

Chemical Analysis Report

SO-DIST-2021-02-03-01

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

Event Description: **2021 SMP: Peace River**
Request ID: **RQ-2021-01-25-50**
Customer: **SO-DIST**
Project ID: **SMP**

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FLDEP South District Office
2295 Victoria Ave. Suite 364
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Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator

Date Certified: 23-FEB-2021 11:04



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: Peace River Above Horse Creek 2

Collection Date/Time: 02/02/2021 12:25

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223060	EPA 180.1 Rev. 2.0	Turbidity	4.8		NTU	P393326	
	EPA 300.0 Rev. 2.1	Chloride	31		mg Cl/L	P393523	
		Sulfate	64		mg SO4/L	P393525	
	SM 2120 B-2011	Color (true)	77		PCU	P393311	
	SM 2320 B-2011	Total Alkalinity	89		mg CaCO3/L	P393638	
	SM 2540 C-2011	TDS	262		mg/L	P393851	
	SM 2540 D-2011	TSS	6	I	mg/L	P393844	
	SM 4500 F-C-2011	Fluoride	0.65		mg F/L	P393644	
2223061	EPA 350.1 Rev. 2.0	Ammonia-N	0.035		mg N/L	P393575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.87		mg N/L	P393596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.67		mg N/L	P393366	
	EPA 365.1 Rev. 2.0	Total-P	0.77		mg P/L	P393436	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P393427	
2223062	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.65		mg P/L	P393328	
2223092	EPA 8270E	Aldrin	0.78	UJ	ng/L	P393293	RPD
		Dieldrin	0.41	U	ng/L	P393293	
		Alpha-BHC	2.1	U	ng/L	P393293	
		Kepone**	5.7	U	ng/L	P393293	
		Alpha-Chlordane	1.0	U	ng/L	P393293	
		Beta-BHC	8.3	U	ng/L	P393293	
		Beta-Cyfluthrin**	16	U	ng/L	P393293	
		Bifenthrin**	4.1	U	ng/L	P393293	
		Delta-BHC	8.3	U	ng/L	P393293	
		Gamma-BHC	8.3	U	ng/L	P393293	
		Chlorothalonil	2.1	U	ng/L	P393293	
		Cis-Nonachlor**	1.0	U	ng/L	P393293	
		Cypermethrin	21	U	ng/L	P393293	
		Dacthal**	1.0	U	ng/L	P393293	
		DDD-p,p'	5.2	U	ng/L	P393293	
		DDE-p,p'	5.2	U	ng/L	P393293	
		DDT-p,p'	6.2	U	ng/L	P393293	
		Deltamethrin**	21	U	ng/L	P393293	
		Dicofol	31	UJ	ng/L	P393293	LCS
		Endosulfan I	4.1	U	ng/L	P393293	
		Endosulfan II	4.1	U	ng/L	P393293	
		Endosulfan Sulfate	2.1	U	ng/L	P393293	
		Endrin	2.1	U	ng/L	P393293	
		Endrin Aldehyde	2.1	U	ng/L	P393293	
		Endrin Ketone	2.1	U	ng/L	P393293	
		Ethalfuralin**	3.1	U	ng/L	P393293	
		Gamma-Chlordane	1.0	U	ng/L	P393293	
		Dichlobenil**	2.1	U	ng/L	P393293	
		Esfenvalerate**	21	U	ng/L	P393293	

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223092	EPA 8270E	Fenpropathrin**	10	U	ng/L	P393293	
		Heptachlor	1.6	U	ng/L	P393293	
		Heptachlor Epoxide	2.1	U	ng/L	P393293	
		Hexachlorobenzene	2.1	U	ng/L	P393293	
		Lambda-Cyhalothrin**	16	U	ng/L	P393293	
		Methoxychlor	4.1	U	ng/L	P393293	
		Mirex	2.1	U	ng/L	P393293	
		MGK-264**	3.1	U	ng/L	P393293	
		Permethrin	10	U	ng/L	P393293	
		Phenothrin**	31	U	ng/L	P393293	
		Piperonyl Butoxide**	1.6	U	ng/L	P393293	
		Prallethrin**	26	U	ng/L	P393293	
		Tau-Fluvalinate**	3.6	U	ng/L	P393293	
		Tetramethrin**	8.3	U	ng/L	P393293	RPD
		Trans-Nonachlor**	1.0	U	ng/L	P393293	
		Triclosan Methyl**	1.0	U	ng/L	P393293	
		Trifluralin	2.6	U	ng/L	P393293	
	EPA 8276	Chlordane	5.3	I	ng/L	P393293	
		Toxaphene	31	U	ng/L	P393293	MS
2223093	EPA 8270E	Acetochlor	0.24	U	ng/L	P393299	
		Alachlor	0.24	U	ng/L	P393299	
		Ametryn	0.57	U	ng/L	P393299	
		Atrazine	5.2		ng/L	P393299	
		Atrazine Desethyl	1.4	U	ng/L	P393299	
		Azinphos Methyl	1.9	U	ng/L	P393299	
		Azoxystrobin**	0.69	I	ng/L	P393299	
		Bromacil	95		ng/L	P393299	
		Butylate	0.38	U	ng/L	P393299	
		Caffeine**	42		ng/L	P393299	
		Carbophenothion	0.48	U	ng/L	P393299	
		Carfentrazone Ethyl**	0.096	U	ng/L	P393299	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P393299	
		Chlorpyrifos Methyl	0.048	U	ng/L	P393299	
		Cyanazine	3.1	U	ng/L	P393299	
		Demeton	1.4	U	ng/L	P393299	
		Diazinon	0.12	U	ng/L	P393299	
		Difenoconazole**	0.57	U	ng/L	P393299	
		Dimethenamid**	0.096	U	ng/L	P393299	
		Disulfoton	0.48	U	ng/L	P393299	
		Dithiopyr**	0.17	U	ng/L	P393299	
		EPTC	1.2	U	ng/L	P393299	
		Ethion	0.14	U	ng/L	P393299	
		Ethoprop	0.096	U	ng/L	P393299	
		Fenamiphos	0.48	U	ng/L	P393299	
		Fenbuconazole**	0.12	U	ng/L	P393299	

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223093	EPA 8270E	Fipronil	0.24	U	ng/L	P393299	
		Fipronil Desulfinyl**	0.12	U	ng/L	P393299	
		Fipronil Sulfide	0.14	U	ng/L	P393299	
		Fipronil Sulfone	0.14	U	ng/L	P393299	
		Fluazifop-P-butyl**	0.096	U	ng/L	P393299	
		Fludioxonil**	0.12	U	ng/L	P393299	
		Flumioxazin**	1.7	U	ng/L	P393299	
		Flutolanil**	0.096	U	ng/L	P393299	
		Fluxapyroxad**	0.16	IJ	ng/L	P393299	LCS
		Fonofos	0.19	U	ng/L	P393299	
		Hexazinone	7.6		ng/L	P393299	
		Imazalil**	0.72	U	ng/L	P393299	
		Iprodione**	0.57	UJ	ng/L	P393299	LCS
		Malathion	0.33	U	ng/L	P393299	
		Metalaxyl	7.6		ng/L	P393299	
		Metolachlor	1.5		ng/L	P393299	
		Metribuzin	3.1	U	ng/L	P393299	
		Mevinphos	1.0	U	ng/L	P393299	
		Molinate	0.29	U	ng/L	P393299	
		Myclobutanil**	0.24	U	ng/L	P393299	
		Naled**	1.4	U	ng/L	P393299	
		Norflurazon	88		ng/L	P393299	
		Oxadiazon	0.29	U	ng/L	P393299	
		Oxyfluorfen**	0.44	I	ng/L	P393299	
		Parathion Ethyl	0.24	U	ng/L	P393299	
		Parathion Methyl	0.53	U	ng/L	P393299	
		Pendimethalin	0.96	U	ng/L	P393299	
		Phorate	0.50	U	ng/L	P393299	
		Prodiamine**	0.17	U	ng/L	P393299	
		Prometon	0.86	U	ng/L	P393299	
		Prometryn	0.19	U	ng/L	P393299	
		Pronamide**	0.14	U	ng/L	P393299	
		Propiconazole**	0.48	U	ng/L	P393299	
		Pyriproxyfen**	0.12	U	ng/L	P393299	
		Simazine	2.7		ng/L	P393299	
		Sulfentrazone**	1.7	I	ng/L	P393299	
		Tebuconazole**	0.48	UJ	ng/L	P393299	LCS
		Terbufos	0.096	U	ng/L	P393299	
		Terbuthylazine	0.41	U	ng/L	P393299	

Ref. Method and Comment:

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

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

EPA 8270E: MS accuracy for some parameters not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Alligator South @ Jones Loop Rd

Collection Date/Time: 02/02/2021 09:45

Field ID: G2SD0033

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223054	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P393326	
	EPA 300.0 Rev. 2.1	Chloride	54		mg Cl/L	P393523	
		Sulfate	7.9		mg SO4/L	P393525	
	SM 2120 B-2011	Color (true)	47		PCU	P393311	
	SM 2320 B-2011	Total Alkalinity	68		mg CaCO3/L	P393638	
	SM 2540 C-2011	TDS	192		mg/L	P393851	
	SM 2540 D-2011	TSS	2	U	mg/L	P393844	
	SM 4500 F-C-2011	Fluoride	0.076	I	mg F/L	P393644	
2223056	EPA 350.1 Rev. 2.0	Ammonia-N	0.086		mg N/L	P393575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.80		mg N/L	P393596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.074		mg N/L	P393366	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P393436	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P393427	
2223058	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.018		mg P/L	P393328	
2223090	EPA 8276	Chlordane	5.2	U	ng/L	P393293	
		Toxaphene	31	U	ng/L	P393293	MS
2223094	EPA 200.7 Rev. 4.4	Barium	9.9		ug/L	P393314	
		Calcium	31.7		mg/L	P393314	
		Iron	510		ug/L	P393314	
		Magnesium	4.98		mg/L	P393314	
		Manganese	9.5		ug/L	P393314	
		Potassium	0.86	I	mg/L	P393314	
		Sodium	27.4		mg/L	P393314	
		Zinc	5.0	U	ug/L	P393314	
		Aluminum	14	I	ug/L	P393314	
		Antimony	0.071	I	ug/L	P393314	
	EPA 200.8 Rev. 5.4	Arsenic	0.80		ug/L	P393314	
		Boron**	21.8		ug/L	P393314	
		Cadmium	0.020	U	ug/L	P393314	
		Chromium	0.40	U	ug/L	P393314	
		Copper	0.40	U	ug/L	P393314	
		Lead	0.20	U	ug/L	P393314	
		Nickel	0.50	U	ug/L	P393314	
		Selenium	0.20	U	ug/L	P393314	
		Silver	0.010	U	ug/L	P393314	
		Thallium	0.10	U	ug/L	P393314	
		Hardness	99.7		mg/L	P393314	

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: Myrtle Slough @ Bermont

Collection Date/Time: 02/02/2021 11:00

Field ID: G3SD0181

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223096	EPA 200.7 Rev. 4.4	Barium	19.5		ug/L	P393314	
		Calcium	87.0		mg/L	P393314	
		Iron	2.93E+03		ug/L	P393314	
		Magnesium	3.04		mg/L	P393314	
		Manganese	11.1		ug/L	P393314	
		Potassium	0.64	I	mg/L	P393314	
		Sodium	16.5		mg/L	P393314	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P393314	
		Aluminum	16	I	ug/L	P393314	
		Antimony	0.068	I	ug/L	P393314	
		Arsenic	1.06		ug/L	P393314	
		Boron**	35.2		ug/L	P393314	
		Cadmium	0.020	U	ug/L	P393314	
		Chromium	1.0	I	ug/L	P393314	
		Copper	0.45	I	ug/L	P393314	
		Lead	0.20	U	ug/L	P393314	
		Nickel	0.50	U	ug/L	P393314	
		Selenium	0.20	U	ug/L	P393314	
		Silver	0.010	U	ug/L	P393314	
		Thallium	0.10	U	ug/L	P393314	
	SM 2340B	Hardness	230		mg/L	P393314	

Sample Location: Myrtle Slough @ Washington

Collection Date/Time: 02/02/2021 11:25

Field ID: G3SD0180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223097	EPA 200.7 Rev. 4.4	Barium	22.2		ug/L	P393314	
		Calcium	65.2		mg/L	P393314	
		Iron	190		ug/L	P393314	
		Magnesium	21.4		mg/L	P393314	
		Manganese	15.9		ug/L	P393314	
		Potassium	7.5		mg/L	P393314	
		Sodium	120		mg/L	P393314	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P393314	
		Aluminum	53		ug/L	P393314	
		Antimony	0.11	I	ug/L	P393314	
		Arsenic	0.59		ug/L	P393314	
		Boron**	71.2		ug/L	P393314	
		Cadmium	0.020	U	ug/L	P393314	
		Chromium	0.41	I	ug/L	P393314	
		Copper	0.53	I	ug/L	P393314	
		Lead	0.20	U	ug/L	P393314	
		Nickel	0.59	I	ug/L	P393314	
		Selenium	0.23	I	ug/L	P393314	
		Silver	0.010	U	ug/L	P393314	
		Thallium	0.10	U	ug/L	P393314	
	SM 2340B	Hardness	251		mg/L	P393314	

Sample Location: Alligator Creek @ Boots St

Collection Date/Time: 02/02/2021 10:10

Field ID: G2SD0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223055	EPA 180.1 Rev. 2.0	Turbidity	3.7		NTU	P393326	
	EPA 300.0 Rev. 2.1	Chloride	68		mg Cl/L	P393523	
		Sulfate	24		mg SO4/L	P393525	
	SM 2120 B-2011	Color (true)	38		PCU	P393311	
	SM 2320 B-2011	Total Alkalinity	132		mg CaCO3/L	P393638	
	SM 2540 C-2011	TDS	301		mg/L	P393851	
	SM 2540 D-2011	TSS	2	U	mg/L	P393844	
2223057	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P393644	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.093		mg N/L	P393575	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.71		mg N/L	P393596	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P393366	
	EPA 365.1 Rev. 2.0	Total-P	0.046		mg P/L	P393436	
2223059	SM 5310 B-2011	Organic Carbon	9.6		mg C/L	P393427	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.028		mg P/L	P393328	
2223091	EPA 8276	Chlordane	5.3	U	ng/L	P393293	
		Toxaphene	32	U	ng/L	P393293	MS
2223095	EPA 200.7 Rev. 4.4	Barium	15.3		ug/L	P393314	
		Calcium	60.9		mg/L	P393314	
		Iron	720		ug/L	P393314	
		Magnesium	6.24		mg/L	P393314	
		Manganese	12.8		ug/L	P393314	
		Potassium	1.3		mg/L	P393314	
		Sodium	33.4		mg/L	P393314	
		Zinc	5.0	U	ug/L	P393314	
		Aluminum	9.6	I	ug/L	P393314	
		Antimony	0.080	I	ug/L	P393314	
	EPA 200.8 Rev. 5.4	Arsenic	1.77		ug/L	P393314	
		Boron**	48.6		ug/L	P393314	
		Cadmium	0.020	U	ug/L	P393314	
		Chromium	0.40	U	ug/L	P393314	
		Copper	0.40	U	ug/L	P393314	
		Lead	0.20	U	ug/L	P393314	
		Nickel	0.50	U	ug/L	P393314	
		Selenium	0.20	U	ug/L	P393314	
		Silver	0.010	U	ug/L	P393314	
		Thallium	0.10	U	ug/L	P393314	
		Hardness	178		mg/L	P393314	

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: Peace River Estuary @ Harbour Heights

Collection Date/Time: 02/02/2021 13:35

Field ID: G3SD0148

Matrix: W-BRACKISH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2223063	EPA 180.1 Rev. 2.0	Turbidity	14	A	NTU	P393327	
	EPA 300.0 Rev. 2.1	Bromide	9.6		mg Br/L	P393555	
	SM 2320 B-2011	Total Alkalinity	83		mg CaCO ₃ /L	P393638	
	SM 2540 D-2011	TSS	22		mg/L	P393846	
	SM 4500 F-C-2011	Fluoride	0.66		mg F/L	P393644	
2223064	EPA 350.1 Rev. 2.0	Ammonia-N	0.037		mg N/L	P393513	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P393592	MS
	EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	0.025		mg N/L	P393588	
	EPA 365.1 Rev. 2.0	Total-P	0.56		mg P/L	P393434	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P393427	
2223065	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.35		mg P/L	P393329	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393326

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393327

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393314

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: P393314

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: P393523

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393525

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393555

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393513

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393575

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393592

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393596

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393366

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393588

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393434

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393436

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393328

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393329

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

Reference Method: EPA 8270E
Batch ID: P393293

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P393293

Component	Result	Code	Units
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 8270E

Batch ID: P393299

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
Caffeine	5.0	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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P393299

Component	Result	Code	Units
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
Terbuthylazine	0.42	U	ng/L

Reference Method: EPA 8276

Batch ID: P393293

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

Reference Method: SM 2120 B-2011

Batch ID: P393311

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P393638

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

Reference Method: SM 2540 C-2011

Batch ID: P393851

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P393844

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393846

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P393644

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P393427

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: P393314

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	97.1		P	85 - 115
Calcium	101		P	85 - 115
Iron	104		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	98.0		P	85 - 115
Potassium	100		P	85 - 115
Sodium	103		P	85 - 115
Zinc	93.6		P	85 - 115

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

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.0		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	97.2		P	85 - 115
Boron	96.4		P	85 - 115
Cadmium	89.6		P	85 - 115
Chromium	94.4		P	85 - 115
Copper	94.6		P	85 - 115
Lead	99.7		P	85 - 115
Nickel	94.7		P	85 - 115
Selenium	91.7		P	85 - 115
Silver	106		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393523

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393525

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393555

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393513

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393575

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393592

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393596

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393366

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393588

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393434

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393436

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393328

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P393329

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P393293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	20.9	41.9	P/P	20 - 110
Alpha-BHC	85.7	73.2	P/P	58 - 130
Alpha-Chlordane	89.3	81.0	P/P	61 - 105
Beta-BHC	98.2	88.7	P/P	53 - 164
Beta-Cyfluthrin	87.7	76.6	P/P	40 - 140
Bifenthrin	82.2	71.6	P/P	44 - 122
Chlorothalonil	93.8	79.7	P/P	20 - 201
Cis-Nonachlor	93.2	82.5	P/P	60 - 110
Cypermethrin	88.5	77.8	P/P	43 - 131
Dacthal	99.8	88.9	P/P	76 - 108
DDD-p,p'	96.2	85.0	P/P	68 - 118
DDE-p,p'	80.5	73.1	P/P	56 - 107
DDT-p,p'	88.5	79.3	P/P	55 - 122
Delta-BHC	106	84.7	P/P	60 - 181
Deltamethrin	97.7	82.7	P/P	51 - 139
Dichlobenil	61.0	52.7	P/P	20 - 106
Dicofol	143	127	F/P	56 - 130
Dieldrin	61.7	76.7	P/P	58 - 112
Endosulfan I	95.6	82.4	P/P	68 - 115
Endosulfan II	114	101	P/P	69 - 133
Endosulfan Sulfate	96.7	87.2	P/P	65 - 126
Endrin	97.6	90.9	P/P	66 - 118
Endrin Aldehyde	107	94.6	P/P	60 - 132
Endrin Ketone	102	89.1	P/P	68 - 121
Esfenvalerate	83.7	71.7	P/P	42 - 116
Ethalfuralin	82.0	71.8	P/P	50 - 118
Fenpropathrin	117	97.6	P/P	55 - 132
Gamma-BHC	96.8	84.2	P/P	65 - 147
Gamma-Chlordane	87.6	76.3	P/P	56 - 103
Heptachlor	72.4	63.7	P/P	47 - 95.0
Heptachlor Epoxide	93.5	83.7	P/P	67 - 107
Hexachlorobenzene	68.9	62.9	P/P	45 - 99.0
Kepone	101	114	P/P	28 - 128
Lambda-Cyhalothrin	86.1	73.1	P/P	41 - 135
Methoxychlor	101	89.6	P/P	61 - 138
MGK-264	67.5	53.5	P/P	20 - 109
Mirex	70.6	63.1	P/P	36 - 92.0
Permethrin	74.1	63.6	P/P	45 - 111
Phenothrin	51.1	39.9	P/P	22 - 88.0
Piperonyl Butoxide	106	92.5	P/P	67 - 120
Prallethrin	67.2	54.8	P/P	28 - 92.0
Tau-Fluvalinate	94.9	81.1	P/P	38 - 145
Tetramethrin	102	91.2	P/P	29 - 150
Trans-Nonachlor	87.0	77.1	P/P	54 - 105
Triclosan Methyl	102	90.8	P/P	76 - 115
Trifluralin	79.1	70.0	P/P	53 - 111

Reference Method: EPA 8270E
 Batch ID: P393299

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	81.5	82.2	P/P	70 - 121

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P393299

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Alachlor	78.9	78.6	P/P	70 - 119
Ametryn	96.6	94.1	P/P	61 - 135
Atrazine	95.9	96.6	P/P	76 - 123
Atrazine Desethyl	86.1	87.5	P/P	35 - 140
Azinphos Methyl	98.5	96.9	P/P	57 - 163
Azoxystrobin	174	151	P/P	43 - 231
Bromacil	80.9	80.0	P/P	42 - 123
Butylate	58.8	62.6	P/P	34 - 92.0
Caffeine	97.5	95.8	P/P	70 - 130
Carbophenothion	76.3	71.2	P/P	61 - 121
Carfentrazone Ethyl	80.5	77.9	P/P	62 - 139
Chlorpyrifos Ethyl	76.3	71.6	P/P	67 - 121
Chlorpyrifos Methyl	88.8	87.9	P/P	67 - 120
Cyanazine	105	99.6	P/P	20 - 226
Demeton	85.5	88.4	P/P	35 - 125
Diazinon	84.0	84.1	P/P	70 - 122
Difenoconazole	146	126	P/P	56 - 186
Dimethenamid	79.2	79.4	P/P	67 - 119
Disulfoton	80.9	78.6	P/P	47 - 120
Dithiopyr	69.5	71.3	P/P	67 - 118
EPTC	57.6	57.7	P/P	33 - 90.0
Ethion	43.8	42.6	P/P	40 - 133
Ethoprop	98.3	99.6	P/P	61 - 121
Fenamiphos	85.4	81.4	P/P	31 - 139
Fenbuconazole	106	90.8	P/P	66 - 141
Fipronil	82.9	83.7	P/P	62 - 129
Fipronil Desulfinyil	76.6	77.5	P/P	59 - 126
Fipronil Sulfide	81.6	79.3	P/P	63 - 117
Fipronil Sulfone	77.6	73.2	P/P	57 - 117
Fluazifop-P-butyl	78.2	77.8	P/P	63 - 124
Fludioxonil	76.1	72.7	P/P	63 - 123
Flumioxazin	136	125	P/P	34 - 245
Flutolanil	81.7	79.6	P/P	56 - 131
Fluxapyroxad	63.0	56.8	P/F	57 - 117
Fonofos	90.4	90.1	P/P	61 - 116
Hexazinone	80.8	81.7	P/P	55 - 138
Imazalil	78.1	78.2	P/P	33 - 143
Iprodione	60.5	58.9	P/F	59 - 118
Malathion	96.3	94.1	P/P	62 - 138
Metalaxyl	76.8	76.8	P/P	24 - 147
Metolachlor	78.7	75.9	P/P	68 - 118
Metribuzin	100	98.7	P/P	20 - 239
Mevinphos	93.4	96.5	P/P	46 - 124
Molinate	72.5	73.3	P/P	46 - 100
Myclobutanil	74.4	69.7	P/P	32 - 149
Naled	38.3	38.1	P/P	32 - 95.0
Norflurazon	74.7	72.5	P/P	57 - 127
Oxadiazon	73.5	70.7	P/P	63 - 118
Oxyfluorfen	85.1	81.8	P/P	69 - 137
Parathion Ethyl	86.8	86.9	P/P	70 - 113
Parathion Methyl	102	109	P/P	71 - 130
Pendimethalin	76.4	77.6	P/P	55 - 118

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P393299

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Phorate	88.7	92.0	P/P	46 - 125
Prodiamine	53.4	51.5	P/P	20 - 141
Prometon	91.7	87.4	P/P	54 - 122
Prometryn	91.1	92.7	P/P	66 - 124
Pronamide	94.9	93.8	P/P	79 - 122
Propiconazole	79.7	73.4	P/P	61 - 126
Pyriproxyfen	80.6	79.1	P/P	52 - 131
Simazine	96.2	98.3	P/P	75 - 128
Sulfentrazone	51.7	50.2	P/P	20 - 132
Tebuconazole	15.2	16.1	F/F	20 - 116
Terbufos	89.7	90.0	P/P	61 - 117
Terbuthylazine	86.5	84.9	P/P	74 - 116

Reference Method: EPA 8276

Batch ID: P393293

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	72.6	90.1	P/P	56 - 117
Toxaphene	94.7	103	P/P	45 - 116

Reference Method: SM 2120 B-2011

Batch ID: P393311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2320 B-2011

Batch ID: P393638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.4		P	93 - 104

Reference Method: SM 4500 F-C-2011

Batch ID: P393644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	90 - 106

Reference Method: SM 5310 B-2011

Batch ID: P393427

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	101		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393314

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222986	Barium	101	100	P/P	80 - 120
2222986	Calcium	98.3		P	80 - 120
2222986	Iron	105	105	P/P	80 - 120
2222986	Magnesium	97.8		P	80 - 120
2222986	Manganese	100	100	P/P	80 - 120
2222986	Potassium	102	100	P/P	80 - 120
2222986	Sodium	101		P	80 - 120
2222986	Zinc	97.1	96.6	P/P	80 - 120
2223094	Barium	94.4		P	80 - 120
2223094	Calcium	88.8		P	80 - 120
2223094	Iron	103		P	80 - 120
2223094	Magnesium	91.4		P	80 - 120
2223094	Manganese	95.9		P	80 - 120
2223094	Potassium	96.7		P	80 - 120
2223094	Sodium	93.0		P	80 - 120
2223094	Zinc	93.8		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
2222986	Aluminum	97.4	99.4	P/P	80 - 120
2222986	Antimony	104	106	P/P	80 - 120
2222986	Arsenic	99.4	101	P/P	80 - 120
2222986	Boron	95.7	97.7	P/P	80 - 120
2222986	Cadmium	94.8	94.0	P/P	80 - 120
2222986	Chromium	91.8	93.7	P/P	80 - 120
2222986	Copper	92.2	94.0	P/P	80 - 120
2222986	Lead	98.2	99.4	P/P	80 - 120
2222986	Nickel	92.4	93.5	P/P	80 - 120
2222986	Selenium	94.5	94.7	P/P	80 - 120
2222986	Silver	107	106	P/P	80 - 120
2222986	Thallium	99.6	101	P/P	80 - 120
2223094	Aluminum	96.4		P	80 - 120
2223094	Antimony	104		P	80 - 120
2223094	Arsenic	101		P	80 - 120
2223094	Boron	96.6		P	80 - 120
2223094	Cadmium	92.1		P	80 - 120
2223094	Chromium	90.0		P	80 - 120
2223094	Copper	94.2		P	80 - 120
2223094	Lead	100		P	80 - 120
2223094	Nickel	92.9		P	80 - 120
2223094	Selenium	98.2		P	80 - 120
2223094	Silver	104		P	80 - 120
2223094	Thallium	100		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P393523

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222431	Chloride	102		P	90 - 110
2223023	Chloride	99.7		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393525

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222431	Sulfate	101		P	90 - 110
2223023	Sulfate	97.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393555

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222197	Bromide	101		P	90 - 110
2222279	Bromide	101	101	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393513

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222362	Ammonia-N	108	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393575

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223045	Ammonia-N	98.5	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223032	Kjeldahl Nitrogen	102	113	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393596

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223024	Kjeldahl Nitrogen	95.0	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393366

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223021	NO2NO3-N	99.0	98.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224228	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393434

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222902	Total-P	98.0	98.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P393436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223007	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P393328

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223008	O-Phosphate-P	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P393329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223065	O-Phosphate-P	98.4	97.5	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P393293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222758	Aldrin	57.3	55.6	P/P	20 - 110
2222758	Dieldrin	81.2	63.4	P/P	58 - 112
2222758	Kepone	56.5	56.1	P/P	28 - 128
2223138	Alpha-BHC	69.7	84.5	P/P	53 - 147
2223138	Alpha-Chlordane	74.9	85.9	P/P	56 - 107
2223138	Beta-BHC	79.4	95.3	P/P	43 - 182
2223138	Beta-Cyfluthrin	66.0	83.6	P/P	42 - 157
2223138	Bifenthrin	68.4	86.9	P/P	52 - 124
2223138	Chlorothalonil	75.6	100	P/P	10 - 265
2223138	Cis-Nonachlor	77.4	88.4	P/P	55 - 112
2223138	Cypermethrin	72.6	98.2	P/P	46 - 144
2223138	Dacthal	83.9	94.2	P/P	72 - 110
2223138	DDD-p,p'	80.5	87.2	P/P	58 - 123
2223138	DDE-p,p'	68.5	73.7	P/P	52 - 106
2223138	DDT-p,p'	73.1	87.7	P/P	50 - 127
2223138	Delta-BHC	90.8	110	P/P	56 - 222
2223138	Deltamethrin	81.9	102	P/P	47 - 152
2223138	Dichlobenil	51.2	56.5	P/P	22 - 99.0
2223138	Dicofol	125	115	P/P	38 - 145
2223138	Endosulfan I	80.7	97.2	P/P	64 - 124
2223138	Endosulfan II	95.1	110	P/P	52 - 159
2223138	Endosulfan Sulfate	80.4	103	P/P	62 - 136
2223138	Endrin	89.3	99.3	P/P	57 - 126
2223138	Endrin Aldehyde	89.0	106	P/P	41 - 128
2223138	Endrin Ketone	82.7	102	P/P	67 - 129
2223138	Esfenvalerate	66.3	84.0	P/P	50 - 120
2223138	Ethalfuralin	67.4	80.2	P/P	41 - 125
2223138	Fenpropathrin	99.3	124	P/P	40 - 202
2223138	Gamma-BHC	78.7	100	P/P	58 - 180
2223138	Gamma-Chlordane	70.8	81.5	P/P	54 - 103
2223138	Heptachlor	65.8	83.3	P/P	46 - 94.0
2223138	Heptachlor Epoxide	78.5	91.0	P/P	62 - 111
2223138	Hexachlorobenzene	56.5	65.3	P/P	42 - 95.0
2223138	Lambda-Cyhalothrin	69.2	93.0	P/P	37 - 162

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P393293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223138	Methoxychlor	84.2	92.6	P/P	52 - 143
2223138	MGK-264	43.4	45.3	P/P	37 - 102
2223138	Mirex	59.6	73.5	P/P	43 - 91.0
2223138	Permethrin	60.1	75.7	P/P	48 - 113
2223138	Phenothrin	38.9	45.0	P/P	30 - 104
2223138	Piperonyl Butoxide	85.7	101	P/P	67 - 127
2223138	Prallethrin	45.4	47.1	P/P	28 - 102
2223138	Tau-Fluvalinate	75.9	97.7	P/P	46 - 174
2223138	Tetramethrin	80.3	132	P/P	28 - 176
2223138	Trans-Nonachlor	71.0	80.6	P/P	51 - 103
2223138	Triclosan Methyl	84.5	93.8	P/P	67 - 116
2223138	Trifluralin	65.1	75.5	P/P	47 - 118

Reference Method: EPA 8270E

Batch ID: P393299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222710	Acetochlor	75.5	81.5	P/P	66 - 122
2222710	Alachlor	74.9	77.2	P/P	65 - 122
2222710	Ametryn	94.3	101	P/P	45 - 173
2222710	Atrazine Desethyl	82.0	88.5	P/P	25 - 150
2222710	Azinphos Methyl	81.6	90.8	P/P	44 - 174
2222710	Azoxystrobin	138	143	P/P	10 - 268
2222710	Butylate	55.5	58.0	P/P	15 - 97.0
2222710	Carbophenothion	65.6	67.8	P/P	42 - 129
2222710	Carfentrazone Ethyl	68.2	70.4	P/P	62 - 145
2222710	Chlorpyrifos Ethyl	67.0	83.0	P/P	60 - 124
2222710	Chlorpyrifos Methyl	82.6	87.2	P/P	66 - 119
2222710	Cyanazine	82.7	99.4	P/P	17 - 225
2222710	Demeton	98.2	97.6	P/P	36 - 142
2222710	Diazinon	83.4	90.9	P/P	70 - 128
2222710	Difenoconazole	128	141	P/P	33 - 222
2222710	Dimethenamid	71.4	77.1	P/P	54 - 125
2222710	Disulfoton	72.0	80.3	P/P	49 - 133
2222710	Dithiopyr	67.4	76.8	P/P	55 - 123
2222710	EPTC	49.5	48.3	P/P	19 - 91.0
2222710	Ethion	32.6	32.3	P/P	13 - 143
2222710	Ethoprop	100	108	P/P	49 - 144
2222710	Fenamiphos	56.4	62.7	P/P	32 - 136
2222710	Fenbuconazole	83.2	103	P/P	73 - 148
2222710	Fipronil	82.7	93.4	P/P	57 - 129
2222710	Fipronil Desulfinyl	71.6	81.5	P/P	49 - 127
2222710	Fipronil Sulfide	69.7	78.7	P/P	44 - 127
2222710	Fipronil Sulfone	63.7	72.3	P/P	35 - 126
2222710	Fluazifop-P-butyl	71.0	75.9	P/P	67 - 129
2222710	Fludioxonil	66.4	76.6	P/P	61 - 126
2222710	Flumioxazin	151	155	P/P	38 - 279
2222710	Flutolanil	67.0	69.1	P/P	55 - 136
2222710	Fluxapyroxad	49.1	51.2	P/P	33 - 140
2222710	Fonofos	86.2	91.6	P/P	58 - 125
2222710	Hexazinone	81.2	87.7	P/P	57 - 148
2222710	Imazalil	69.0	81.8	P/P	10 - 221

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P393299

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222710	Iprodione	58.3	55.0	P/P	32 - 140
2222710	Malathion	86.3	93.6	P/P	52 - 138
2222710	Metalaxyl	66.6	82.9	P/P	46 - 134
2222710	Metolachlor	67.6	78.6	P/P	58 - 122
2222710	Metribuzin	88.7	103	P/P	16 - 272
2222710	Mevinphos	107	115	P/P	45 - 140
2222710	Molinate	68.1	70.4	P/P	41 - 103
2222710	Myclobutanil	72.0	80.5	P/P	60 - 134
2222710	Naled	50.2	54.3	P/P	20 - 113
2222710	Oxadiazon	66.9	69.7	P/P	44 - 125
2222710	Oxyfluorfen	83.8	87.9	P/P	66 - 176
2222710	Parathion Ethyl	84.0	92.0	P/P	57 - 132
2222710	Parathion Methyl	109	110	P/P	59 - 156
2222710	Pendimethalin	82.6	84.6	P/P	59 - 129
2222710	Phorate	91.8	108	P/P	47 - 136
2222710	Prodiamine	61.2	71.5	P/P	10 - 159
2222710	Prometon	84.7	92.9	P/P	59 - 127
2222710	Prometryn	86.6	97.5	P/P	59 - 129
2222710	Pronamide	109	116	P/P	65 - 145
2222710	Propiconazole	85.6	87.5	P/P	28 - 165
2222710	Pyriproxyfen	66.3	68.7	P/P	21 - 180
2222710	Simazine	97.9	111	P/P	63 - 147
2222710	Sulfentrazone	65.5	75.5	P/P	32 - 136
2222710	Tebuconazole	13.5	14.9	P/P	-8.3 - 117
2222710	Terbufos	89.0	98.4	P/P	61 - 131
2222710	Terbutylazine	80.4	90.9	P/P	62 - 126

Reference Method: EPA 8276

Batch ID: P393293

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2222758	Chlordane	98.2	85.6	P/P	47 - 128
2222758	Toxaphene	164	147	F/P	11 - 163

Reference Method: SM 4500 F-C-2011

Batch ID: P393644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2224031	Fluoride	98.8	99.7	P/P	94 - 107

Reference Method: SM 5310 B-2011

Batch ID: P393427

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223056	Organic Carbon	99.0	95.2	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223023	Turbidity	13.7	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P393327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223063	Turbidity	4.44	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393314

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222986	Barium	0.328	Spike	P	0 - 20
2222986	Calcium	0.276	Spike	P	0 - 20
2222986	Iron	0.383	Spike	P	0 - 20
2222986	Magnesium	0.0518	Spike	P	0 - 20
2222986	Manganese	0.304	Spike	P	0 - 20
2222986	Potassium	1.10	Spike	P	0 - 20
2222986	Sodium	0.782	Spike	P	0 - 20
2222986	Zinc	0.491	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	Aluminum	2.04	Spike	P	0 - 20
2222986	Antimony	1.71	Spike	P	0 - 20
2222986	Arsenic	1.50	Spike	P	0 - 20
2222986	Boron	1.84	Spike	P	0 - 20
2222986	Cadmium	0.922	Spike	P	0 - 20
2222986	Chromium	2.08	Spike	P	0 - 20
2222986	Copper	1.92	Spike	P	0 - 20
2222986	Lead	1.23	Spike	P	0 - 20
2222986	Nickel	1.25	Spike	P	0 - 20
2222986	Selenium	0.147	Spike	P	0 - 20
2222986	Silver	0.890	Spike	P	0 - 20
2222986	Thallium	1.48	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393523

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222431	Chloride	1.42	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393525

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222431	Sulfate	0.922	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393555

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222279	Bromide	0.371	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393513

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222362	Ammonia-N	2.97	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393575

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223045	Ammonia-N	1.04	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223032	Kjeldahl Nitrogen	7.62	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393596

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223024	Kjeldahl Nitrogen	7.54	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223021	NO2NO3-N	1.02	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224228	NO2NO3-N	0.499	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P393434

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222902	Total-P	0.525	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P393436

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223007	Total-P	0.708	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P393328

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223008	O-Phosphate-P	0.0999	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P393329

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223065	O-Phosphate-P	0.538	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P393293

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222758	Aldrin	2.95	Spike	P	0 - 30
2222758	Dieldrin	24.6	Spike	P	0 - 30
2222758	Kepone	0.603	Spike	P	0 - 30
2223138	Alpha-BHC	19.2	Spike	P	0 - 30
2223138	Alpha-Chlordane	13.7	Spike	P	0 - 30
2223138	Beta-BHC	18.2	Spike	P	0 - 30
2223138	Beta-Cyfluthrin	23.5	Spike	P	0 - 30
2223138	Bifenthrin	23.8	Spike	P	0 - 30
2223138	Chlorothalonil	28.2	Spike	P	0 - 30
2223138	Cis-Nonachlor	13.2	Spike	P	0 - 30
2223138	Cypermethrin	30.0	Spike	P	0 - 30
2223138	Dacthal	11.6	Spike	P	0 - 30
2223138	DDD-p,p'	8.06	Spike	P	0 - 30
2223138	DDE-p,p'	7.25	Spike	P	0 - 30
2223138	DDT-p,p'	18.2	Spike	P	0 - 30
2223138	Delta-BHC	18.8	Spike	P	0 - 30
2223138	Deltamethrin	21.6	Spike	P	0 - 30
2223138	Dichlobenil	9.82	Spike	P	0 - 30
2223138	Dicofol	8.21	Spike	P	0 - 30
2223138	Endosulfan I	18.6	Spike	P	0 - 30
2223138	Endosulfan II	14.6	Spike	P	0 - 30
2223138	Endosulfan Sulfate	25.1	Spike	P	0 - 30
2223138	Endrin	10.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P393293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223138	Endrin Aldehyde	17.2	Spike	P	0 - 30
2223138	Endrin Ketone	20.9	Spike	P	0 - 30
2223138	Esfenvalerate	23.6	Spike	P	0 - 30
2223138	Ethalfuralin	17.4	Spike	P	0 - 30
2223138	Fenpropathrin	22.1	Spike	P	0 - 30
2223138	Gamma-BHC	24.3	Spike	P	0 - 30
2223138	Gamma-Chlordane	14.1	Spike	P	0 - 30
2223138	Heptachlor	23.4	Spike	P	0 - 30
2223138	Heptachlor Epoxide	14.7	Spike	P	0 - 30
2223138	Hexachlorobenzene	14.4	Spike	P	0 - 30
2223138	Lambda-Cyhalothrin	29.4	Spike	P	0 - 30
2223138	Methoxychlor	9.48	Spike	P	0 - 30
2223138	MGK-264	4.36	Spike	P	0 - 30
2223138	Mirex	20.9	Spike	P	0 - 30
2223138	Permethrin	22.9	Spike	P	0 - 30
2223138	Phenothrin	14.4	Spike	P	0 - 30
2223138	Piperonyl Butoxide	16.7	Spike	P	0 - 30
2223138	Prallethrin	3.68	Spike	P	0 - 30
2223138	Tau-Fluvalinate	25.1	Spike	P	0 - 30
2223138	Tetramethrin	48.9	Spike	F	0 - 30
2223138	Trans-Nonachlor	12.7	Spike	P	0 - 30
2223138	Triclosan Methyl	10.5	Spike	P	0 - 30
2223138	Trifluralin	14.8	Spike	P	0 - 30
LFB	Aldrin	66.7	LCS	F	0 - 30
LFB	Alpha-BHC	15.8	LCS	P	0 - 30
LFB	Alpha-Chlordane	9.73	LCS	P	0 - 30
LFB	Beta-BHC	10.1	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	13.5	LCS	P	0 - 30
LFB	Bifenthrin	13.8	LCS	P	0 - 30
LFB	Chlorothalonil	16.3	LCS	P	0 - 30
LFB	Cis-Nonachlor	12.2	LCS	P	0 - 30
LFB	Cypermethrin	12.9	LCS	P	0 - 30
LFB	Dacthal	11.6	LCS	P	0 - 30
LFB	DDD-p,p'	12.3	LCS	P	0 - 30
LFB	DDE-p,p'	9.68	LCS	P	0 - 30
LFB	DDT-p,p'	11.0	LCS	P	0 - 30
LFB	Delta-BHC	22.7	LCS	P	0 - 30
LFB	Deltamethrin	16.6	LCS	P	0 - 30
LFB	Dichlobenil	14.5	LCS	P	0 - 30
LFB	Dicofol	12.2	LCS	P	0 - 30
LFB	Dieldrin	21.8	LCS	P	0 - 30
LFB	Endosulfan I	14.9	LCS	P	0 - 30
LFB	Endosulfan II	11.7	LCS	P	0 - 30
LFB	Endosulfan Sulfate	10.3	LCS	P	0 - 30
LFB	Endrin	7.11	LCS	P	0 - 30
LFB	Endrin Aldehyde	12.3	LCS	P	0 - 30
LFB	Endrin Ketone	13.4	LCS	P	0 - 30
LFB	Esfenvalerate	15.5	LCS	P	0 - 30
LFB	Ethalfuralin	13.3	LCS	P	0 - 30
LFB	Fenpropathrin	18.3	LCS	P	0 - 30
LFB	Gamma-BHC	13.9	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P393293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Gamma-Chlordane	13.8	LCS	P	0 - 30
LFB	Heptachlor	12.8	LCS	P	0 - 30
LFB	Heptachlor Epoxide	11.1	LCS	P	0 - 30
LFB	Hexachlorobenzene	9.16	LCS	P	0 - 30
LFB	Kepone	11.3	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	16.4	LCS	P	0 - 30
LFB	Methoxychlor	12.4	LCS	P	0 - 30
LFB	MGK-264	23.1	LCS	P	0 - 30
LFB	Mirex	11.2	LCS	P	0 - 30
LFB	Permethrin	15.2	LCS	P	0 - 30
LFB	Phenothrin	24.7	LCS	P	0 - 30
LFB	Piperonyl Butoxide	13.2	LCS	P	0 - 30
LFB	Prallethrin	20.2	LCS	P	0 - 30
LFB	Tau-Fluvalinate	15.6	LCS	P	0 - 30
LFB	Tetramethrin	11.2	LCS	P	0 - 30
LFB	Trans-Nonachlor	12.1	LCS	P	0 - 30
LFB	Triclosan Methyl	11.5	LCS	P	0 - 30
LFB	Trifluralin	12.2	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P393299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222710	Acetochlor	7.57	Spike	P	0 - 30
2222710	Alachlor	2.99	Spike	P	0 - 30
2222710	Ametryn	6.45	Spike	P	0 - 30
2222710	Atrazine	11.2	Spike	P	0 - 30
2222710	Atrazine Desethyl	7.60	Spike	P	0 - 30
2222710	Azinphos Methyl	10.6	Spike	P	0 - 30
2222710	Azoxystrobin	3.50	Spike	P	0 - 30
2222710	Bromacil	15.0	Spike	P	0 - 30
2222710	Butylate	4.47	Spike	P	0 - 30
2222710	Caffeine	26.7	Spike	P	0 - 30
2222710	Carbophenothion	3.20	Spike	P	0 - 30
2222710	Carfentrazone Ethyl	3.11	Spike	P	0 - 30
2222710	Chlorpyrifos Ethyl	21.3	Spike	P	0 - 30
2222710	Chlorpyrifos Methyl	5.44	Spike	P	0 - 30
2222710	Cyanazine	18.4	Spike	P	0 - 30
2222710	Demeton	0.560	Spike	P	0 - 30
2222710	Diazinon	8.63	Spike	P	0 - 30
2222710	Difenoconazole	9.80	Spike	P	0 - 30
2222710	Dimethenamid	7.73	Spike	P	0 - 30
2222710	Disulfoton	10.9	Spike	P	0 - 30
2222710	Dithiopyr	13.0	Spike	P	0 - 30
2222710	EPTC	2.42	Spike	P	0 - 30
2222710	Ethion	0.873	Spike	P	0 - 30
2222710	Ethoprop	7.64	Spike	P	0 - 30
2222710	Fenamiphos	10.5	Spike	P	0 - 30
2222710	Fenbuconazole	21.6	Spike	P	0 - 30
2222710	Fipronil	11.0	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P393299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222710	Fipronil Desulfenyl	13.0	Spike	P	0 - 30
2222710	Fipronil Sulfide	10.9	Spike	P	0 - 30
2222710	Fipronil Sulfone	10.5	Spike	P	0 - 30
2222710	Fluazifop-P-butyl	6.66	Spike	P	0 - 30
2222710	Fludioxonil	14.3	Spike	P	0 - 30
2222710	Flumioxazin	2.34	Spike	P	0 - 30
2222710	Flutolanil	3.10	Spike	P	0 - 30
2222710	Fluxapyroxad	4.17	Spike	P	0 - 30
2222710	Fonofos	6.08	Spike	P	0 - 30
2222710	Hexazinone	6.63	Spike	P	0 - 30
2222710	Imazalil	17.0	Spike	P	0 - 30
2222710	Iprodione	5.78	Spike	P	0 - 30
2222710	Malathion	8.11	Spike	P	0 - 30
2222710	Metaxyl	10.3	Spike	P	0 - 30
2222710	Metolachlor	9.01	Spike	P	0 - 30
2222710	Metribuzin	14.7	Spike	P	0 - 30
2222710	Mevinphos	7.19	Spike	P	0 - 30
2222710	Molinate	3.37	Spike	P	0 - 30
2222710	Myclobutanil	11.1	Spike	P	0 - 30
2222710	Naled	7.86	Spike	P	0 - 30
2222710	Norflurazon	8.84	Spike	P	0 - 30
2222710	Oxadiazon	4.13	Spike	P	0 - 30
2222710	Oxyfluorfen	4.70	Spike	P	0 - 30
2222710	Parathion Ethyl	9.11	Spike	P	0 - 30
2222710	Parathion Methyl	1.22	Spike	P	0 - 30
2222710	Pendimethalin	2.45	Spike	P	0 - 30
2222710	Phorate	16.0	Spike	P	0 - 30
2222710	Prodiamine	15.4	Spike	P	0 - 30
2222710	Prometon	9.24	Spike	P	0 - 30
2222710	Prometryn	11.8	Spike	P	0 - 30
2222710	Pronamide	6.53	Spike	P	0 - 30
2222710	Propiconazole	2.18	Spike	P	0 - 30
2222710	Pyriproxyfen	3.44	Spike	P	0 - 30
2222710	Simazine	12.5	Spike	P	0 - 30
2222710	Sulfentrazone	14.2	Spike	P	0 - 30
2222710	Tebuconazole	9.82	Spike	P	0 - 30
2222710	Terbufos	9.99	Spike	P	0 - 30
2222710	Terbuthylazine	12.4	Spike	P	0 - 30
LFB	Acetochlor	0.860	LCS	P	0 - 30
LFB	Alachlor	0.322	LCS	P	0 - 30
LFB	Ametryn	2.57	LCS	P	0 - 30
LFB	Atrazine	0.781	LCS	P	0 - 30
LFB	Atrazine Desethyl	1.59	LCS	P	0 - 30
LFB	Azinphos Methyl	1.58	LCS	P	0 - 30
LFB	Azoxystrobin	14.3	LCS	P	0 - 30
LFB	Bromacil	1.14	LCS	P	0 - 30
LFB	Butylate	6.24	LCS	P	0 - 30
LFB	Caffeine	1.83	LCS	P	0 - 30
LFB	Carbophenothion	6.81	LCS	P	0 - 30
LFB	Carfentrazone Ethyl	3.32	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	6.32	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P393299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlorpyrifos Methyl	0.954	LCS	P	0 - 30
LFB	Cyanazine	5.36	LCS	P	0 - 30
LFB	Demeton	3.35	LCS	P	0 - 30
LFB	Diazinon	0.0491	LCS	P	0 - 30
LFB	Difenoconazole	14.7	LCS	P	0 - 30
LFB	Dimethenamid	0.243	LCS	P	0 - 30
LFB	Disulfoton	2.94	LCS	P	0 - 30
LFB	Dithiopyr	2.54	LCS	P	0 - 30
LFB	EPTC	0.239	LCS	P	0 - 30
LFB	Ethion	2.74	LCS	P	0 - 30
LFB	Ethoprop	1.35	LCS	P	0 - 30
LFB	Fenamiphos	4.85	LCS	P	0 - 30
LFB	Fenbuconazole	15.1	LCS	P	0 - 30
LFB	Fipronil	0.994	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	1.09	LCS	P	0 - 30
LFB	Fipronil Sulfide	2.92	LCS	P	0 - 30
LFB	Fipronil Sulfone	5.84	LCS	P	0 - 30
LFB	Fluazifop-P-butyl	0.526	LCS	P	0 - 30
LFB	Fludioxonil	4.66	LCS	P	0 - 30
LFB	Flumioxazin	8.40	LCS	P	0 - 30
LFB	Flutolanil	2.67	LCS	P	0 - 30
LFB	Fluxapyroxad	10.3	LCS	P	0 - 30
LFB	Fonofos	0.280	LCS	P	0 - 30
LFB	Hexazinone	1.05	LCS	P	0 - 30
LFB	Imazalil	0.154	LCS	P	0 - 30
LFB	Iprodione	2.78	LCS	P	0 - 30
LFB	Malathion	2.29	LCS	P	0 - 30
LFB	Metaxyl	0.0488	LCS	P	0 - 30
LFB	Metolachlor	3.66	LCS	P	0 - 30
LFB	Metribuzin	1.42	LCS	P	0 - 30
LFB	Mevinphos	3.24	LCS	P	0 - 30
LFB	Molinate	1.10	LCS	P	0 - 30
LFB	Myclobutanil	6.58	LCS	P	0 - 30
LFB	Naled	0.509	LCS	P	0 - 30
LFB	Norflurazon	2.92	LCS	P	0 - 30
LFB	Oxadiazon	3.88	LCS	P	0 - 30
LFB	Oxyfluorfen	3.99	LCS	P	0 - 30
LFB	Parathion Ethyl	0.121	LCS	P	0 - 30
LFB	Parathion Methyl	6.94	LCS	P	0 - 30
LFB	Pendimethalin	1.66	LCS	P	0 - 30
LFB	Phorate	3.65	LCS	P	0 - 30
LFB	Prodiamine	3.68	LCS	P	0 - 30
LFB	Prometon	4.83	LCS	P	0 - 30
LFB	Prometryn	1.74	LCS	P	0 - 30
LFB	Pronamide	1.19	LCS	P	0 - 30
LFB	Propiconazole	8.23	LCS	P	0 - 30
LFB	Pyriproxyfen	1.90	LCS	P	0 - 30
LFB	Simazine	2.16	LCS	P	0 - 30
LFB	Sulfentrazone	2.99	LCS	P	0 - 30
LFB	Tebuconazole	5.76	LCS	P	0 - 30
LFB	Terbufos	0.394	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
 Batch ID: P393299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Terbutylazine	1.80	LCS	P	0 - 30

Reference Method: EPA 8276
 Batch ID: P393293

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2222758	Chlordane	12.2	Spike	P	0 - 30
2222758	Toxaphene	10.9	Spike	P	0 - 30
LFB	Chlordane	21.6	LCS	P	0 - 30
LFB	Toxaphene	8.58	LCS	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P393311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223020	Color (true)	0.659	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P393638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224031	Total Alkalinity	2.10	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
 Batch ID: P393851

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223023	TDS	4.17	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P393644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2224031	Fluoride	0.457	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
 Batch ID: P393427

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223056	Organic Carbon	2.39	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2223090
Field Sample ID: G2SD0033

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	34.6	P	29 - 92.0
EPA 8276	PCNB	112	P	43 - 134

Lab Sample ID: 2223091
Field Sample ID: G2SD0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	36.6	P	29 - 92.0
EPA 8276	PCNB	99.5	P	43 - 134

Lab Sample ID: 2223092
Field Sample ID: G3SD0154

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	73.8	P	40 - 123
EPA 8270E	Decachlorobiphenyl	70.2	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	36.9	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	39.9	P	33 - 102
EPA 8276	Decachlorobiphenyl	30.1	P	29 - 92.0
EPA 8276	PCNB	85.6	P	43 - 134

Lab Sample ID: 2223093
Field Sample ID: G3SD0154

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	77.2	P	20 - 200
EPA 8270E	Simazine-d10	103	P	73 - 135
EPA 8270E	Terbufos-d10	92.7	P	58 - 130

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A103390

Included Lab Sample IDs: 2223054, 2223055, 2223060

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A103393

Included Lab Sample IDs: 2223054, 2223055, 2223060, 2223063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105
Turbidity	99.5	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A103394

Included Lab Sample IDs: 2223058, 2223059, 2223062, 2223065

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103410

Included Lab Sample IDs: 2223056, 2223057, 2223061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.5	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103435

Included Lab Sample IDs: 2223094, 2223095, 2223096, 2223097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	96.1	99.6	P/P	90 - 110
Barium	99.2	96.1	P/P	90 - 110
Calcium	95.4	97.3	P/P	90 - 110
Calcium	99.4	95.4	P/P	90 - 110
Iron	96.4	98.7	P/P	90 - 110
Iron	99.7	96.4	P/P	90 - 110
Magnesium	95.5	97.8	P/P	90 - 110
Magnesium	99.6	95.5	P/P	90 - 110
Manganese	98.0	100	P/P	90 - 110
Manganese	99.8	98.0	P/P	90 - 110
Potassium	96.4	96.9	P/P	90 - 110
Potassium	98.2	96.4	P/P	90 - 110
Sodium	98.1	98.6	P/P	90 - 110
Sodium	99.9	98.1	P/P	90 - 110
Zinc	101	96.6	P/P	90 - 110
Zinc	96.6	102	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A103443

Included Lab Sample IDs: 2223056, 2223057, 2223061, 2223064

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

Reference Method: SM 5310 B-2011

Run ID: A103443

Included Lab Sample IDs: 2223056, 2223057, 2223061, 2223064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	98.6	P/P	90 - 110
Organic Carbon	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103476

Included Lab Sample IDs: 2223061, 2223064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.6	P/P	90 - 110
Total-P	97.7	98.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103478

Included Lab Sample IDs: 2223064

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103480

Included Lab Sample IDs: 2223094, 2223095, 2223096, 2223097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	93.7	95.2	P/P	90 - 110
Antimony	95.1	96.0	P/P	90 - 110
Arsenic	93.2	93.9	P/P	90 - 110
Boron	97.4	98.4	P/P	90 - 110
Cadmium	90.5	90.9	P/P	90 - 110
Chromium	90.2	90.2	P/P	90 - 110
Copper	90.3	90.3	P/P	90 - 110
Lead	95.9	96.6	P/P	90 - 110
Nickel	90.0	90.3	P/P	90 - 110
Selenium	92.2	91.0	P/P	90 - 110
Thallium	107	107	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103481

Included Lab Sample IDs: 2223054, 2223055, 2223060

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A103482

Included Lab Sample IDs: 2223063

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103495

Included Lab Sample IDs: 2223056, 2223057

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.5	97.5	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103500

Included Lab Sample IDs: 2223056, 2223057, 2223061

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103502

Included Lab Sample IDs: 2223094, 2223095, 2223096, 2223097

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	92.5	95.8	P/P	90 - 110
Silver	100	104	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A103503

Included Lab Sample IDs: 2223092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Alpha-BHC	93.2		P	80 - 120
Alpha-Chlordane	96.7		P	80 - 120
Beta-BHC	98.2		P	80 - 120
Beta-Cyfluthrin	88.0		P	80 - 120
Bifenthrin	103		P	80 - 120
Chlorothalonil	92.0		P	80 - 120
Cis-Nonachlor	95.7		P	80 - 120
Cypermethrin	92.6		P	80 - 120
Dacthal	97.3		P	80 - 120
DDD-p,p'	99.0		P	80 - 120
DDE-p,p'	100		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	88.7		P	80 - 120
Deltamethrin	108		P	80 - 120
Dichlobenil	91.1		P	80 - 120
Dicofol	93.5		P	80 - 120
Endosulfan I	98.4		P	80 - 120
Endosulfan II	92.7		P	80 - 120
Endosulfan Sulfate	93.9		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	92.2		P	80 - 120
Endrin Ketone	97.3		P	80 - 120
Esfenvalerate	93.7		P	80 - 120
Ethalfuralin	103		P	80 - 120
Fenpropathrin	82.7		P	80 - 120
Gamma-BHC	99.4		P	80 - 120
Gamma-Chlordane	97.0		P	80 - 120
Heptachlor	91.2		P	80 - 120
Heptachlor Epoxide	94.6		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103503
Included Lab Sample IDs: 2223092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Hexachlorobenzene	112		P	80 - 120
Lambda-Cyhalothrin	91.1		P	80 - 120
Methoxychlor	103		P	80 - 120
MGK-264	96.1		P	80 - 120
Mirex	97.9		P	80 - 120
Permethrin	89.1		P	80 - 120
Phenothrin	89.0		P	80 - 120
Piperonyl Butoxide	100		P	80 - 120
Prallethrin	87.7		P	80 - 120
Tau-Fluvalinate	95.2		P	80 - 120
Tetramethrin	106		P	80 - 120
Trans-Nonachlor	94.5		P	80 - 120
Triclosan Methyl	94.2		P	80 - 120
Trifluralin	99.7		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A103513
Included Lab Sample IDs: 2223064

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

Reference Method: SM 2320 B-2011
Run ID: A103529
Included Lab Sample IDs: 2223054, 2223055, 2223060, 2223063

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.0	106	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A103529
Included Lab Sample IDs: 2223054, 2223055, 2223060, 2223063

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

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A103537
Included Lab Sample IDs: 2223056, 2223057, 2223061, 2223064

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	102	P/P	90 - 110
Kjeldahl Nitrogen	103	97.8	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A103633
Included Lab Sample IDs: 2223093

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	94.0		P	80 - 120
Alachlor	95.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103633
Included Lab Sample IDs: 2223093

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ametryn	86.2		P	80 - 120
Atrazine	97.5		P	80 - 120
Atrazine Desethyl	92.4		P	80 - 120
Azinphos Methyl	86.4		P	80 - 120
Azoxystrobin	87.5		P	80 - 120
Butylate	99.7		P	80 - 120
Caffeine	105		P	70 - 120
Carbophenothion	92.4		P	80 - 120
Carfentrazone Ethyl	91.5		P	80 - 120
Chlorpyrifos Ethyl	95.7		P	80 - 120
Chlorpyrifos Methyl	96.7		P	80 - 120
Cyanazine	96.8		P	80 - 120
Demeton	96.7		P	80 - 120
Diazinon	86.4		P	80 - 120
Difenoconazole	95.7		P	80 - 120
Dimethenamid	93.7		P	80 - 120
Disulfoton	93.9		P	80 - 120
Dithiopyr	94.4		P	80 - 120
EPTC	95.8		P	80 - 120
Ethion	93.7		P	80 - 120
Ethoprop	97.4		P	80 - 120
Fenamiphos	100		P	80 - 120
Fenbuconazole	99.8		P	80 - 120
Fipronil	97.1		P	80 - 120
Fipronil Desulfinyl	92.4		P	80 - 120
Fipronil Sulfide	98.4		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Fluazifop-P-butyl	89.6		P	80 - 120
Fludioxonil	100		P	80 - 120
Flumioxazin	89.0		P	80 - 120
Flutolanil	95.3		P	80 - 120
Fluxapyroxad	96.5		P	80 - 120
Fonofos	100		P	80 - 120
Hexazinone	95.2		P	80 - 120
Imazalil	102		P	80 - 120
Iprodione	96.5		P	80 - 120
Malathion	95.2		P	80 - 120
Metalaxyl	95.6		P	80 - 120
Metolachlor	96.8		P	80 - 120
Metribuzin	107		P	80 - 120
Mevinphos	103		P	80 - 120
Molinate	96.7		P	80 - 120
Myclobutanil	97.4		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	95.7		P	80 - 120
Oxadiazon	95.5		P	80 - 120
Oxyfluorfen	99.9		P	80 - 120
Parathion Ethyl	97.6		P	80 - 120
Parathion Methyl	102		P	80 - 120
Pendimethalin	99.2		P	80 - 120
Phorate	91.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103633
Included Lab Sample IDs: 2223093

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Prodiamine	109		P	80 - 120
Prometon	97.4		P	80 - 120
Prometryn	94.4		P	80 - 120
Pronamide	91.9		P	80 - 120
Propiconazole	97.6		P	80 - 120
Pyriproxyfen	107		P	80 - 120
Simazine	97.2		P	80 - 120
Sulfentrazone	95.4		P	80 - 120
Tebuconazole	97.6		P	80 - 120
Terbufos	94.3		P	80 - 120
Terbuthylazine	93.5		P	80 - 120

Reference Method: EPA 8270E
Run ID: A103640
Included Lab Sample IDs: 2223093

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromacil	99.0		P	80 - 120

Reference Method: EPA 8276
Run ID: A103682
Included Lab Sample IDs: 2223090, 2223091, 2223092

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.4		P	80 - 120
Toxaphene	97.8		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						13.7	
	Turbidity						4.44	
EPA 200.7 Rev. 4.4	Barium	97.1		101	100	94.4		0.328
	Calcium	101		98.3	88.8			0.276
	Iron	104		105	105	103		0.383
	Magnesium	101		97.8	91.4			0.0518
	Manganese	98.0		100	100	95.9		0.304
	Potassium	100		102	100	96.7		1.10
	Sodium	103		101	93.0			0.782
	Zinc	93.6		97.1	96.6	93.8		0.491
EPA 200.8 Rev. 5.4	Aluminum	99.0		97.4	99.4	96.4		2.04
	Antimony	102		104	106	104		1.71
	Arsenic	97.2		99.4	101	101		1.50
	Boron	96.4		95.7	97.7	96.6		1.84
	Cadmium	89.6		94.8	94.0	92.1		0.922
	Chromium	94.4		91.8	93.7	90.0		2.08
	Copper	94.6		92.2	94.0	94.2		1.92
	Lead	99.7		98.2	99.4	100		1.23
	Nickel	94.7		92.4	93.5	92.9		1.25
	Selenium	91.7		94.5	94.7	98.2		0.147
	Silver	106		107	106	104		0.890
	Thallium	100		99.6	101	100		1.48
EPA 300.0 Rev. 2.1	Bromide	103		101	101	101		0.371
	Chloride	103		102	99.7		1.42	
	Sulfate	103		101	97.4		0.922	
EPA 350.1 Rev. 2.0	Ammonia-N	98.5		108	104			2.97
	Ammonia-N	103		98.5	99.8			1.04
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		102	113			7.62
	Kjeldahl Nitrogen	104		95.0	104			7.54
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.0		99.0	98.0			1.02
	NO ₂ NO ₃ -N	99.5		100	100			0.499
EPA 365.1 Rev. 2.0	Total-P	106		98.0	98.5			0.525
	Total-P	104		106	105			0.708
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.6		100	100			0.0999
	O-Phosphate-P	101		98.4	97.5			0.538
EPA 8270E	Acetochlor	81.5	82.2	81.5	75.5	0.860		7.57
	Alachlor	78.9	78.6	77.2	74.9	0.322		2.99
	Aldrin	20.9	41.9	57.3	55.6	66.7		2.95
	Alpha-BHC	85.7	73.2	84.5	69.7	15.8		19.2
	Alpha-Chlordane	89.3	81.0	85.9	74.9	9.73		13.7
	Ametryn	96.6	94.1	101	94.3	2.57		6.45
	Atrazine	95.9	96.6			0.781		11.2
	Atrazine Desethyl	86.1	87.5	88.5	82.0	1.59		7.60
	Azinphos Methyl	98.5	96.9	90.8	81.6	1.58		10.6
	Azoxystrobin	174	151	143	138	14.3		3.50
	Beta-BHC	98.2	88.7	95.3	79.4	10.1		18.2
	Beta-Cyfluthrin	87.7	76.6	66.0	83.6	13.5		23.5
	Bifenthrin	82.2	71.6	68.4	86.9	13.8		23.8
	Bromacil	80.9	80.0			1.14		15.0
	Butylate	58.8	62.6	58.0	55.5	6.24		4.47
	Caffeine	97.5	95.8			1.83		26.7
	Carbophenothion	76.3	71.2	67.8	65.6	6.81		3.20
	Carfentrazone Ethyl	80.5	77.9	70.4	68.2	3.32		3.11
	Chlorothalonil	93.8	79.7	100	75.6	16.3		28.2

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Chlorpyrifos Ethyl	76.3	71.6	83.0	67.0	6.32		21.3
	Chlorpyrifos Methyl	88.8	87.9	87.2	82.6	0.954		5.44
	Cis-Nonachlor	93.2	82.5	88.4	77.4	12.2		13.2
	Cyanazine	105	99.6	99.4	82.7	5.36		18.4
	Cypermethrin	88.5	77.8	98.2	72.6	12.9		30.0
	Dacthal	99.8	88.9	94.2	83.9	11.6		11.6
	DDD-p,p'	96.2	85.0	87.2	80.5	12.3		8.06
	DDE-p,p'	80.5	73.1	73.7	68.5	9.68		7.25
	DDT-p,p'	88.5	79.3	87.7	73.1	11.0		18.2
	Delta-BHC	106	84.7	90.8	110	22.7		18.8
	Deltamethrin	97.7	82.7	102	81.9	16.6		21.6
	Demeton	85.5	88.4	97.6	98.2	3.35		0.560
	Diazinon	84.0	84.1	90.9	83.4	0.0491		8.63
	Dichlobenil	61.0	52.7	56.5	51.2	14.5		9.82
	Dicofol	143	127	115	125	12.2		8.21
	Dieldrin	61.7	76.7	81.2	63.4	21.8		24.6
	Difenoconazole	146	126	141	128	14.7		9.80
	Dimethenamid	79.2	79.4	77.1	71.4	0.243		7.73
	Disulfoton	80.9	78.6	80.3	72.0	2.94		10.9
	Dithiopyr	69.5	71.3	76.8	67.4	2.54		13.0
	Endosulfan I	95.6	82.4	97.2	80.7	14.9		18.6
	Endosulfan II	114	101	110	95.1	11.7		14.6
	Endosulfan Sulfate	96.7	87.2	103	80.4	10.3		25.1
	Endrin	97.6	90.9	99.3	89.3	7.11		10.6
	Endrin Aldehyde	107	94.6	106	89.0	12.3		17.2
	Endrin Ketone	102	89.1	102	82.7	13.4		20.9
	EPTC	57.6	57.7	48.3	49.5	0.239		2.42
	Esfenvalerate	83.7	71.7	84.0	66.3	15.5		23.6
	Ethalfuralin	82.0	71.8	80.2	67.4	13.3		17.4
	Ethion	43.8	42.6	32.3	32.6	2.74		0.873
	Ethoprop	98.3	99.6	108	100	1.35		7.64
	Fenamiphos	85.4	81.4	62.7	56.4	4.85		10.5
	Fenbuconazole	106	90.8	103	83.2	15.1		21.6
	Fenpropathrin	117	97.6	124	99.3	18.3		22.1
	Fipronil	82.9	83.7	93.4	82.7	0.994		11.0
	Fipronil Desulfinyl	76.6	77.5	81.5	71.6	1.09		13.0
	Fipronil Sulfide	81.6	79.3	78.7	69.7	2.92		10.9
	Fipronil Sulfone	77.6	73.2	72.3	63.7	5.84		10.5
	Fluazifop-P-butyl	78.2	77.8	75.9	71.0	0.526		6.66
	Fludioxonil	76.1	72.7	76.6	66.4	4.66		14.3
	Flumioxazin	136	125	155	151	8.40		2.34
	Flutolanil	81.7	79.6	69.1	67.0	2.67		3.10
	Fluxapyroxad	63.0	56.8	51.2	49.1	10.3		4.17
	Fonofos	90.4	90.1	91.6	86.2	0.280		6.08
	Gamma-BHC	96.8	84.2	78.7	100	13.9		24.3
	Gamma-Chlordane	87.6	76.3	81.5	70.8	13.8		14.1
	Heptachlor	72.4	63.7	83.3	65.8	12.8		23.4
	Heptachlor Epoxide	93.5	83.7	91.0	78.5	11.1		14.7
	Hexachlorobenzene	68.9	62.9	65.3	56.5	9.16		14.4
	Hexazinone	80.8	81.7	87.7	81.2	1.05		6.63
	Imazalil	78.1	78.2	81.8	69.0	0.154		17.0
	Iprodione	60.5	58.9	55.0	58.3	2.78		5.78
	Kepone	101	114	56.5	56.1	11.3		0.603
	Lambda-Cyhalothrin	86.1	73.1	93.0	69.2	16.4		29.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Malathion	96.3	94.1	93.6	86.3	2.29	8.11
	Metalaxyl	76.8	76.8	82.9	66.6	0.0488	10.3
	Methoxychlor	101	89.6	92.6	84.2	12.4	9.48
	Metolachlor	78.7	75.9	78.6	67.6	3.66	9.01
	Metribuzin	100	98.7	103	88.7	1.42	14.7
	Mevinphos	93.4	96.5	115	107	3.24	7.19
	MGK-264	67.5	53.5	45.3	43.4	23.1	4.36
	Mirex	70.6	63.1	73.5	59.6	11.2	20.9
	Molinate	72.5	73.3	70.4	68.1	1.10	3.37
	Myclobutanil	74.4	69.7	80.5	72.0	6.58	11.1
	Naled	38.3	38.1	54.3	50.2	0.509	7.86
	Norflurazon	74.7	72.5			2.92	8.84
	Oxadiazon	73.5	70.7	69.7	66.9	3.88	4.13
	Oxyfluorfen	85.1	81.8	87.9	83.8	3.99	4.70
	Parathion Ethyl	86.8	86.9	92.0	84.0	0.121	9.11
	Parathion Methyl	102	109	110	109	6.94	1.22
	Pendimethalin	76.4	77.6	84.6	82.6	1.66	2.45
	Permethrin	74.1	63.6	75.7	60.1	15.2	22.9
	Phenothrin	51.1	39.9	45.0	38.9	24.7	14.4
	Phorate	88.7	92.0	108	91.8	3.65	16.0
	Piperonyl Butoxide	106	92.5	85.7	101	13.2	16.7
	Prallethrin	67.2	54.8	45.4	47.1	20.2	3.68
	Prodiamine	53.4	51.5	71.5	61.2	3.68	15.4
	Prometon	91.7	87.4	92.9	84.7	4.83	9.24
	Prometryn	91.1	92.7	97.5	86.6	1.74	11.8
	Pronamide	94.9	93.8	116	109	1.19	6.53
	Propiconazole	79.7	73.4	87.5	85.6	8.23	2.18
	Pyriproxyfen	80.6	79.1	68.7	66.3	1.90	3.44
	Simazine	96.2	98.3	111	97.9	2.16	12.5
	Sulfentrazone	51.7	50.2	75.5	65.5	2.99	14.2
	Tau-Fluvalinate	94.9	81.1	75.9	97.7	15.6	25.1
	Tebuconazole	15.2	16.1	14.9	13.5	5.76	9.82
	Terbufos	89.7	90.0	98.4	89.0	0.394	9.99
	Terbuthylazine	86.5	84.9	90.9	80.4	1.80	12.4
	Tetramethrin	102	91.2	80.3	132	11.2	48.9
	Trans-Nonachlor	87.0	77.1	71.0	80.6	12.1	12.7
	Triclosan Methyl	102	90.8	84.5	93.8	11.5	10.5
	Trifluralin	79.1	70.0	65.1	75.5	12.2	14.8
EPA 8276	Chlordane	72.6	90.1	98.2	85.6	21.6	12.2
	Toxaphene	94.7	103	164	147	8.58	10.9
SM 2120 B-2011	Color (true)	99.6				0.659	
SM 2320 B-2011	Total Alkalinity	97.4				2.10	
SM 2540 C-2011	TDS					4.17	
SM 4500 F-C-2011	Fluoride	97.6		98.8	99.7		0.457
SM 5310 B-2011	Organic Carbon	101		99.0	95.2		2.39

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2223054, 2223055, 2223060, 2223063
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2223094, 2223095, 2223096, 2223097

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2223094, 2223095, 2223096, 2223097
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2223063
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2223054, 2223055, 2223060
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2223054, 2223055, 2223060
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2223056, 2223057, 2223061, 2223064
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2223056, 2223057, 2223061, 2223064
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2223056, 2223057, 2223061, 2223064
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2223056, 2223057, 2223061, 2223064
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2223058, 2223059, 2223062, 2223065
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2223092
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2223092
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2223093
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2223090, 2223091, 2223092
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2223054, 2223055, 2223060
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2223054, 2223055, 2223060, 2223063
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2223094, 2223095, 2223096, 2223097
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2223054, 2223055, 2223060
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2223054, 2223055, 2223060, 2223063
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2223054, 2223055, 2223060, 2223063
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2223056, 2223057, 2223061, 2223064

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	02/03/2021			02/03/2021 14:10	Yen Ta	2223054, 2223055, 2223060, 2223063
EPA 200.7 Rev. 4.4	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/04/2021 16:43	Betina Topolski	2223094
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/04/2021 17:42	Betina Topolski	2223095
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/04/2021 17:50	Betina Topolski	2223096
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/04/2021 17:58	Betina Topolski	2223097
EPA 200.8 Rev. 5.4	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/08/2021 18:17	Alexander Thompson	2223095
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/08/2021 18:25	Alexander Thompson	2223096
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/08/2021 18:32	Alexander Thompson	2223097
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/08/2021 18:39	Alexander Thompson	2223094
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/09/2021 14:14	Alexander Thompson	2223095
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/09/2021 14:19	Alexander Thompson	2223096
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/09/2021 14:23	Alexander Thompson	2223097
	02/03/2021	02/03/2021 16:10	Elliott D. Healy	02/09/2021 14:28	Alexander Thompson	2223094
EPA 300.0 Rev. 2.1	02/03/2021			02/09/2021 02:39	Lipi Saha	2223063
	02/03/2021			02/09/2021 05:11	Lipi Saha	2223054
	02/03/2021			02/09/2021 05:23	Lipi Saha	2223055
	02/03/2021			02/09/2021 05:35	Lipi Saha	2223060
EPA 350.1 Rev. 2.0	02/03/2021			02/08/2021 17:21	Ping Hua	2223064
	02/03/2021			02/09/2021 14:45	Julia Storbeck	2223056
	02/03/2021			02/09/2021 14:47	Julia Storbeck	2223057
	02/03/2021			02/09/2021 14:48	Julia Storbeck	2223061
EPA 351.2 Rev. 2.0	02/03/2021	02/10/2021 12:11	Yen Ta	02/11/2021 11:55	Julia Storbeck	2223064
	02/03/2021	02/10/2021 12:24	Yen Ta	02/11/2021 10:58	Julia Storbeck	2223056
	02/03/2021	02/10/2021 12:24	Yen Ta	02/11/2021 10:59	Julia Storbeck	2223057
	02/03/2021	02/10/2021 12:24	Yen Ta	02/11/2021 11:01	Julia Storbeck	2223061
EPA 353.2 Rev. 2.0	02/03/2021			02/04/2021 10:01	Beverly Y. Sanders	2223056
	02/03/2021			02/04/2021 10:02	Beverly Y. Sanders	2223057
	02/03/2021			02/04/2021 10:03	Beverly Y. Sanders	2223061
	02/03/2021			02/10/2021 09:11	Beverly Y. Sanders	2223064
EPA 365.1 Rev. 2.0	02/03/2021	02/05/2021 14:15	Lipi Saha	02/08/2021 13:53	Shengyu Wang	2223064
	02/03/2021	02/05/2021 14:15	Lipi Saha	02/08/2021 14:21	Shengyu Wang	2223061
	02/03/2021	02/05/2021 14:15	Lipi Saha	02/09/2021 16:00	Shengyu Wang	2223056
	02/03/2021	02/05/2021 14:15	Lipi Saha	02/09/2021 16:01	Shengyu Wang	2223057
EPA 365.1 Rev. 2.0 dissolved	02/03/2021			02/03/2021 15:48	Virginia P. Brown	2223058
	02/03/2021			02/03/2021 15:49	Virginia P. Brown	2223059
	02/03/2021			02/03/2021 15:50	Virginia P. Brown	2223062
	02/03/2021			02/03/2021 15:53	Virginia P. Brown	2223065
EPA 8270E	02/03/2021	02/04/2021 08:30	Rasheda Ghaffari	02/10/2021 22:39	Vandana T. Nagar	2223093
	02/03/2021	02/04/2021 08:30	Rasheda Ghaffari	02/12/2021 18:04	Vandana T. Nagar	2223093
	02/03/2021	02/05/2021 08:00	Fe-Val Siddell	02/08/2021 21:34	Michael Poppell	2223092

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270E	02/03/2021	02/05/2021 08:00	Fe-Val Siddell	02/10/2021 16:24	Julie Wi	2223092
EPA 8276	02/03/2021	02/05/2021 08:00	Fe-Val Siddell	02/18/2021 10:57	Arthur Maknenko	2223090
	02/03/2021	02/05/2021 08:00	Fe-Val Siddell	02/18/2021 11:53	Arthur Maknenko	2223091
	02/03/2021	02/05/2021 08:00	Fe-Val Siddell	02/18/2021 12:48	Arthur Maknenko	2223092
	02/03/2021			02/03/2021 15:11	Benjamin T. Nordmann	2223054
SM 2120 B-2011	02/03/2021			02/03/2021 15:12	Benjamin T. Nordmann	2223055
	02/03/2021			02/03/2021 15:13	Benjamin T. Nordmann	2223060
	02/03/2021			02/09/2021 08:19	Dale L. Simmons	2223054
SM 2320 B-2011	02/03/2021			02/09/2021 08:32	Dale L. Simmons	2223055
	02/03/2021			02/09/2021 08:45	Dale L. Simmons	2223060
	02/03/2021			02/09/2021 09:08	Dale L. Simmons	2223063
	02/03/2021			02/04/2021 16:43	Betina Topolski	2223094
SM 2340B	02/03/2021			02/04/2021 17:42	Betina Topolski	2223095
	02/03/2021			02/04/2021 17:50	Betina Topolski	2223096
	02/03/2021			02/04/2021 17:58	Betina Topolski	2223097
	02/03/2021			02/05/2021 14:39	Yijie Li	2223054, 2223055, 2223060
SM 2540 C-2011	02/03/2021			02/05/2021 14:39	Yijie Li	2223054, 2223055, 2223060, 2223063
SM 2540 D-2011	02/03/2021			02/09/2021 08:19	Dale L. Simmons	2223054
SM 4500 F-C-2011	02/03/2021			02/09/2021 08:32	Dale L. Simmons	2223055
	02/03/2021			02/09/2021 08:45	Dale L. Simmons	2223060
	02/03/2021			02/09/2021 09:08	Dale L. Simmons	2223063
	02/03/2021			02/04/2021 19:58	Touraj Touran	2223056
SM 5310 B-2011	02/03/2021			02/04/2021 20:54	Touraj Touran	2223057
	02/03/2021			02/05/2021 01:27	Touraj Touran	2223061
	02/03/2021			02/05/2021 01:42	Touraj Touran	2223064