3	U	ng/L	P392729	
		Lambda-Cyhalothrin**	17	U	ng/L	P392729	
		Methoxychlor	4.5	U	ng/L	P392729	
		Mirex	2.3	U	ng/L	P392729	
		MGK-264**	3.4	U	ng/L	P392729	
		Permethrin	11	U	ng/L	P392729	
		Phenothrin**	34	U	ng/L	P392729	
		Piperonyl Butoxide**	1.7	U	ng/L	P392729	
		Prallethrin**	28	U	ng/L	P392729	
		Tau-Fluvalinate**	4.0	U	ng/L	P392729	
		Tetramethrin**	9.0	U	ng/L	P392729	
		Trans-Nonachlor**	1.1	U	ng/L	P392729	
		Triclosan Methyl**	1.1	U	ng/L	P392729	
		Trifluralin	2.8	U	ng/L	P392729	
		Chlordane	5.6	U	ng/L	P392729	

Field ID: G2TLHR0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220618	EPA 8276	Toxaphene	34	U	ng/L	P392729	
2220619	EPA 8270E	Acetochlor	0.25	U	ng/L	P392681	
		Alachlor	0.25	U	ng/L	P392681	
		Ametryn	0.59	UJ	ng/L	P392681	LCS
		Atrazine	9.2		ng/L	P392681	
		Atrazine Desethyl	2.9	I	ng/L	P392681	
		Azinphos Methyl	2.0	UJ	ng/L	P392681	CCV
		Azoxystrobin**	1.4	I	ng/L	P392681	
		Bromacil	1.2	I	ng/L	P392681	
		Butylate	0.39	U	ng/L	P392681	
		Carbophenothion	0.49	U	ng/L	P392681	
		Carfentrazone Ethyl**	0.099	U	ng/L	P392681	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P392681	
		Chlorpyrifos Methyl	0.049	U	ng/L	P392681	
		Cyanazine	3.2	U	ng/L	P392681	
		Demeton	1.5	U	ng/L	P392681	
		Diazinon	0.12	U	ng/L	P392681	
		Difenoconazole**	0.59	U	ng/L	P392681	
		Dimethenamid**	0.11	I	ng/L	P392681	
		Disulfoton	0.49	U	ng/L	P392681	
		Dithiopyr**	0.27	I	ng/L	P392681	
		EPTC	1.2	U	ng/L	P392681	
		Ethion	0.15	U	ng/L	P392681	
		Ethoprop	0.099	U	ng/L	P392681	
		Fenamiphos	0.49	U	ng/L	P392681	
		Fenbuconazole**	0.12	UJ	ng/L	P392681	CCV, LCS, MS
		Fipronil	0.29	I	ng/L	P392681	
		Fipronil Desulfinyl**	0.24	I	ng/L	P392681	
		Fipronil Sulfide	0.15	U	ng/L	P392681	
		Fipronil Sulfone	0.26	I	ng/L	P392681	
		Fluazifop-P-butyl**	0.099	U	ng/L	P392681	
		Fludioxonil**	0.12	U	ng/L	P392681	
		Flumioxazin**	1.7	U	ng/L	P392681	
		Flutolanil**	1.3		ng/L	P392681	
		Fluxapyroxad**	0.38	I	ng/L	P392681	
		Fonofos	0.20	U	ng/L	P392681	
		Hexazinone	0.49	U	ng/L	P392681	
		Imazalil**	0.74	U	ng/L	P392681	
		Iprodione**	0.59	U	ng/L	P392681	
		Malathion	0.35	U	ng/L	P392681	
		Metalaxyl	0.74	U	ng/L	P392681	
		Metolachlor	4.3		ng/L	P392681	
		Metribuzin	3.2	U	ng/L	P392681	
		Mevinphos	1.0	U	ng/L	P392681	

Field ID: G2TLHR0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2220619	EPA 8270E	Molinate	0.30	U	ng/L	P392681	
		Myclobutanil**	0.25	U	ng/L	P392681	
		Naled**	1.5	U	ng/L	P392681	
		Norflurazon	0.49	U	ng/L	P392681	
		Oxadiazon	1.2		ng/L	P392681	
		Oxyfluorfen**	0.15	U	ng/L	P392681	
		Parathion Ethyl	0.25	U	ng/L	P392681	
		Parathion Methyl	0.54	U	ng/L	P392681	
		Pendimethalin	0.99	U	ng/L	P392681	
		Phorate	0.52	U	ng/L	P392681	
		Prodiamine**	0.17	U	ng/L	P392681	
		Prometon	0.89	U	ng/L	P392681	
		Prometryn	0.20	U	ng/L	P392681	
		Pronamide**	1.1		ng/L	P392681	
		Propiconazole**	1.1	I	ng/L	P392681	
		Pyriproxyfen**	0.12	UJ	ng/L	P392681	CCV
		Simazine	48		ng/L	P392681	
		Sulfentrazone**	0.49	U	ng/L	P392681	
		Tebuconazole**	0.98	I	ng/L	P392681	
		Terbufos	0.099	U	ng/L	P392681	
		Terbutylazine	0.42	U	ng/L	P392681	
2220622	EPA 200.7 Rev. 4.4	Barium	19.4		ug/L	P392838	
		Calcium	14.6		mg/L	P392838	
		Iron	770		ug/L	P392838	
		Magnesium	1.93		mg/L	P392838	
		Manganese	22.7		ug/L	P392838	
		Potassium	1.6		mg/L	P392838	
		Sodium	5.2		mg/L	P392838	
		Zinc	5.0	U	ug/L	P392838	
	EPA 200.8 Rev. 5.4	Aluminum	292		ug/L	P392838	
		Antimony	0.054	I	ug/L	P392838	
		Arsenic	0.32		ug/L	P392838	
		Beryllium	0.029	I	ug/L	P392838	
		Boron**	15.1		ug/L	P392838	
		Cadmium	0.020	U	ug/L	P392838	
		Chromium	0.61	I	ug/L	P392838	
		Copper	0.60	I	ug/L	P392838	
		Lead	0.34	I	ug/L	P392838	
		Nickel	0.50	U	ug/L	P392838	
		Selenium	0.20	U	ug/L	P392838	
		Silver	0.010	U	ug/L	P392838	
		Thallium	0.10	U	ug/L	P392838	
		Hardness	44.4		mg/L	P392838	

SM 2340B

Field ID: G2TLHR0013

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8270E: Duplicate matrix spike was lost due to a defective vial and it is not reported. 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: P392717

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P392838

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
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392838

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	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 200.8 Rev. 5.4
Batch ID: P393314

Component	Result	Code	Units
Lead	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392954

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392956

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393454

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393127

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393128

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392882

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393243

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392704

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

Reference Method: EPA 8270E
Batch ID: P392681

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	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P392681

Component	Result	Code	Units
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.18	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
Fenbuconazole	0.12	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
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	1.8	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P392729

Component	Result	Code	Units
Aldrin	0.75	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	8.0	U	ng/L
Beta-Cyfluthrin	15	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
Dacthal	1.0	U	ng/L
DDD-p,p'	5.0	U	ng/L
DDE-p,p'	5.0	U	ng/L
DDT-p,p'	6.0	U	ng/L
Delta-BHC	8.0	U	ng/L
Deltamethrin	20	U	ng/L
Dichlobenil	2.0	U	ng/L
Dicofol	30	U	ng/L
Dieldrin	0.40	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
Esfenvalerate	20	U	ng/L
Ethalfuralin	3.0	U	ng/L
Fenpropathrin	10	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
Kepone	5.5	U	ng/L
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
MGK-264	3.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Piperonyl Butoxide	1.5	U	ng/L
Prallethrin	25	U	ng/L
Tau-Fluvalinate	3.5	U	ng/L
Tetramethrin	8.0	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Triclosan Methyl	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276

Batch ID: P392729

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P392729

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

Reference Method: EPA 8321B
Batch ID: P392662

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: P392677

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

Reference Method: EPA 8321B
Batch ID: P392877

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P392877

Component	Result	Code	Units
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-2011
Batch ID: P392712

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P392864

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

Reference Method: SM 2540 C-2011
Batch ID: P393351

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393294

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P392868

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P392986

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: P392838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.5		P	85 - 115
Calcium	98.2		P	85 - 115
Iron	96.5		P	85 - 115
Magnesium	97.3		P	85 - 115
Manganese	98.8		P	85 - 115
Potassium	97.7		P	85 - 115
Sodium	105		P	85 - 115
Zinc	95.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P392838

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	107		P	85 - 115
Arsenic	105		P	85 - 115
Beryllium	101		P	85 - 115
Boron	103		P	85 - 115
Cadmium	86.7		P	85 - 115
Chromium	112		P	85 - 115
Copper	102		P	85 - 115
Lead	106		P	85 - 115
Nickel	102		P	85 - 115
Selenium	103		P	85 - 115
Silver	113		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	99.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392954

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: P392956

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393454

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393127

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393128

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392882

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393243

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392704

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

Reference Method: EPA 8270E
Batch ID: P392681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	110	109	P/P	70 - 121
Alachlor	110	104	P/P	70 - 119
Ametryn	140	139	F/F	61 - 135
Atrazine	106	107	P/P	76 - 123
Atrazine Desethyl	107	99.2	P/P	35 - 140
Azinphos Methyl	118	109	P/P	57 - 163
Azoxystrobin	170	151	P/P	43 - 231
Bromacil	109	98.2	P/P	42 - 123
Butylate	64.1	66.1	P/P	34 - 92.0
Carbophenothion	99.8	88.8	P/P	61 - 121
Carfentrazone Ethyl	122	110	P/P	62 - 139
Chlorpyrifos Ethyl	98.4	89.2	P/P	67 - 121
Chlorpyrifos Methyl	100	91.8	P/P	67 - 120
Cyanazine	189	180	P/P	20 - 226
Demeton	93.7	88.8	P/P	35 - 125
Diazinon	101	102	P/P	70 - 122
Difenoconazole	151	144	P/P	56 - 186
Dimethenamid	108	105	P/P	67 - 119
Disulfoton	90.6	79.4	P/P	47 - 120
Dithiopyr	102	93.3	P/P	67 - 118
EPTC	70.7	69.3	P/P	33 - 90.0
Ethion	101	86.0	P/P	40 - 133

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P392681

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ethoprop	98.5	95.1	P/P	61 - 121
Fenamiphos	107	102	P/P	31 - 139
Fenbuconazole	67.8	56.8	P/F	66 - 141
Fipronil	126	121	P/P	62 - 129
Fipronil Desulfinyl	117	109	P/P	59 - 126
Fipronil Sulfide	103	101	P/P	63 - 117
Fipronil Sulfone	104	107	P/P	57 - 117
Fluazifop-P-butyl	107	91.3	P/P	63 - 124
Fludioxonil	115	106	P/P	63 - 123
Flumioxazin	204	191	P/P	34 - 245
Flutolanil	119	116	P/P	56 - 131
Fluxapyroxad	105	97.4	P/P	57 - 117
Fonofos	87.3	82.8	P/P	61 - 116
Hexazinone	102	101	P/P	55 - 138
Imazalil	117	114	P/P	33 - 143
Iprodione	96.7	90.0	P/P	59 - 118
Malathion	108	100	P/P	62 - 138
Metalaxyl	113	109	P/P	24 - 147
Metolachlor	105	105	P/P	68 - 118
Metribuzin	110	114	P/P	20 - 239
Mevinphos	92.7	85.5	P/P	46 - 124
Molinate	85.6	80.3	P/P	46 - 100
Myclobutanil	121	113	P/P	32 - 149
Naled	52.8	50.9	P/P	32 - 95.0
Norflurazon	115	108	P/P	57 - 127
Oxadiazon	99.5	89.5	P/P	63 - 118
Oxyfluorfen	122	107	P/P	69 - 137
Parathion Ethyl	108	91.8	P/P	70 - 113
Parathion Methyl	119	111	P/P	71 - 130
Pendimethalin	86.3	82.6	P/P	55 - 118
Phorate	80.8	81.0	P/P	46 - 125
Prodiamine	116	105	P/P	20 - 141
Prometon	110	106	P/P	54 - 122
Prometryn	117	113	P/P	66 - 124
Pronamide	119	117	P/P	79 - 122
Propiconazole	114	108	P/P	61 - 126
Pyriproxyfen	88.2	74.8	P/P	52 - 131
Simazine	111	110	P/P	75 - 128
Sulfentrazone	89.4	79.2	P/P	20 - 132
Tebuconazole	70.8	66.9	P/P	20 - 116
Terbufos	85.0	81.6	P/P	61 - 117
Terbuthylazine	102	103	P/P	74 - 116

Reference Method: EPA 8270E

Batch ID: P392729

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.2	56.6	P/P	20 - 110
Alpha-BHC	82.6	79.1	P/P	58 - 130
Alpha-Chlordane	79.0	79.6	P/P	61 - 105
Beta-BHC	89.0	89.6	P/P	53 - 164
Beta-Cyfluthrin	86.5	82.7	P/P	40 - 140

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P392729

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bifenthrin	85.5	85.8	P/P	44 - 122
Carbophenothion	44.4	40.3	P/P	20 - 161
Chlorothalonil	78.7	87.2	P/P	20 - 201
Cis-Nonachlor	80.3	81.8	P/P	60 - 110
Cypermethrin	95.8	96.7	P/P	43 - 131
Dacthal	87.4	87.1	P/P	76 - 108
DDD-p,p'	83.2	85.1	P/P	68 - 118
DDE-p,p'	77.1	79.0	P/P	56 - 107
DDT-p,p'	75.8	76.5	P/P	55 - 122
Delta-BHC	107	103	P/P	60 - 181
Deltamethrin	99.9	99.1	P/P	51 - 139
Dichlobenil	51.0	50.6	P/P	20 - 106
Dicofol	94.3	91.3	P/P	56 - 130
Dieldrin	68.8	71.9	P/P	58 - 112
Endosulfan I	82.9	80.0	P/P	68 - 115
Endosulfan II	91.5	88.6	P/P	69 - 133
Endosulfan Sulfate	87.2	87.9	P/P	65 - 126
Endrin	84.0	84.0	P/P	66 - 118
Endrin Aldehyde	85.1	83.2	P/P	60 - 132
Endrin Ketone	83.5	85.8	P/P	68 - 121
Esfenvalerate	87.9	81.3	P/P	42 - 116
Ethalfuralin	74.1	76.8	P/P	50 - 118
Fenpropathrin	107	96.3	P/P	55 - 132
Gamma-BHC	85.0	80.0	P/P	65 - 147
Gamma-Chlordane	76.7	76.6	P/P	56 - 103
Heptachlor	70.4	73.4	P/P	47 - 95.0
Heptachlor Epoxide	82.5	81.6	P/P	67 - 107
Hexachlorobenzene	73.3	70.2	P/P	45 - 99.0
Kepone	84.0	86.1	P/P	28 - 128
Lambda-Cyhalothrin	89.1	84.9	P/P	41 - 135
Methoxychlor	88.1	86.9	P/P	61 - 138
MGK-264	67.0	66.9	P/P	20 - 109
Mirex	68.0	69.8	P/P	36 - 92.0
Permethrin	83.7	83.4	P/P	45 - 111
Phenothrin	68.9	64.4	P/P	22 - 88.0
Piperonyl Butoxide	90.5	92.9	P/P	67 - 120
Prallethrin	61.0	58.6	P/P	28 - 92.0
Tau-Fluvalinate	98.2	92.1	P/P	38 - 145
Tetramethrin	89.4	84.6	P/P	29 - 150
Trans-Nonachlor	77.7	77.4	P/P	54 - 105
Triclosan Methyl	92.0	92.3	P/P	76 - 115
Trifluralin	77.0	75.6	P/P	53 - 111

Reference Method: EPA 8276

Batch ID: P392729

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	87.5	91.7	P/P	56 - 117
Toxaphene	105	106	P/P	45 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P392662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	108		P	40 - 150
Endothall	95.3		P	40 - 150
Glufosinate	92.8		P	40 - 150
Glyphosate	121		P	40 - 140
Sucralose	131		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P392677

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	128		P	30 - 160
Acetaminophen	85.3		P	30 - 160
Acetamiprid	101		P	30 - 160
Afidopyropen	85.4		P	30 - 160
Bentazon	91.3		P	30 - 160
Benzovindiflupyr	80.9		P	30 - 160
Carbamazepine	84.3		P	30 - 160
Clothianidin	83.3		P	30 - 160
Dinotefuran	91.9		P	30 - 160
Diuron	71.1		P	30 - 160
Fenuron	104		P	30 - 160
Fluridone	80.5		P	30 - 160
Hydrocodone	105		P	30 - 160
Ibuprofen	85.2		P	30 - 160
Imazapyr	92.5		P	30 - 160
Imidacloprid	107		P	30 - 160
Linuron	71.3		P	30 - 160
Mandestrobin	96.6		P	30 - 160
MCPP	105		P	30 - 160
Naproxen	61.3		P	30 - 160
Primidone	87.2		P	30 - 160
Pyraclostrobin	78.0		P	30 - 160
Thiamethoxam	93.5		P	30 - 160
Tolfenpyrad	51.1		P	30 - 160
Triclopyr	91.7		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392877

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	101		P	30 - 160
Aldicarb	59.2		P	30 - 160
Aldicarb Sulfone	114		P	30 - 160
Aldicarb Sulfoxide	103		P	30 - 160
Carbaryl	61.7		P	30 - 160
Carbofuran	71.6		P	30 - 160
Methiocarb	63.6		P	30 - 160
Methomyl	91.0		P	30 - 160
Oxamyl	102		P	30 - 160
Propoxur	69.0		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2120 B-2011
Batch ID: P392712

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

Reference Method: SM 2320 B-2011
Batch ID: P392864

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.6		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P392868

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P392986

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P392838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220401	Barium	103		P	80 - 120
2220401	Calcium	99.4		P	80 - 120
2220401	Iron	102		P	80 - 120
2220401	Magnesium	102		P	80 - 120
2220401	Manganese	102		P	80 - 120
2220401	Potassium	101		P	80 - 120
2220401	Sodium	106		P	80 - 120
2220401	Zinc	97.8		P	80 - 120
2220503	Barium	101	99.4	P/P	80 - 120
2220503	Calcium	102	101	P/P	80 - 120
2220503	Iron	100	102	P/P	80 - 120
2220503	Magnesium	101	102	P/P	80 - 120
2220503	Manganese	100	98.7	P/P	80 - 120
2220503	Potassium	98.7	97.8	P/P	80 - 120
2220503	Sodium	102	101	P/P	80 - 120
2220503	Zinc	98.0	96.7	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P392838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220401	Aluminum	99.5		P	80 - 120
2220401	Antimony	103		P	80 - 120
2220401	Arsenic	102		P	80 - 120
2220401	Beryllium	100		P	80 - 120
2220401	Boron	105		P	80 - 120
2220401	Cadmium	89.1		P	80 - 120
2220401	Chromium	104		P	80 - 120
2220401	Copper	95.5		P	80 - 120
2220401	Lead	105		P	80 - 120
2220401	Nickel	92.6		P	80 - 120
2220401	Selenium	98.9		P	80 - 120
2220401	Silver	111		P	80 - 120
2220401	Thallium	104		P	80 - 120
2220503	Aluminum	98.5	102	P/P	80 - 120
2220503	Antimony	104	105	P/P	80 - 120
2220503	Arsenic	103	104	P/P	80 - 120
2220503	Beryllium	100	99.4	P/P	80 - 120
2220503	Boron	101	105	P/P	80 - 120
2220503	Cadmium	90.2	91.2	P/P	80 - 120
2220503	Chromium	110	114	P/P	80 - 120
2220503	Copper	101	103	P/P	80 - 120
2220503	Lead	107	109	P/P	80 - 120
2220503	Nickel	102	103	P/P	80 - 120
2220503	Selenium	101	102	P/P	80 - 120
2220503	Silver	112	114	P/P	80 - 120
2220503	Thallium	104	108	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393314

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222986	Lead	98.2	99.4	P/P	80 - 120
2223094	Lead	100		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392954

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220450	Chloride	93.1		P	90 - 110
2220520	Chloride	96.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P392956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220450	Sulfate	93.6		P	90 - 110
2220520	Sulfate	96.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393454

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220524	Ammonia-N	99.4	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220485	Kjeldahl Nitrogen	105	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393128

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220608	Kjeldahl Nitrogen	109	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392882

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220594	NO2NO3-N	96.5	96.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393243

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220594	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220486	O-Phosphate-P	101	101	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P392681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220502	Acetochlor	98.8		P	66 - 122
2220502	Alachlor	92.0		P	65 - 122
2220502	Ametryn	133		P	45 - 173
2220502	Atrazine	103		P	70 - 134
2220502	Atrazine Desethyl	79.8		P	25 - 150
2220502	Azinphos Methyl	104		P	44 - 174
2220502	Azoxystrobin	118		P	10 - 268
2220502	Bromacil	86.9		P	31 - 145
2220502	Butylate	55.6		P	15 - 97.0
2220502	Carbophenothion	84.0		P	42 - 129
2220502	Carfentrazone Ethyl	101		P	62 - 145
2220502	Chlorpyrifos Ethyl	85.0		P	60 - 124
2220502	Chlorpyrifos Methyl	88.5		P	66 - 119
2220502	Cyanazine	197		P	17 - 225
2220502	Demeton	83.8		P	36 - 142
2220502	Diazinon	100		P	70 - 128
2220502	Difenoconazole	134		P	33 - 222
2220502	Dimethenamid	94.3		P	54 - 125
2220502	Disulfoton	88.4		P	49 - 133
2220502	Dithiopyr	93.8		P	55 - 123
2220502	EPTC	66.4		P	19 - 91.0
2220502	Ethion	82.3		P	13 - 143
2220502	Ethoprop	93.0		P	49 - 144
2220502	Fenamiphos	92.0		P	32 - 136
2220502	Fenbuconazole	47.1		F	73 - 148
2220502	Fipronil	113		P	57 - 129
2220502	Fipronil Desulfinyl	96.1		P	49 - 127
2220502	Fipronil Sulfide	88.9		P	44 - 127
2220502	Fipronil Sulfone	84.9		P	35 - 126
2220502	Fluazifop-P-butyl	90.9		P	67 - 129
2220502	Fludioxonil	96.0		P	61 - 126
2220502	Flumioxazin	175		P	38 - 279
2220502	Flutolanil	99.6		P	55 - 136
2220502	Fluxapyroxad	80.6		P	33 - 140
2220502	Fonofos	81.8		P	58 - 125
2220502	Hexazinone	96.6		P	57 - 148
2220502	Imazalil	89.0		P	10 - 221
2220502	Iprodione	77.3		P	32 - 140
2220502	Malathion	97.2		P	52 - 138
2220502	Metalaxyl	98.5		P	46 - 134
2220502	Metolachlor	95.1		P	58 - 122
2220502	Metribuzin	105		P	16 - 272
2220502	Mevinphos	81.5		P	45 - 140
2220502	Molinate	76.2		P	41 - 103
2220502	Myclobutanil	101		P	60 - 134
2220502	Naled	46.2		P	20 - 113
2220502	Norflurazon	97.3		P	51 - 123
2220502	Oxadiazon	86.5		P	44 - 125
2220502	Oxyfluorfen	120		P	66 - 176
2220502	Parathion Ethyl	100		P	57 - 132
2220502	Parathion Methyl	107		P	59 - 156
2220502	Pendimethalin	103		P	59 - 129

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P392681

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220502	Phorate	105		P	47 - 136
2220502	Prodiamine	47.8		P	10 - 159
2220502	Prometon	102		P	59 - 127
2220502	Prometryn	105		P	59 - 129
2220502	Pronamide	107		P	65 - 145
2220502	Propiconazole	94.2		P	28 - 165
2220502	Pyriproxyfen	68.7		P	21 - 180
2220502	Simazine	105		P	63 - 147
2220502	Sulfentrazone	72.8		P	32 - 136
2220502	Tebuconazole	54.7		P	10 - 117
2220502	Terbufos	84.2		P	61 - 131
2220502	Terbuthylazine	92.6		P	62 - 126

Reference Method: EPA 8270E
Batch ID: P392729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220618	Aldrin	55.7	41.9	P/P	22 - 127
2220618	Dieldrin	65.7	52.5	P/P	52 - 123
2220618	Kepone	36.5	33.0	P/P	18 - 138
2220870	Alpha-BHC	80.0	78.9	P/P	53 - 147
2220870	Alpha-Chlordane	77.8	78.2	P/P	56 - 107
2220870	Beta-BHC	73.5	82.6	P/P	43 - 182
2220870	Beta-Cyfluthrin	111	112	P/P	42 - 157
2220870	Bifenthrin	91.3	90.3	P/P	52 - 124
2220870	Carbophenothion	71.9	72.0	P/P	40 - 172
2220870	Chlorothalonil	91.7	84.0	P/P	10 - 265
2220870	Cis-Nonachlor	79.2	80.5	P/P	55 - 112
2220870	Cypermethrin	103	107	P/P	46 - 144
2220870	Dacthal	87.0	86.7	P/P	72 - 110
2220870	DDD-p,p'	82.9	83.2	P/P	58 - 123
2220870	DDE-p,p'	74.5	76.4	P/P	52 - 106
2220870	DDT-p,p'	74.0	74.7	P/P	50 - 127
2220870	Delta-BHC	86.9	95.9	P/P	56 - 222
2220870	Deltamethrin	102	116	P/P	47 - 152
2220870	Dichlobenil	65.1	62.5	P/P	22 - 99.0
2220870	Dicofol	95.5	93.1	P/P	38 - 145
2220870	Endosulfan I	87.0	83.3	P/P	64 - 124
2220870	Endosulfan II	120	142	P/P	52 - 159
2220870	Endosulfan Sulfate	97.4	97.5	P/P	62 - 136
2220870	Endrin	81.3	82.4	P/P	57 - 126
2220870	Endrin Aldehyde	80.9	71.3	P/P	41 - 128
2220870	Endrin Ketone	86.9	86.1	P/P	67 - 129
2220870	Esfenvalerate	89.6	94.3	P/P	50 - 120
2220870	Ethalfuralin	75.6	72.5	P/P	41 - 125
2220870	Fenpropathrin	81.2	54.4	P/P	40 - 202
2220870	Gamma-BHC	87.3	88.4	P/P	58 - 180
2220870	Gamma-Chlordane	75.6	75.3	P/P	54 - 103
2220870	Heptachlor	68.6	69.9	P/P	46 - 94.0
2220870	Heptachlor Epoxide	80.3	79.2	P/P	62 - 111
2220870	Hexachlorobenzene	64.0	64.2	P/P	42 - 95.0
2220870	Lambda-Cyhalothrin	96.5	96.9	P/P	37 - 162

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P392729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220870	Methoxychlor	89.8	86.8	P/P	52 - 143
2220870	MGK-264	77.7	75.3	P/P	37 - 102
2220870	Mirex	70.1	71.2	P/P	43 - 91.0
2220870	Permethrin	87.5	91.3	P/P	48 - 113
2220870	Phenothrin	75.2	76.6	P/P	30 - 104
2220870	Piperonyl Butoxide	99.5	102	P/P	67 - 127
2220870	Prallethrin	67.7	66.3	P/P	28 - 102
2220870	Tau-Fluvalinate	105	113	P/P	46 - 174
2220870	Tetramethrin	131	130	P/P	28 - 176
2220870	Trans-Nonachlor	76.4	77.0	P/P	51 - 103
2220870	Triclosan Methyl	92.1	91.0	P/P	67 - 116
2220870	Trifluralin	75.7	75.5	P/P	47 - 118

Reference Method: EPA 8276
Batch ID: P392729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220618	Chlordane	86.0	77.3	P/P	47 - 128
2220618	Toxaphene	153	151	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P392662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220513	Acesulfame K	27.1	27.4	F/F	40 - 150
2220513	AMPA	89.0	110	P/P	40 - 150
2220513	Endothall	110	103	P/P	40 - 150
2220513	Glufosinate	90.3	87.6	P/P	40 - 150
2220513	Glyphosate	75.7	55.0	P/P	40 - 140
2220513	Sucralose	126	142	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P392677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220213	2,4-D	102	95.7	P/P	30 - 160
2220213	Acetaminophen	91.4	88.0	P/P	30 - 160
2220213	Acetamiprid	86.5	83.6	P/P	30 - 160
2220213	Afidopyropen	90.2	82.0	P/P	30 - 160
2220213	Benzovindiflupyr	85.8	76.2	P/P	30 - 160
2220213	Carbamazepine	67.7	64.1	P/P	30 - 160
2220213	Clothianidin	77.2	87.2	P/P	30 - 160
2220213	Dinotefuran	102	101	P/P	30 - 160
2220213	Diuron	49.9	50.4	P/P	30 - 160
2220213	Fenuron	65.6	67.4	P/P	30 - 160
2220213	Hydrocodone	93.2	93.1	P/P	30 - 160
2220213	Ibuprofen	64.0	78.2	P/P	30 - 160
2220213	Imidacloprid	130	124	P/P	30 - 160
2220213	Linuron	65.6	59.5	P/P	30 - 160
2220213	Mandestrobin	88.8	82.4	P/P	30 - 160
2220213	MCP	101	89.8	P/P	30 - 160
2220213	Naproxen	67.9	76.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P392677

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220213	Primidone	76.9	78.4	P/P	30 - 160
2220213	Pyraclostrobin	83.5	78.3	P/P	30 - 160
2220213	Thiamethoxam	101	106	P/P	30 - 160
2220213	Tolfenpyrad	55.7	50.9	P/P	30 - 160
2220213	Triclopyr	106	89.8	P/P	30 - 160

Reference Method: EPA 8321B

Batch ID: P392877

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220497	3-Hydroxycarbofuran	117	106	P/P	30 - 160
2220497	Aldicarb	89.5	77.7	P/P	30 - 160
2220497	Aldicarb Sulfone	128	124	P/P	30 - 160
2220497	Aldicarb Sulfoxide	68.0	58.4	P/P	30 - 160
2220497	Carbaryl	57.9	62.7	P/P	30 - 160
2220497	Carbofuran	73.2	67.8	P/P	30 - 160
2220497	Methiocarb	72.5	65.0	P/P	30 - 160
2220497	Methomyl	82.7	93.2	P/P	30 - 160
2220497	Oxamyl	88.0	92.2	P/P	30 - 160
2220497	Propoxur	68.3	59.0	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P392868

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220663	Fluoride	100	100	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P392986

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220453	Organic Carbon	99.4	96.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P392717

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220521	Turbidity	6.26	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P392838

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220503	Barium	1.17	Spike	P	0 - 20
2220503	Calcium	0.103	Spike	P	0 - 20
2220503	Iron	1.48	Spike	P	0 - 20
2220503	Magnesium	0.644	Spike	P	0 - 20
2220503	Manganese	1.14	Spike	P	0 - 20
2220503	Potassium	0.728	Spike	P	0 - 20
2220503	Sodium	0.840	Spike	P	0 - 20
2220503	Zinc	1.32	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P392838

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220503	Aluminum	3.37	Spike	P	0 - 20
2220503	Antimony	0.598	Spike	P	0 - 20
2220503	Arsenic	0.633	Spike	P	0 - 20
2220503	Beryllium	0.519	Spike	P	0 - 20
2220503	Boron	3.11	Spike	P	0 - 20
2220503	Cadmium	1.10	Spike	P	0 - 20
2220503	Chromium	4.00	Spike	P	0 - 20
2220503	Copper	1.78	Spike	P	0 - 20
2220503	Lead	1.28	Spike	P	0 - 20
2220503	Nickel	1.02	Spike	P	0 - 20
2220503	Selenium	0.430	Spike	P	0 - 20
2220503	Silver	1.86	Spike	P	0 - 20
2220503	Thallium	3.54	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393314

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222986	Lead	1.23	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P392954

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220450	Chloride	0.232	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P392956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220450	Sulfate	0.315	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P393454

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220524	Ammonia-N	0.0228	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P393127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220485	Kjeldahl Nitrogen	0.148	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P393128

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220608	Kjeldahl Nitrogen	0.130	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P392882

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220594	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P393243

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220594	Total-P	1.83	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P392704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220486	O-Phosphate-P	0.0	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P392681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Acetochlor	0.531	LCS	P	0 - 30
LFB	Alachlor	5.73	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P392681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Ametryn	0.869	LCS	P	0 - 30
LFB	Atrazine	0.437	LCS	P	0 - 30
LFB	Atrazine Desethyl	7.50	LCS	P	0 - 30
LFB	Azinphos Methyl	7.44	LCS	P	0 - 30
LFB	Azoxystrobin	11.5	LCS	P	0 - 30
LFB	Bromacil	9.96	LCS	P	0 - 30
LFB	Butylate	3.02	LCS	P	0 - 30
LFB	Carbophenothion	11.7	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	10.5	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	9.80	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	8.60	LCS	P	0 - 30
LFB	Cyanazine	5.11	LCS	P	0 - 30
LFB	Demeton	5.37	LCS	P	0 - 30
LFB	Diazinon	0.682	LCS	P	0 - 30
LFB	Difenoconazole	4.56	LCS	P	0 - 30
LFB	Dimethenamid	2.92	LCS	P	0 - 30
LFB	Disulfoton	13.3	LCS	P	0 - 30
LFB	Dithiopyr	9.30	LCS	P	0 - 30
LFB	EPTC	2.06	LCS	P	0 - 30
LFB	Ethion	16.3	LCS	P	0 - 30
LFB	Ethoprop	3.56	LCS	P	0 - 30
LFB	Fenamiphos	5.03	LCS	P	0 - 30
LFB	Fenbuconazole	17.7	LCS	P	0 - 30
LFB	Fipronil	4.72	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	7.72	LCS	P	0 - 30
LFB	Fipronil Sulfide	1.73	LCS	P	0 - 30
LFB	Fipronil Sulfone	2.47	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	15.9	LCS	P	0 - 30
LFB	Fludioxonil	8.25	LCS	P	0 - 30
LFB	Flumioxazin	6.10	LCS	P	0 - 30
LFB	Flutolanil	2.56	LCS	P	0 - 30
LFB	Fluxapyroxad	7.17	LCS	P	0 - 30
LFB	Fonofos	5.32	LCS	P	0 - 30
LFB	Hexazinone	0.523	LCS	P	0 - 30
LFB	Imazalil	2.85	LCS	P	0 - 30
LFB	Iprodione	7.24	LCS	P	0 - 30
LFB	Malathion	7.27	LCS	P	0 - 30
LFB	Metalaxyl	3.51	LCS	P	0 - 30
LFB	Metolachlor	0.290	LCS	P	0 - 30
LFB	Metribuzin	3.92	LCS	P	0 - 30
LFB	Mevinphos	8.02	LCS	P	0 - 30
LFB	Molinate	6.37	LCS	P	0 - 30
LFB	Myclobutanil	6.43	LCS	P	0 - 30
LFB	Naled	3.57	LCS	P	0 - 30
LFB	Norflurazon	6.64	LCS	P	0 - 30
LFB	Oxadiazon	10.5	LCS	P	0 - 30
LFB	Oxyfluorfen	13.5	LCS	P	0 - 30
LFB	Parathion Ethyl	16.3	LCS	P	0 - 30
LFB	Parathion Methyl	7.31	LCS	P	0 - 30
LFB	Pendimethalin	4.36	LCS	P	0 - 30
LFB	Phorate	0.230	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P392681

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prodiamine	10.3	LCS	P	0 - 30
LFB	Prometon	3.06	LCS	P	0 - 30
LFB	Prometryn	2.66	LCS	P	0 - 30
LFB	Pronamide	1.07	LCS	P	0 - 30
LFB	Propiconazole	5.56	LCS	P	0 - 30
LFB	Pyriproxyfen	16.4	LCS	P	0 - 30
LFB	Simazine	0.993	LCS	P	0 - 30
LFB	Sulfentrazone	12.0	LCS	P	0 - 30
LFB	Tebuconazole	5.58	LCS	P	0 - 30
LFB	Terbufos	4.00	LCS	P	0 - 30
LFB	Terbuthylazine	0.945	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P392729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220618	Aldrin	28.4	Spike	P	0 - 30
2220618	Dieldrin	20.0	Spike	P	0 - 30
2220618	Kepone	10.1	Spike	P	0 - 30
2220870	Alpha-BHC	1.35	Spike	P	0 - 30
2220870	Alpha-Chlordane	0.470	Spike	P	0 - 30
2220870	Beta-BHC	11.7	Spike	P	0 - 30
2220870	Beta-Cyfluthrin	0.433	Spike	P	0 - 30
2220870	Bifenthrin	1.12	Spike	P	0 - 30
2220870	Carbophenothion	0.131	Spike	P	0 - 30
2220870	Chlorothalonil	8.81	Spike	P	0 - 30
2220870	Cis-Nonachlor	1.62	Spike	P	0 - 30
2220870	Cypermethrin	3.48	Spike	P	0 - 30
2220870	Dacthal	0.336	Spike	P	0 - 30
2220870	DDD-p,p'	0.361	Spike	P	0 - 30
2220870	DDE-p,p'	2.49	Spike	P	0 - 30
2220870	DDT-p,p'	1.03	Spike	P	0 - 30
2220870	Delta-BHC	9.86	Spike	P	0 - 30
2220870	Deltamethrin	13.0	Spike	P	0 - 30
2220870	Dichlobenil	4.05	Spike	P	0 - 30
2220870	Dicofol	2.53	Spike	P	0 - 30
2220870	Endosulfan I	4.37	Spike	P	0 - 30
2220870	Endosulfan II	16.4	Spike	P	0 - 30
2220870	Endosulfan Sulfate	0.0135	Spike	P	0 - 30
2220870	Endrin	1.39	Spike	P	0 - 30
2220870	Endrin Aldehyde	12.6	Spike	P	0 - 30
2220870	Endrin Ketone	0.839	Spike	P	0 - 30
2220870	Esfenvalerate	5.10	Spike	P	0 - 30
2220870	Ethalfuralin	4.25	Spike	P	0 - 30
2220870	Fenpropathrin	23.2	Spike	P	0 - 30
2220870	Gamma-BHC	1.30	Spike	P	0 - 30
2220870	Gamma-Chlordane	0.329	Spike	P	0 - 30
2220870	Heptachlor	1.89	Spike	P	0 - 30
2220870	Heptachlor Epoxide	1.31	Spike	P	0 - 30
2220870	Hexachlorobenzene	0.342	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P392729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220870	Lambda-Cyhalothrin	0.373	Spike	P	0 - 30
2220870	Methoxychlor	3.30	Spike	P	0 - 30
2220870	MGK-264	3.08	Spike	P	0 - 30
2220870	Mirex	1.51	Spike	P	0 - 30
2220870	Permethrin	4.27	Spike	P	0 - 30
2220870	Phenothrin	1.87	Spike	P	0 - 30
2220870	Piperonyl Butoxide	2.08	Spike	P	0 - 30
2220870	Prallethrin	2.10	Spike	P	0 - 30
2220870	Tau-Fluvalinate	7.75	Spike	P	0 - 30
2220870	Tetramethrin	0.701	Spike	P	0 - 30
2220870	Trans-Nonachlor	0.848	Spike	P	0 - 30
2220870	Triclosan Methyl	1.20	Spike	P	0 - 30
2220870	Trifluralin	0.216	Spike	P	0 - 30
LFB	Aldrin	4.38	LCS	P	0 - 30
LFB	Alpha-BHC	4.37	LCS	P	0 - 30
LFB	Alpha-Chlordane	0.760	LCS	P	0 - 30
LFB	Beta-BHC	0.678	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	4.57	LCS	P	0 - 30
LFB	Bifenthrin	0.415	LCS	P	0 - 30
LFB	Carbophenothion	9.79	LCS	P	0 - 30
LFB	Chlorothalonil	10.2	LCS	P	0 - 30
LFB	Cis-Nonachlor	1.84	LCS	P	0 - 30
LFB	Cypermethrin	0.910	LCS	P	0 - 30
LFB	Dacthal	0.320	LCS	P	0 - 30
LFB	DDD-p,p'	2.21	LCS	P	0 - 30
LFB	DDE-p,p'	2.49	LCS	P	0 - 30
LFB	DDT-p,p'	0.850	LCS	P	0 - 30
LFB	Delta-BHC	3.55	LCS	P	0 - 30
LFB	Deltamethrin	0.785	LCS	P	0 - 30
LFB	Dichlobenil	0.812	LCS	P	0 - 30
LFB	Dicofol	3.22	LCS	P	0 - 30
LFB	Dieldrin	4.43	LCS	P	0 - 30
LFB	Endosulfan I	3.56	LCS	P	0 - 30
LFB	Endosulfan II	3.15	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.789	LCS	P	0 - 30
LFB	Endrin	0.0198	LCS	P	0 - 30
LFB	Endrin Aldehyde	2.24	LCS	P	0 - 30
LFB	Endrin Ketone	2.70	LCS	P	0 - 30
LFB	Esfenvalerate	7.81	LCS	P	0 - 30
LFB	Ethalfuralin	3.66	LCS	P	0 - 30
LFB	Fenpropathrin	10.1	LCS	P	0 - 30
LFB	Gamma-BHC	6.00	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.206	LCS	P	0 - 30
LFB	Heptachlor	4.25	LCS	P	0 - 30
LFB	Heptachlor Epoxide	1.12	LCS	P	0 - 30
LFB	Hexachlorobenzene	4.32	LCS	P	0 - 30
LFB	Kepone	2.49	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	4.81	LCS	P	0 - 30
LFB	Methoxychlor	1.42	LCS	P	0 - 30
LFB	MGK-264	0.127	LCS	P	0 - 30
LFB	Mirex	2.65	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P392729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Permethrin	0.381	LCS	P	0 - 30
LFB	Phenothrin	6.79	LCS	P	0 - 30
LFB	Piperonyl Butoxide	2.63	LCS	P	0 - 30
LFB	Prallethrin	4.11	LCS	P	0 - 30
LFB	Tau-Fluvalinate	6.39	LCS	P	0 - 30
LFB	Tetramethrin	5.46	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.405	LCS	P	0 - 30
LFB	Triclosan Methyl	0.424	LCS	P	0 - 30
LFB	Trifluralin	1.84	LCS	P	0 - 30

Reference Method: EPA 8276

Batch ID: P392729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220618	Chlordane	10.7	Spike	P	0 - 30
2220618	Toxaphene	1.16	Spike	P	0 - 30
LFB	Chlordane	4.68	LCS	P	0 - 30
LFB	Toxaphene	1.30	LCS	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P392662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220513	Acesulfame K	0.990	Spike	P	0 - 30
2220513	AMPA	12.7	Spike	P	0 - 30
2220513	Endothall	6.31	Spike	P	0 - 30
2220513	Glufosinate	3.00	Spike	P	0 - 30
2220513	Glyphosate	6.12	Spike	P	0 - 30
2220513	Sucralose	7.83	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P392677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220213	2,4-D	5.80	Spike	P	0 - 30
2220213	Acetaminophen	3.82	Spike	P	0 - 30
2220213	Acetamiprid	3.46	Spike	P	0 - 30
2220213	Afidopyropen	9.49	Spike	P	0 - 30
2220213	Bentazon	3.35	Spike	P	0 - 30
2220213	Benzovindiflupyr	11.8	Spike	P	0 - 30
2220213	Carbamazepine	5.35	Spike	P	0 - 30
2220213	Clothianidin	12.2	Spike	P	0 - 30
2220213	Dinotefuran	0.802	Spike	P	0 - 30
2220213	Diuron	0.932	Spike	P	0 - 30
2220213	Fenuron	2.71	Spike	P	0 - 30
2220213	Fluridone	16.3	Spike	P	0 - 30
2220213	Hydrocodone	0.132	Spike	P	0 - 30
2220213	Ibuprofen	20.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P392677

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220213	Imazapyr	7.82	Spike	P	0 - 30
2220213	Imidacloprid	4.43	Spike	P	0 - 30
2220213	Linuron	9.66	Spike	P	0 - 30
2220213	Mandestrobin	7.47	Spike	P	0 - 30
2220213	MCPPP	11.5	Spike	P	0 - 30
2220213	Naproxen	11.7	Spike	P	0 - 30
2220213	Primidone	1.79	Spike	P	0 - 30
2220213	Pyraclostrobin	6.47	Spike	P	0 - 30
2220213	Thiamethoxam	5.33	Spike	P	0 - 30
2220213	Tolfenpyrad	9.08	Spike	P	0 - 30
2220213	Triclopyr	16.1	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392877

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220497	3-Hydroxycarbofuran	9.25	Spike	P	0 - 30
2220497	Aldicarb	14.1	Spike	P	0 - 30
2220497	Aldicarb Sulfone	2.93	Spike	P	0 - 30
2220497	Aldicarb Sulfoxide	15.2	Spike	P	0 - 30
2220497	Carbaryl	8.02	Spike	P	0 - 30
2220497	Carbofuran	7.78	Spike	P	0 - 30
2220497	Methiocarb	10.9	Spike	P	0 - 30
2220497	Methomyl	11.9	Spike	P	0 - 30
2220497	Oxamyl	4.69	Spike	P	0 - 30
2220497	Propoxur	14.7	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P392712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220593	Color (true)	5.49	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P392864

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220663	Total Alkalinity	2.25	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220626	TDS	5.28	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P392868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220663	Fluoride	0.0	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P392986

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220453	Organic Carbon	1.78	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2220615

Field Sample ID: G2TLHR0012

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	68.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	79.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	45.9	P	30 - 160
EPA 8321B	Diuron-d6	37.0	P	30 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Endothall-d6	104	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	90.8	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	90.8	P	40 - 160
EPA 8321B	Ibuprofen-d3	68.4	P	30 - 160
EPA 8321B	Primidone-d5	56.4	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160

Lab Sample ID: 2220616

Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	49.3	P	30 - 160

Lab Sample ID: 2220617

Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	71.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	66.4	P	30 - 160
EPA 8321B	Diuron-d6	64.6	P	30 - 160
EPA 8321B	Endothall-d6	96.4	P	40 - 160
EPA 8321B	Endothall-d6	96.4	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	94.0	P	40 - 160
EPA 8321B	Ibuprofen-d3	70.0	P	30 - 160
EPA 8321B	Primidone-d5	76.2	P	30 - 160
EPA 8321B	Sucralose-d6	98.5	P	30 - 160
EPA 8321B	Sucralose-d6	98.5	P	30 - 160

Lab Sample ID: 2220618

Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	74.4	P	40 - 123
EPA 8270E	Decachlorobiphenyl	60.8	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	39.4	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	45.4	P	33 - 102
EPA 8276	Decachlorobiphenyl	44.0	P	29 - 92.0
EPA 8276	PCNB	70.0	P	43 - 134

Lab Sample ID: 2220619

Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	90.6	P	73 - 135

Quality Assurance Report Surrogates

Lab Sample ID: 2220619
Field Sample ID: G2TLHR0013

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Terbufos-d10	78.3	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103162

Included Lab Sample IDs: 2220606, 2220609

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

Reference Method: SM 2120 B-2011

Run ID: A103163

Included Lab Sample IDs: 2220604, 2220607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103165

Included Lab Sample IDs: 2220604, 2220607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	102	102	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A103192

Included Lab Sample IDs: 2220615, 2220617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	119	119	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A103215

Included Lab Sample IDs: 2220615, 2220617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.4	96.4	P/P	60 - 160
AMPA	103	106	P/P	60 - 160
Endothall	91.7	100	P/P	60 - 160
Glufosinate	99.7	96.1	P/P	60 - 160
Glyphosate	112	86.7	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A103225

Included Lab Sample IDs: 2220604, 2220607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	92.8	96.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A103225

Included Lab Sample IDs: 2220604, 2220607

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103226

Included Lab Sample IDs: 2220604, 2220607

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.5	98.0	P/P	90 - 110
Sulfate	97.7	97.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A103235

Included Lab Sample IDs: 2220615, 2220617

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.4	85.9	P/P	50 - 150
Acetaminophen	103	99.8	P/P	60 - 160
Acetamiprid	109	107	P/P	50 - 150
Afidopyropen	120	117	P/P	50 - 150
Bentazon	121	119	P/P	50 - 160
Benzovindiflupyr	122	108	P/P	50 - 160
Carbamazepine	103	106	P/P	60 - 150
Clothianidin	92.2	99.4	P/P	60 - 150
Dinotefuran	101	108	P/P	50 - 150
Diuron	113	108	P/P	60 - 160
Fenuron	106	109	P/P	60 - 150
Fluridone	122	113	P/P	60 - 160
Hydrocodone	119	110	P/P	60 - 150
Ibuprofen	75.7	72.9	P/P	50 - 160
Imazapyr	97.3	97.1	P/P	50 - 160
Imidacloprid	103	96.4	P/P	60 - 150
Linuron	104	110	P/P	60 - 150
Mandestrobin	107	115	P/P	50 - 150
MCPP	98.3	96.2	P/P	50 - 150
Naproxen	74.8	92.6	P/P	50 - 160
Primidone	87.2	86.6	P/P	60 - 150
Pyraclostrobin	111	111	P/P	60 - 150
Thiamethoxam	105	94.1	P/P	50 - 150
Tolfenpyrad	107	101	P/P	60 - 150
Triclopyr	90.2	96.6	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103236

Included Lab Sample IDs: 2220605, 2220608

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103253

Included Lab Sample IDs: 2220620, 2220621, 2220622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	98.3	98.6	P/P	90 - 110
Calcium	94.2	94.9	P/P	90 - 110
Iron	94.2	95.2	P/P	90 - 110
Magnesium	93.3	94.6	P/P	90 - 110
Manganese	99.4	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103253

Included Lab Sample IDs: 2220620, 2220621, 2220622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	94.4	96.7	P/P	90 - 110
Sodium	96.5	98.9	P/P	90 - 110
Zinc	97.0	97.1	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A103265

Included Lab Sample IDs: 2220605, 2220608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.4	96.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A103292

Included Lab Sample IDs: 2220616

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	124	147	P/P	60 - 150
Aldicarb	94.2	123	P/P	60 - 150
Aldicarb Sulfone	132	131	P/P	50 - 150
Aldicarb Sulfoxide	117	119	P/P	50 - 150
Carbaryl	106	118	P/P	60 - 150
Carbofuran	118	129	P/P	50 - 150
Methiocarb	109	113	P/P	50 - 150
Methomyl	115	131	P/P	50 - 150
Oxamyl	121	122	P/P	50 - 150
Propoxur	115	123	P/P	50 - 150

Reference Method: EPA 8276

Run ID: A103305

Included Lab Sample IDs: 2220618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.2		P	80 - 120
Toxaphene	112		P	80 - 120

Reference Method: EPA 8270E

Run ID: A103310

Included Lab Sample IDs: 2220618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	99.8		P	80 - 120
Dieldrin	97.1		P	80 - 120
Kepone	64.2*		F	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103333

Included Lab Sample IDs: 2220620, 2220621, 2220622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Antimony	99.7	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103333

Included Lab Sample IDs: 2220620, 2220621, 2220622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	99.2	98.5	P/P	90 - 110
Boron	106	104	P/P	90 - 110
Chromium	110	109	P/P	90 - 110
Copper	97.2	96.5	P/P	90 - 110
Lead	103	102	P/P	90 - 110
Nickel	97.4	95.8	P/P	90 - 110
Selenium	99.1	98.2	P/P	90 - 110
Silver	107	107	P/P	90 - 110
Thallium	105	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103347

Included Lab Sample IDs: 2220605, 2220608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	106	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103351

Included Lab Sample IDs: 2220620, 2220621, 2220622

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	92.3	92.7	P/P	90 - 110
Cadmium	90.6	90.9	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A103364

Included Lab Sample IDs: 2220619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	98.8		P	80 - 120
Alachlor	98.0		P	80 - 120
Ametryn	96.8		P	80 - 120
Atrazine	99.0		P	80 - 120
Atrazine Desethyl	101		P	80 - 120
Azinphos Methyl	73.6*		F	80 - 120
Azoxystrobin	91.8		P	80 - 120
Bromacil	99.9		P	80 - 120
Butylate	91.1		P	80 - 120
Carbophenothion	95.3		P	80 - 120
Carfentrazone Ethyl	95.6		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	99.6		P	80 - 120
Cyanazine	101		P	80 - 120
Demeton	95.7		P	80 - 120
Diazinon	99.9		P	80 - 120
Difenoconazole	96.8		P	80 - 120
Dimethenamid	100		P	80 - 120
Disulfoton	97.6		P	80 - 120
Dithiopyr	99.9		P	80 - 120
EPTC	99.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103364
Included Lab Sample IDs: 2220619

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ethion	92.0		P	80 - 120
Ethoprop	98.8		P	80 - 120
Fenamiphos	92.7		P	80 - 120
Fenbuconazole	60.3*		F	80 - 120
Fipronil	96.7		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	88.8		P	80 - 120
Fipronil Sulfone	91.2		P	80 - 120
Fluazifop-P-butyl	94.1		P	80 - 120
Fludioxonil	89.9		P	80 - 120
Flumioxazin	120		P	80 - 120
Flutolanil	98.2		P	80 - 120
Fluxapyroxad	88.4		P	80 - 120
Fonofos	109		P	80 - 120
Hexazinone	94.4		P	80 - 120
Imazalil	96.7		P	80 - 120
Iprodione	89.9		P	80 - 120
Malathion	93.2		P	80 - 120
Metalaxyl	102		P	80 - 120
Metolachlor	97.1		P	80 - 120
Metribuzin	97.2		P	80 - 120
Mevinphos	93.9		P	80 - 120
Molinate	96.8		P	80 - 120
Myclobutanil	95.8		P	80 - 120
Naled	106		P	80 - 120
Norflurazon	93.0		P	80 - 120
Oxadiazon	93.0		P	80 - 120
Oxyfluorfen	97.3		P	80 - 120
Parathion Ethyl	97.1		P	80 - 120
Parathion Methyl	98.2		P	80 - 120
Pendimethalin	95.4		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	102		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	98.2		P	80 - 120
Pronamide	99.1		P	80 - 120
Propiconazole	96.7		P	80 - 120
Pyriproxyfen	78.3*		F	80 - 120
Simazine	98.6		P	80 - 120
Sulfentrazone	85.9		P	80 - 120
Tebuconazole	91.9		P	80 - 120
Terbufos	101		P	80 - 120
Terbutylazine	100		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A103417
Included Lab Sample IDs: 2220605, 2220608

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103418
Included Lab Sample IDs: 2220618

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	96.0		P	80 - 120
Beta-BHC	100		P	80 - 120
Beta-Cyfluthrin	90.2		P	80 - 120
Bifenthrin	99.4		P	80 - 120
Carbophenothion	99.4		P	80 - 120
Chlorothalonil	105		P	80 - 120
Cis-Nonachlor	96.2		P	80 - 120
Cypermethrin	95.9		P	80 - 120
Dacthal	98.9		P	80 - 120
DDD-p,p'	98.2		P	80 - 120
DDE-p,p'	99.8		P	80 - 120
DDT-p,p'	97.9		P	80 - 120
Delta-BHC	103		P	80 - 120
Deltamethrin	95.7		P	80 - 120
Dichlobenil	92.4		P	80 - 120
Dicofol	99.0		P	80 - 120
Endosulfan I	97.8		P	80 - 120
Endosulfan II	103		P	80 - 120
Endosulfan Sulfate	99.5		P	80 - 120
Endrin	96.3		P	80 - 120
Endrin Aldehyde	109		P	80 - 120
Endrin Ketone	95.1		P	80 - 120
Esfenvalerate	92.0		P	80 - 120
Ethalfuralin	98.8		P	80 - 120
Fenpropathrin	103		P	80 - 120
Gamma-BHC	102		P	80 - 120
Gamma-Chlordane	95.3		P	80 - 120
Heptachlor	96.0		P	80 - 120
Heptachlor Epoxide	97.4		P	80 - 120
Hexachlorobenzene	96.7		P	80 - 120
Lambda-Cyhalothrin	98.1		P	80 - 120
Methoxychlor	95.5		P	80 - 120
MGK-264	99.3		P	80 - 120
Mirex	100		P	80 - 120
Permethrin	93.2		P	80 - 120
Phenothrin	93.6		P	80 - 120
Piperonyl Butoxide	93.5		P	80 - 120
Prallethrin	90.3		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	97.4		P	80 - 120
Trans-Nonachlor	97.4		P	80 - 120
Triclosan Methyl	97.2		P	80 - 120
Trifluralin	96.0		P	80 - 120

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A103454
Included Lab Sample IDs: 2220605, 2220608

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	95.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103502

Included Lab Sample IDs: 2220620

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	101	96.4	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							6.26	
EPA 200.7 Rev. 4.4	Barium	98.5		103	101	99.4			1.17
	Calcium	98.2		99.4	102	101			0.103
	Iron	96.5		102	100	102			1.48
	Magnesium	97.3		102	101	102			0.644
	Manganese	98.8		102	100	98.7			1.14
	Potassium	97.7		101	98.7	97.8			0.728
	Sodium	105		106	102	101			0.840
	Zinc	95.4		97.8	98.0	96.7			1.32
EPA 200.8 Rev. 5.4	Aluminum	102		98.5	102	99.5			3.37
	Antimony	107		104	105	103			0.598
	Arsenic	105		103	104	102			0.633
	Beryllium	101		100	99.4	100			0.519
	Boron	103		101	105	105			3.11
	Cadmium	86.7		90.2	91.2	89.1			1.10
	Chromium	112		110	114	104			4.00
	Copper	102		101	103	95.5			1.78
	Lead	106		107	109	105			1.28
	Lead	99.7		98.2	99.4	100			1.23
	Nickel	102		102	103	92.6			1.02
	Selenium	103		101	102	98.9			0.430
	Silver	113		112	114	111			1.86
	Thallium	104		104	108	104			3.54
EPA 300.0 Rev. 2.1	Chloride	98.0		93.1	96.8			0.232	
	Sulfate	97.7		93.6	96.8			0.315	
EPA 350.1 Rev. 2.0	Ammonia-N	100		99.4	99.5				0.0228
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106		105	105				0.148
	Kjeldahl Nitrogen	102		109	109				0.130
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		96.5	96.5				0.0
EPA 365.1 Rev. 2.0	Total-P	103		106	104				1.83
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.5		101	101				0.0
EPA 8270E	Acetochlor	110	109	98.8			0.531		
	Alachlor	104	110	92.0			5.73		
	Aldrin	54.2	56.6	55.7	41.9	4.38			28.4
	Alpha-BHC	82.6	79.1	80.0	78.9	4.37			1.35
	Alpha-Chlordane	79.0	79.6	77.8	78.2	0.760			0.470
	Ametryn	139	140	133		0.869			
	Atrazine	107	106	103		0.437			
	Atrazine Desethyl	99.2	107	79.8		7.50			
	Azinphos Methyl	109	118	104		7.44			
	Azoxystrobin	151	170	118		11.5			
	Beta-BHC	89.0	89.6	73.5	82.6	0.678			11.7
	Beta-Cyfluthrin	86.5	82.7	111	112	4.57			0.433
	Bifenthrin	85.5	85.8	91.3	90.3	0.415			1.12
	Bromacil	98.2	109	86.9		9.96			
	Butylate	66.1	64.1	55.6		3.02			
	Carbophenothion	99.8	88.8	84.0		11.7			
	Carbophenothion	44.4	40.3	71.9	72.0	9.79			0.131
	Carfentrazone Ethyl	122	110	101		10.5			
	Chlorothalonil	78.7	87.2	91.7	84.0	10.2			8.81
	Chlorpyrifos Ethyl	98.4	89.2	85.0		9.80			
	Chlorpyrifos Methyl	100	91.8	88.5		8.60			
	Cis-Nonachlor	80.3	81.8	79.2	80.5	1.84			1.62
	Cyanazine	189	180	197		5.11			

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Cypermethrin	95.8	96.7	103	107	0.910	3.48
	Dacthal	87.4	87.1	87.0	86.7	0.320	0.336
	DDD-p,p'	83.2	85.1	82.9	83.2	2.21	0.361
	DDE-p,p'	77.1	79.0	74.5	76.4	2.49	2.49
	DDT-p,p'	75.8	76.5	74.0	74.7	0.850	1.03
	Delta-BHC	107	103	86.9	95.9	3.55	9.86
	Deltamethrin	99.9	99.1	102	116	0.785	13.0
	Demeton	93.7	88.8	83.8		5.37	
	Diazinon	101	102	100		0.682	
	Dichlobenil	51.0	50.6	65.1	62.5	0.812	4.05
	Dicofol	94.3	91.3	95.5	93.1	3.22	2.53
	Dieldrin	68.8	71.9	65.7	52.5	4.43	20.0
	Difenoconazole	151	144	134		4.56	
	Dimethenamid	108	105	94.3		2.92	
	Disulfoton	79.4	90.6	88.4		13.3	
	Dithiopyr	93.3	102	93.8		9.30	
	Endosulfan I	82.9	80.0	87.0	83.3	3.56	4.37
	Endosulfan II	91.5	88.6	120	142	3.15	16.4
	Endosulfan Sulfate	87.2	87.9	97.4	97.5	0.789	0.0135
	Endrin	84.0	84.0	81.3	82.4	0.0198	1.39
	Endrin Aldehyde	85.1	83.2	80.9	71.3	2.24	12.6
	Endrin Ketone	83.5	85.8	86.9	86.1	2.70	0.839
	EPTC	69.3	70.7	66.4		2.06	
	Esfenvalerate	87.9	81.3	89.6	94.3	7.81	5.10
	Ethalfuralin	74.1	76.8	75.6	72.5	3.66	4.25
	Ethion	86.0	101	82.3		16.3	
	Ethoprop	95.1	98.5	93.0		3.56	
	Fenamiphos	102	107	92.0		5.03	
	Fenbuconazole	56.8	67.8	47.1		17.7	
	Fenpropathrin	107	96.3	81.2	54.4	10.1	23.2
	Fipronil	121	126	113		4.72	
	Fipronil Desulfinyl	109	117	96.1		7.72	
	Fipronil Sulfide	101	103	88.9		1.73	
	Fipronil Sulfone	107	104	84.9		2.47	
	Fluazifop-P-butyl	91.3	107	90.9		15.9	
	Fludioxonil	106	115	96.0		8.25	
	Flumioxazin	191	204	175		6.10	
	Flutolanil	116	119	99.6		2.56	
	Fluxapyroxad	97.4	105	80.6		7.17	
	Fonofos	82.8	87.3	81.8		5.32	
	Gamma-BHC	85.0	80.0	87.3	88.4	6.00	1.30
	Gamma-Chlordane	76.7	76.6	75.6	75.3	0.206	0.329
	Heptachlor	70.4	73.4	68.6	69.9	4.25	1.89
	Heptachlor Epoxide	82.5	81.6	80.3	79.2	1.12	1.31
	Hexachlorobenzene	73.3	70.2	64.0	64.2	4.32	0.342
	Hexazinone	101	102	96.6		0.523	
	Imazalil	114	117	89.0		2.85	
	Iprodione	90.0	96.7	77.3		7.24	
	Kepone	84.0	86.1	36.5	33.0	2.49	10.1
	Lambda-Cyhalothrin	89.1	84.9	96.5	96.9	4.81	0.373
	Malathion	100	108	97.2		7.27	
	Metalaxyl	109	113	98.5		3.51	
	Methoxychlor	88.1	86.9	89.8	86.8	1.42	3.30
	Metolachlor	105	105	95.1		0.290	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Metribuzin	114	110	105		3.92		
	Mevinphos	85.5	92.7	81.5		8.02		
	MGK-264	67.0	66.9	77.7	75.3	0.127		3.08
	Mirex	68.0	69.8	70.1	71.2	2.65		1.51
	Molinate	80.3	85.6	76.2		6.37		
	Myclobutanil	113	121	101		6.43		
	Naled	50.9	52.8	46.2		3.57		
	Norflurazon	108	115	97.3		6.64		
	Oxadiazon	89.5	99.5	86.5		10.5		
	Oxyfluorfen	107	122	120		13.5		
	Parathion Ethyl	91.8	108	100		16.3		
	Parathion Methyl	111	119	107		7.31		
	Pendimethalin	82.6	86.3	103		4.36		
	Permethrin	83.7	83.4	87.5	91.3	0.381		4.27
	Phenothrin	68.9	64.4	75.2	76.6	6.79		1.87
	Phorate	81.0	80.8	105		0.230		
	Piperonyl Butoxide	90.5	92.9	99.5	102	2.63		2.08
	Prallethrin	61.0	58.6	67.7	66.3	4.11		2.10
	Prodiamine	105	116	47.8		10.3		
	Prometon	106	110	102		3.06		
	Prometryn	113	117	105		2.66		
	Pronamide	117	119	107		1.07		
	Propiconazole	108	114	94.2		5.56		
	Pyriproxyfen	74.8	88.2	68.7		16.4		
	Simazine	110	111	105		0.993		
	Sulfentrazon	79.2	89.4	72.8		12.0		
	Tau-Fluvalinate	98.2	92.1	105	113	6.39		7.75
	Tebuconazole	66.9	70.8	54.7		5.58		
	Terbufos	81.6	85.0	84.2		4.00		
	Terbuthylazine	103	102	92.6		0.945		
	Tetramethrin	89.4	84.6	131	130	5.46		0.701
	Trans-Nonachlor	77.7	77.4	76.4	77.0	0.405		0.848
	Triclosan Methyl	92.0	92.3	92.1	91.0	0.424		1.20
	Trifluralin	77.0	75.6	75.7	75.5	1.84		0.216
EPA 8276	Chlordane	87.5	91.7	86.0	77.3	4.68		10.7
	Toxaphene	105	106	153	151	1.30		1.16
EPA 8321B	2,4-D	128		102	95.7			5.80
	3-Hydroxycarbofuran	101		117	106			9.25
	Acesulfame K	103		27.1	27.4			0.990
	Acetaminophen	85.3		91.4	88.0			3.82
	Acetamiprid	101		86.5	83.6			3.46
	Afidopyropen	85.4		90.2	82.0			9.49
	Aldicarb	59.2		89.5	77.7			14.1
	Aldicarb Sulfone	114		128	124			2.93
	Aldicarb Sulfoxide	103		68.0	58.4			15.2
	AMPA	108		89.0	110			12.7
	Bentazon	91.3						3.35
	Benzovindiflupyr	80.9		85.8	76.2			11.8
	Carbamazepine	84.3		67.7	64.1			5.35
	Carbaryl	61.7		57.9	62.7			8.02
	Carbofuran	71.6		73.2	67.8			7.78
	Clothianidin	83.3		77.2	87.2			12.2
	Dinotefuran	91.9		102	101			0.802
	Diuron	71.1		49.9	50.4			0.932

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Endothall	95.3	110	103		6.31
	Fenuron	104	65.6	67.4		2.71
	Fluridone	80.5				16.3
	Glufosinate	92.8	90.3	87.6		3.00
	Glyphosate	121	75.7	55.0		6.12
	Hydrocodone	105	93.2	93.1		0.132
	Ibuprofen	85.2	64.0	78.2		20.0
	Imazapyr	92.5				7.82
	Imidacloprid	107	130	124		4.43
	Linuron	71.3	65.6	59.5		9.66
	Mandestrobin	96.6	88.8	82.4		7.47
	MCPP	105	101	89.8		11.5
	Methiocarb	63.6	72.5	65.0		10.9
	Methomyl	91.0	82.7	93.2		11.9
	Naproxen	61.3	67.9	76.4		11.7
	Oxamyl	102	88.0	92.2		4.69
	Primidone	87.2	76.9	78.4		1.79
	Propoxur	69.0	68.3	59.0		14.7
	Pyraclostrobin	78.0	83.5	78.3		6.47
	Sucralose	131	126	142		7.83
	Thiamethoxam	93.5	101	106		5.33
	Tolfenpyrad	51.1	55.7	50.9		9.08
	Triclopyr	91.7	106	89.8		16.1
SM 2120 B-2011	Color (true)	100			5.49	
SM 2320 B-2011	Total Alkalinity	96.6			2.25	
SM 2540 C-2011	TDS				5.28	
SM 4500 F-C-2011	Fluoride	100	100	100		0.0
SM 5310 B-2011	Organic Carbon	97.8	99.4	96.8		1.78

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2220604, 2220607
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2220620, 2220621, 2220622
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2220620, 2220621, 2220622
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2220604, 2220607
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2220604, 2220607
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2220605, 2220608
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2220605, 2220608
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2220605, 2220608
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2220605, 2220608
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2220606, 2220609
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2220618
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2220618
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2220619
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2220618
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2220616
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2220615, 2220617
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2220615, 2220617
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2220604, 2220607

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2220604, 2220607
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2220620, 2220621, 2220622
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2220604, 2220607
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2220604, 2220607
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2220604, 2220607
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2220605, 2220608

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	01/21/2021			01/21/2021 15:02	Yen Ta	2220604, 2220607
EPA 200.7 Rev. 4.4	01/21/2021	01/25/2021 15:35	Elliott D. Healy	01/26/2021 20:35	Betina Topolski	2220620
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	01/26/2021 20:43	Betina Topolski	2220621
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	01/26/2021 20:51	Betina Topolski	2220622
EPA 200.8 Rev. 5.4	01/21/2021	01/25/2021 15:35	Elliott D. Healy	01/29/2021 18:41	Alexander Thompson	2220620
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	01/29/2021 18:49	Alexander Thompson	2220621
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	01/29/2021 18:56	Alexander Thompson	2220622
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	02/01/2021 17:05	Alexander Thompson	2220620
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	02/01/2021 17:09	Alexander Thompson	2220621
	01/21/2021	01/25/2021 15:35	Elliott D. Healy	02/01/2021 17:14	Alexander Thompson	2220622
	01/21/2021	02/03/2021 16:10	Elliott D. Healy	02/09/2021 13:20	Alexander Thompson	2220620
EPA 300.0 Rev. 2.1	01/21/2021			01/26/2021 15:31	Lipi Saha	2220604
	01/21/2021			01/26/2021 15:43	Lipi Saha	2220607
EPA 350.1 Rev. 2.0	01/21/2021			02/05/2021 17:29	Ping Hua	2220605
	01/21/2021			02/05/2021 17:30	Ping Hua	2220608
EPA 351.2 Rev. 2.0	01/21/2021	01/29/2021 12:35	Yen Ta	02/01/2021 16:30	Julia Storbeck	2220605
	01/21/2021	01/29/2021 12:35	Yen Ta	02/01/2021 16:35	Julia Storbeck	2220608
EPA 353.2 Rev. 2.0	01/21/2021			01/26/2021 09:05	Beverly Y. Sanders	2220605
	01/21/2021			01/26/2021 09:06	Beverly Y. Sanders	2220608
EPA 365.1 Rev. 2.0	01/21/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 11:51	Shengyu Wang	2220605
	01/21/2021	02/02/2021 13:00	Lipi Saha	02/04/2021 11:52	Shengyu Wang	2220608
EPA 365.1 Rev. 2.0 dissolved	01/21/2021			01/21/2021 14:51	Blanca Fach	2220606
	01/21/2021			01/21/2021 14:52	Blanca Fach	2220609
EPA 8270E	01/21/2021	01/22/2021 08:00	Fe-Val Siddell	01/27/2021 16:41	Vandana T. Nagar	2220619
	01/21/2021	01/25/2021 08:30	Rasheda Ghaffari	01/28/2021 19:08	Michael Poppell	2220618
	01/21/2021	01/25/2021 08:30	Rasheda Ghaffari	02/01/2021 19:29	Julie Wi	2220618
EPA 8276	01/21/2021	01/25/2021 08:30	Rasheda Ghaffari	01/29/2021 00:58	Michael Poppell	2220618
EPA 8321B	01/21/2021	01/21/2021 15:00	Rebecca Ware	01/21/2021 22:39	Rebecca Ware	2220615
	01/21/2021	01/21/2021 15:00	Rebecca Ware	01/21/2021 22:51	Rebecca Ware	2220617
	01/21/2021	01/21/2021 15:00	Rebecca Ware	01/23/2021 02:02	Rebecca Ware	2220615
	01/21/2021	01/21/2021 15:00	Rebecca Ware	01/23/2021 02:16	Rebecca Ware	2220617
	01/21/2021	01/22/2021 09:00	Hoor Shaik	01/24/2021 02:10	Juyoung Kim	2220615
	01/21/2021	01/22/2021 09:00	Hoor Shaik	01/24/2021 02:45	Juyoung Kim	2220617
	01/21/2021	01/27/2021 09:00	Hoor Shaik	01/27/2021 20:50	Juyoung Kim	2220616
SM 2120 B-2011	01/21/2021			01/21/2021 16:27	Benjamin T. Nordmann	2220607
	01/21/2021			01/21/2021 16:31	Benjamin T. Nordmann	2220604
SM 2320 B-2011	01/21/2021			01/23/2021 05:25	Dale L. Simmons	2220604
	01/21/2021			01/23/2021 05:37	Dale L. Simmons	2220607
SM 2340B	01/21/2021			01/26/2021 20:35	Betina Topolski	2220620
	01/21/2021			01/26/2021 20:43	Betina Topolski	2220621

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2340B	01/21/2021			01/26/2021 20:51	Betina Topolski	2220622
SM 2540 C-2011	01/21/2021			01/26/2021 14:21	Yijie Li	2220604, 2220607
SM 2540 D-2011	01/21/2021			01/26/2021 14:21	Yijie Li	2220604, 2220607
SM 4500 F-C-2011	01/21/2021			01/23/2021 05:25	Dale L. Simmons	2220604
	01/21/2021			01/23/2021 05:37	Dale L. Simmons	2220607
SM 5310 B-2011	01/21/2021			01/26/2021 08:14	Madeline Gruver	2220605
	01/21/2021			01/26/2021 08:27	Madeline Gruver	2220608