

Chemical Analysis Report

NW-DIST-2020-07-07-01

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

Event Description: **Pensacola Bayous**
Request ID: **RQ-2020-07-06-57**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 29-JUL-2020 10:10

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the "T" and a long horizontal stroke at the end.

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: 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: BAYOU CHICO NW OF BRIDGE

Collection Date/Time: 07/06/2020 11:07

Field ID: G4NW0450

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180892	EPA 8321B	2,4-D	0.0020	U	ug/L	P384189	
		Acesulfame K**	0.10	UJ	ug/L	P384190	SUR
		AMPA**	1.0	U	ug/L	P384190	
		Sucralose**	0.074		ug/L	P384190	
		Acetaminophen**	0.0080	U	ug/L	P384189	
		Acetamiprid**	0.0020	U	ug/L	P384189	
		Endothall**	0.25	UJ	ug/L	P384190	SUR
		Glufosinate**	1.0	U	ug/L	P384190	
		Glyphosate**	1.0	U	ug/L	P384190	
		Afidopyropen**	0.0020	U	ug/L	P384189	
		Bentazon	8.0E-04	U	ug/L	P384189	
		Benzovindiflupyr**	0.0020	U	ug/L	P384189	
		Carbamazepine**	8.0E-04	U	ug/L	P384189	
		Clothianidin**	0.0020	U	ug/L	P384189	
		Dinotefuran**	0.0020	U	ug/L	P384189	
		Diuron	0.0025	I	ug/L	P384189	
		Fenuron	0.016	U	ug/L	P384189	
		Fluridone**	8.0E-04	U	ug/L	P384189	
		Imazapyr**	0.0040	U	ug/L	P384189	
		Hydrocodone**	0.0020	U	ug/L	P384189	
		Ibuprofen**	0.020	U	ug/L	P384189	
		Imidacloprid	0.0020	U	ug/L	P384189	
		Linuron	0.0040	U	ug/L	P384189	
		Mandestrobin**	0.0020	U	ug/L	P384189	
		MCPP	0.0020	U	ug/L	P384189	
		Naproxen**	0.0080	U	ug/L	P384189	
		Primidone**	0.0040	U	ug/L	P384189	
		Pyraclostrobin**	0.0020	U	ug/L	P384189	
		Thiamethoxam**	0.0020	U	ug/L	P384189	
		Tolfenpyrad**	0.0020	U	ug/L	P384189	
		Triclopyr**	0.0040	U	ug/L	P384189	
2180896	EPA 8270E	Aldrin	4.3	U	ng/L	P384221	
		Alpha-BHC	2.2	U	ng/L	P384221	
		Alpha-Chlordane	1.1	U	ng/L	P384221	
		Beta-BHC	8.6	U	ng/L	P384221	
		Beta-Cyfluthrin**	16	U	ng/L	P384221	
		Bifenthrin**	4.3	U	ng/L	P384221	
		Delta-BHC	8.6	U	ng/L	P384221	
		Gamma-BHC	8.6	U	ng/L	P384221	
		Chlorothalonil	2.2	UJ	ng/L	P384221	CCV, RPD
		Cis-Nonachlor**	1.1	U	ng/L	P384221	
		Cypermethrin	22	U	ng/L	P384221	
		Dacthal**	1.1	U	ng/L	P384221	
		DDD-p,p'	5.4	U	ng/L	P384221	

Field ID: G4NW0450

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180896	EPA 8270E	DDE-p,p'	5.4	U	ng/L	P384221	
		DDT-p,p'	6.5	U	ng/L	P384221	
		Dicofol	32	U	ng/L	P384221	
		Dieldrin	4.3	U	ng/L	P384221	
		Endosulfan I	4.3	U	ng/L	P384221	
		Endosulfan II	4.3	U	ng/L	P384221	
		Endosulfan Sulfate	2.2	U	ng/L	P384221	
		Endrin	2.2	U	ng/L	P384221	
		Endrin Aldehyde	2.2	U	ng/L	P384221	
		Endrin Ketone	2.2	U	ng/L	P384221	
		Ethalfuralin**	3.2	U	ng/L	P384221	
		Gamma-Chlordane	1.1	U	ng/L	P384221	
		Heptachlor	1.6	U	ng/L	P384221	
		Heptachlor Epoxide	2.2	U	ng/L	P384221	
		Hexachlorobenzene	2.2	U	ng/L	P384221	
		Lambda-Cyhalothrin**	16	UJ	ng/L	P384221	CCV
		Methoxychlor	4.3	U	ng/L	P384221	
		Mirex	2.2	U	ng/L	P384221	
		Permethrin	11	U	ng/L	P384221	
		Phenothrin**	32	U	ng/L	P384221	
		Prallethrin**	27	UJ	ng/L	P384221	CCV
		Trans-Nonachlor**	1.1	U	ng/L	P384221	
		Trifluralin	2.7	U	ng/L	P384221	
	EPA 8276	Chlordane	7.9	I	ng/L	P384221	
		Toxaphene	32	U	ng/L	P384221	

Ref. Method and Comment:

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Sample Location: BAYOU CHICO WESTERN ARM

Collection Date/Time: 07/06/2020 11:23

Field ID: G4NW0451

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180893	EPA 8321B	2,4-D	0.014		ug/L	P384189	
		Acesulfame K**	0.10	UJ	ug/L	P384190	SUR
		AMPA**	1.0	U	ug/L	P384190	
		Sucralose**	0.17		ug/L	P384190	
		Acetaminophen**	0.0091	I	ug/L	P384189	
		Acetamiprid**	0.0020	U	ug/L	P384189	
		Endothall**	0.25	UJ	ug/L	P384190	SUR
		Glufosinate**	1.0	U	ug/L	P384190	
		Glyphosate**	1.0	U	ug/L	P384190	
		Afidopyropen**	0.0020	U	ug/L	P384189	
		Bentazon	8.0E-04	U	ug/L	P384189	
		Benzovindiflupyr**	0.0020	U	ug/L	P384189	
		Carbamazepine**	8.0E-04	U	ug/L	P384189	
		Clothianidin**	0.0020	U	ug/L	P384189	
		Dinotefuran**	0.0020	U	ug/L	P384189	
		Diuron	0.0028	I	ug/L	P384189	
		Fenuron	0.016	U	ug/L	P384189	
		Fluridone**	8.0E-04	U	ug/L	P384189	
		Imazapyr**	0.0040	U	ug/L	P384189	
		Hydrocodone**	0.0020	U	ug/L	P384189	
		Ibuprofen**	0.020	U	ug/L	P384189	
		Imidacloprid	0.0042	I	ug/L	P384189	
		Linuron	0.0040	U	ug/L	P384189	
		Mandestrobin**	0.0020	U	ug/L	P384189	
		MCPP	0.0020	U	ug/L	P384189	
		Naproxen**	0.0080	U	ug/L	P384189	
		Primidone**	0.0040	U	ug/L	P384189	
		Pyraclostrobin**	0.0020	U	ug/L	P384189	
		Thiamethoxam**	0.0020	U	ug/L	P384189	
		Tolfenpyrad**	0.0020	U	ug/L	P384189	
		Triclopyr**	0.0040	U	ug/L	P384189	
2180897	EPA 8270E	Aldrin	4.5	U	ng/L	P384221	
		Alpha-BHC	2.3	U	ng/L	P384221	
		Alpha-Chlordane	1.1	U	ng/L	P384221	
		Beta-BHC	9.0	U	ng/L	P384221	
		Beta-Cyfluthrin**	17	U	ng/L	P384221	
		Bifenthrin**	4.5	U	ng/L	P384221	
		Delta-BHC	9.0	U	ng/L	P384221	
		Gamma-BHC	9.0	U	ng/L	P384221	
		Chlorothalonil	2.3	UJ	ng/L	P384221	CCV, RPD
		Cis-Nonachlor**	1.1	U	ng/L	P384221	
		Cypermethrin	23	U	ng/L	P384221	
		Dacthal**	1.1	U	ng/L	P384221	
		DDD-p,p'	5.6	U	ng/L	P384221	

Field ID: G4NW0451

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180897	EPA 8270E	DDE-p,p'	5.6	U	ng/L	P384221	
		DDT-p,p'	6.8	U	ng/L	P384221	
		Dicofol	34	U	ng/L	P384221	
		Dieldrin	4.5	U	ng/L	P384221	
		Endosulfan I	4.5	U	ng/L	P384221	
		Endosulfan II	4.5	U	ng/L	P384221	
		Endosulfan Sulfate	2.3	U	ng/L	P384221	
		Endrin	2.3	U	ng/L	P384221	
		Endrin Aldehyde	2.3	U	ng/L	P384221	
		Endrin Ketone	2.3	U	ng/L	P384221	
		Ethalfuralin**	3.4	U	ng/L	P384221	
		Gamma-Chlordane	1.1	U	ng/L	P384221	
		Heptachlor	1.7	U	ng/L	P384221	
		Heptachlor Epoxide	2.3	U	ng/L	P384221	
		Hexachlorobenzene	2.3	U	ng/L	P384221	
		Lambda-Cyhalothrin**	17	UJ	ng/L	P384221	CCV
		Methoxychlor	4.5	U	ng/L	P384221	
		Mirex	2.3	U	ng/L	P384221	
		Permethrin	11	U	ng/L	P384221	
		Phenothrin**	34	U	ng/L	P384221	
		Prallethrin**	28	UJ	ng/L	P384221	CCV
		Trans-Nonachlor**	1.1	U	ng/L	P384221	
		Trifluralin	2.8	U	ng/L	P384221	
	EPA 8276	Chlordane	5.6	U	ng/L	P384221	
		Toxaphene	34	U	ng/L	P384221	

Ref. Method and Comment:

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

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

Sample Location: BAYOU GRANDE

Collection Date/Time: 07/06/2020 12:06

Field ID: G4NW0500

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180868	EPA 180.1 Rev. 2.0	Turbidity	1.2		NTU	P384162	
	EPA 300.0 Rev. 2.1	Bromide	33		mg Br/L	P384895	
	SM 2320 B-2011	Total Alkalinity	74		mg CaCO3/L	P384688	
	SM 2540 D-2011	TSS	5	I	mg/L	P384727	
	SM 4500 F-C-2011	Fluoride	0.71		mg F/L	P384927	
2180869	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P384427	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P384261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	I	mg N/L	P384216	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P384245	
	SM 5310 B-2011	Organic Carbon	3.9		mg C/L	P384266	
2180870	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P384235	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch matrix spike recoveries for one of two spiked samples and batch relative percent difference are unavailable because of high analyte concentration in the QC sample.

Sample Location: Bayou Grande near Navy Point Boat Ramp

Collection Date/Time: 07/06/2020 12:15

Field ID: G4NW0501

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180871	EPA 180.1 Rev. 2.0	Turbidity	1.7		NTU	P384162	
	EPA 300.0 Rev. 2.1	Bromide	33		mg Br/L	P384895	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P384688	
	SM 2540 D-2011	TSS	4	I	mg/L	P384727	
	SM 4500 F-C-2011	Fluoride	0.74		mg F/L	P384927	
2180872	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P384436	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36	I	mg N/L	P384261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P384217	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P384245	
	SM 5310 B-2011	Organic Carbon	3.7		mg C/L	P384266	
2180873	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P384235	
2180889	EPA 8321B	2,4-D	0.0020	U	ug/L	P384189	
		Acesulfame K**	0.10	UJ	ug/L	P384190	SUR
		AMPA**	1.0	U	ug/L	P384190	
		Sucralose**	0.063		ug/L	P384190	
		Acetaminophen**	0.0080	U	ug/L	P384189	
		Acetamiprid**	0.0020	U	ug/L	P384189	
		Endothall**	0.25	UJ	ug/L	P384190	SUR
		Glufosinate**	1.0	U	ug/L	P384190	
		Glyphosate**	1.0	U	ug/L	P384190	
		Afidopyropen**	0.0020	U	ug/L	P384189	
		Bentazon	8.0E-04	U	ug/L	P384189	
		Benzovindiflupyr**	0.0020	U	ug/L	P384189	
		Carbamazepine**	8.0E-04	U	ug/L	P384189	
		Clothianidin**	0.0020	U	ug/L	P384189	
		Dinotefuran**	0.0020	U	ug/L	P384189	
		Diuron	0.0020	U	ug/L	P384189	
		Fenuron	0.016	U	ug/L	P384189	
		Fluridone**	8.0E-04	U	ug/L	P384189	
		Imazapyr**	0.0040	U	ug/L	P384189	
		Hydrocodone**	0.0020	U	ug/L	P384189	
		Ibuprofen**	0.020	U	ug/L	P384189	
		Imidacloprid	0.0020	U	ug/L	P384189	
		Linuron	0.0040	U	ug/L	P384189	
		Mandestrobin**	0.0020	U	ug/L	P384189	
		MCP	0.0020	U	ug/L	P384189	
		Naproxen**	0.0080	U	ug/L	P384189	
		Primidone**	0.0040	U	ug/L	P384189	
		Pyraclostrobin**	0.0020	U	ug/L	P384189	
		Thiamethoxam**	0.0020	U	ug/L	P384189	
		Tolfenpyrad**	0.0020	U	ug/L	P384189	
		Triclopyr**	0.0040	U	ug/L	P384189	

Field ID: G4NW0501

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch matrix spike recoveries for one of two spiked samples and batch relative percent difference are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Bayou Texar 200 Meters above Hwy 90 Bridge Collection Date/Time: 07/06/2020 13:02

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180874	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P384162	
	EPA 300.0 Rev. 2.1	Bromide	28		mg Br/L	P384895	
	SM 2320 B-2011	Total Alkalinity	71		mg CaCO3/L	P384688	
	SM 2540 D-2011	TSS	8	I	mg/L	P384727	
	SM 4500 F-C-2011	Fluoride	0.69		mg F/L	P384927	
2180875	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P384436	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40	I	mg N/L	P384261	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	mg N/L	P384217	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P384245	
	SM 5310 B-2011	Organic Carbon	4.1		mg C/L	P384266	
2180876	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P384235	
2180890	EPA 8321B	Aldicarb	0.020	U	ug/L	P384331	
		Aldicarb Sulfone	0.0020	U	ug/L	P384331	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P384331	
		Carbaryl	0.0020	U	ug/L	P384331	
		Carbofuran	0.0020	U	ug/L	P384331	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P384331	
		Methiocarb	0.0020	U	ug/L	P384331	
		Methomyl	0.0020	U	ug/L	P384331	
		Oxamyl	0.0020	U	ug/L	P384331	
		Propoxur	0.0020	U	ug/L	P384331	
		2,4-D	0.0020	U	ug/L	P384189	
		Acesulfame K**	0.10	UJ	ug/L	P384190	SUR
		AMPA**	1.0	U	ug/L	P384190	
		Sucralose**	0.055		ug/L	P384190	
2180891		Acetaminophen**	0.0080	U	ug/L	P384189	
		Acetamiprid**	0.0020	U	ug/L	P384189	
		Endothal**	0.25	UJ	ug/L	P384190	SUR
		Glufosinate**	1.0	U	ug/L	P384190	
		Glyphosate**	1.0	U	ug/L	P384190	
		Afidopyropen**	0.0020	U	ug/L	P384189	
		Bentazon	8.0E-04	U	ug/L	P384189	
		Benzovindiflupyr**	0.0020	U	ug/L	P384189	
		Carbamazepine**	8.0E-04	U	ug/L	P384189	
		Clothianidin**	0.0020	U	ug/L	P384189	
		Dinotefuran**	0.0020	U	ug/L	P384189	
		Diuron	0.0020	U	ug/L	P384189	
		Fenuron	0.016	U	ug/L	P384189	
		Fluridone**	8.0E-04	U	ug/L	P384189	
		Imazapyr**	0.0040	U	ug/L	P384189	
		Hydrocodone**	0.0020	U	ug/L	P384189	
		Ibuprofen**	0.020	U	ug/L	P384189	
		Imidacloprid	0.0020	U	ug/L	P384189	

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180891	EPA 8321B	Linuron	0.0040	U	ug/L	P384189	
		Mandestrobin**	0.0020	U	ug/L	P384189	
		MCPD	0.0020	U	ug/L	P384189	
		Naproxen**	0.0080	U	ug/L	P384189	
		Primidone**	0.0040	U	ug/L	P384189	
		Pyraclostrobin**	0.0020	U	ug/L	P384189	
		Thiamethoxam**	0.0020	U	ug/L	P384189	
		Tolfenpyrad**	0.0020	U	ug/L	P384189	
		Triclopyr**	0.0040	U	ug/L	P384189	
2180894	EPA 8270E	Aldrin	4.3	U	ng/L	P384221	
		Alpha-BHC	2.2	U	ng/L	P384221	
		Alpha-Chlordane	1.1	U	ng/L	P384221	
		Beta-BHC	8.7	U	ng/L	P384221	
		Beta-Cyfluthrin**	16	U	ng/L	P384221	
		Bifenthrin**	4.3	U	ng/L	P384221	
		Delta-BHC	8.7	U	ng/L	P384221	
		Gamma-BHC	8.7	U	ng/L	P384221	
		Chlorothalonil	2.2	UJ	ng/L	P384221	CCV, RPD
		Cis-Nonachlor**	1.1	U	ng/L	P384221	
		Cypermethrin	22	U	ng/L	P384221	
		Dacthal**	1.1	U	ng/L	P384221	
		DDD-p,p'	5.4	U	ng/L	P384221	
		DDE-p,p'	5.4	U	ng/L	P384221	
		DDT-p,p'	6.5	U	ng/L	P384221	
		Dicofol	33	U	ng/L	P384221	
		Dieldrin	4.3	U	ng/L	P384221	
		Endosulfan I	4.3	U	ng/L	P384221	
		Endosulfan II	4.3	U	ng/L	P384221	
		Endosulfan Sulfate	2.2	U	ng/L	P384221	
		Endrin	2.2	U	ng/L	P384221	
		Endrin Aldehyde	2.2	U	ng/L	P384221	
		Endrin Ketone	2.2	U	ng/L	P384221	
		Ethalfuralin**	3.3	U	ng/L	P384221	
		Gamma-Chlordane	1.1	U	ng/L	P384221	
		Heptachlor	1.6	U	ng/L	P384221	
		Heptachlor Epoxide	2.2	U	ng/L	P384221	
		Hexachlorobenzene	2.2	U	ng/L	P384221	
		Lambda-Cyhalothrin**	16	UJ	ng/L	P384221	CCV
		Methoxychlor	4.3	U	ng/L	P384221	
		Mirex	2.2	U	ng/L	P384221	
		Permethrin	11	U	ng/L	P384221	
		Phenothrin**	33	U	ng/L	P384221	
		Prallethrin**	27	UJ	ng/L	P384221	CCV
		Trans-Nonachlor**	1.1	U	ng/L	P384221	
		Trifluralin	2.7	U	ng/L	P384221	

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180894	EPA 8276	Chlordane	5.4	U	ng/L	P384221	
		Toxaphene	33	U	ng/L	P384221	
2180895	EPA 8270E	Acetochlor	0.26	U	ng/L	P384079	
		Alachlor	0.26	U	ng/L	P384079	
		Ametryn	0.61	U	ng/L	P384079	
		Atrazine	8.7		ng/L	P384079	
		Atrazine Desethyl	1.5	U	ng/L	P384079	
		Azinphos Methyl	2.0	U	ng/L	P384079	
		Bromacil	14		ng/L	P384079	
		Butylate	0.41	U	ng/L	P384079	RPD
		Carbophenothion	0.51	U	ng/L	P384079	
		Chlorpyrifos Ethyl	0.26	U	ng/L	P384079	
		Chlorpyrifos Methyl	0.051	U	ng/L	P384079	
		Cyanazine	3.3	U	ng/L	P384079	
		Demeton	1.5	U	ng/L	P384079	
		Diazinon	0.13	U	ng/L	P384079	
		Dimethenamid**	0.10	U	ng/L	P384079	
		Disulfoton	0.51	U	ng/L	P384079	
		Dithiopyr**	0.10	U	ng/L	P384079	
		EPTC	1.3	U	ng/L	P384079	RPD
		Ethion	0.15	U	ng/L	P384079	
		Ethoprop	0.10	U	ng/L	P384079	
		Fenamiphos	0.51	U	ng/L	P384079	
		Fipronil	0.26	U	ng/L	P384079	
		Fipronil Desulfinyl**	0.28	I	ng/L	P384079	
		Fipronil Sulfide	0.15	U	ng/L	P384079	
		Fipronil Sulfone	0.93		ng/L	P384079	
		Flumioxazin**	1.8	U	ng/L	P384079	
		Fonofos	0.20	U	ng/L	P384079	
		Hexazinone	3.6		ng/L	P384079	
		Imazalil**	0.77	U	ng/L	P384079	
		Malathion	0.36	U	ng/L	P384079	
		Metalaxyl	0.77	U	ng/L	P384079	
		Metolachlor	0.88	I	ng/L	P384079	
		Metribuzin	3.3	U	ng/L	P384079	
		Mevinphos	0.51	U	ng/L	P384079	
		Molinate	0.31	U	ng/L	P384079	RPD
		Naled**	1.5	U	ng/L	P384079	
		Norflurazon	0.51	U	ng/L	P384079	
		Oxadiazon	0.11	I	ng/L	P384079	
		Parathion Ethyl	0.26	U	ng/L	P384079	
		Parathion Methyl	0.56	U	ng/L	P384079	
		Pendimethalin	1.0	U	ng/L	P384079	
		Phorate	0.26	UJ	ng/L	P384079	LCS
		Prodiamine**	0.18	UJ	ng/L	P384079	RPD

Field ID: G4NW0402

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2180895	EPA 8270E	Prometon	0.92	U	ng/L	P384079	
		Prometryn	0.20	U	ng/L	P384079	
		Pronamide**	0.15	U	ng/L	P384079	
		Propiconazole**	0.71	I	ng/L	P384079	
		Simazine	2.0	I	ng/L	P384079	
		Sulfentrazone**	0.51	U	ng/L	P384079	
		Tebuconazole**	0.51	U	ng/L	P384079	
		Terbufos	0.10	U	ng/L	P384079	
		Terbuthylazine	0.43	U	ng/L	P384079	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Bromide: Batch matrix spike recoveries for one of two spiked samples and batch relative percent difference are unavailable because of high analyte concentration in the QC sample.

EPA 8321B: MS accuracy for 2,4-D could not be assessed due to high concentration of parameter in the spiked sample.

EPA 8321B: MDL for some parameters elevated due to matrix interference. Results confirmed in sample duplicate. Refer to the Lab Analysis Report for an explanation of QC Codes.

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

EPA 8270E: MS accuracy for atrazine not assessed due to high content of this parameter in the sample spiked. 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: P384162

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384895

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384427

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384436

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384261

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384216

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384217

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384245

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384235

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P384079

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
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Carbophenothion	0.50	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
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Flumioxazin	1.8	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	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: P384221

Component	Result	Code	Units
Aldrin	4.0	U	ng/L
Alpha-BHC	2.0	U	ng/L
Alpha-Chlordane	1.0	U	ng/L
Beta-BHC	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
Dicofol	30	U	ng/L
Dieldrin	4.0	U	ng/L
Endosulfan I	4.0	U	ng/L
Endosulfan II	4.0	U	ng/L
Endosulfan Sulfate	2.0	U	ng/L
Endrin	2.0	U	ng/L
Endrin Aldehyde	2.0	U	ng/L
Endrin Ketone	2.0	U	ng/L
Ethalfuralin	3.0	U	ng/L
Gamma-BHC	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
Lambda-Cyhalothrin	15	U	ng/L
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Phenothrin	30	U	ng/L
Prallethrin	25	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8276
Batch ID: P384221

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

Reference Method: EPA 8321B
Batch ID: P384189

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P384189

Component	Result	Code	Units
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: P384190

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: P384331

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

Reference Method: SM 2320 B-2011
Batch ID: P384688

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P384688

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

Reference Method: SM 2540 D-2011
Batch ID: P384727

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P384927

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P384266

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	96.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384427

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384436

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: P384261

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.3		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384216

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384217

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384245

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: P384235

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

Reference Method: EPA 8270E
Batch ID: P384079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	83.5	96.5	P/P	71 - 122
Alachlor	86.4	98.9	P/P	70 - 121
Ametryn	98.6	109	P/P	49 - 137
Atrazine	91.3	104	P/P	76 - 125

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P384079

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Atrazine Desethyl	75.9	83.7	P/P	31 - 144
Azinphos Methyl	106	118	P/P	67 - 150
Bromacil	78.6	88.6	P/P	36 - 121
Butylate	49.8	53.3	P/P	33 - 88.0
Carbophenothion	91.0	109	P/P	50 - 150
Chlorpyrifos Ethyl	90.6	106	P/P	73 - 117
Chlorpyrifos Methyl	89.9	104	P/P	68 - 121
Cyanazine	95.9	109	P/P	20 - 250
Demeton	63.5	83.8	P/P	30 - 123
Diazinon	82.8	96.1	P/P	70 - 128
Dimethenamid	85.4	97.2	P/P	66 - 122
Disulfoton	64.4	87.1	P/P	46 - 124
Dithiopyr	81.7	95.7	P/P	69 - 122
EPTC	38.4	40.2	P/P	31 - 90.0
Ethion	90.8	109	P/P	45 - 135
Ethoprop	79.2	92.5	P/P	59 - 118
Fenamiphos	91.4	121	P/P	30 - 136
Fipronil	89.6	102	P/P	57 - 127
Fipronil Desulfinyl	96.0	107	P/P	51 - 122
Fipronil Sulfide	90.0	106	P/P	57 - 119
Fipronil Sulfone	92.0	107	P/P	51 - 119
Flumioxazin	152	151	P/P	70 - 200
Fonofos	80.7	102	P/P	60 - 120
Hexazinone	87.5	96.8	P/P	57 - 142
Imazalil	65.2	76.6	P/P	50 - 150
Malathion	101	115	P/P	67 - 128
Metalaxyl	88.6	103	P/P	21 - 148
Metolachlor	81.8	97.1	P/P	70 - 120
Metribuzin	107	122	P/P	20 - 253
Mevinphos	70.2	83.4	P/P	47 - 116
Molinate	50.2	56.3	P/P	41 - 99.0
Naled	60.1	69.9	P/P	40 - 130
Norflurazon	93.0	106	P/P	54 - 127
Oxadiazon	83.6	96.9	P/P	65 - 122
Parathion Ethyl	82.4	96.2	P/P	71 - 113
Parathion Methyl	84.2	101	P/P	73 - 129
Pendimethalin	85.6	106	P/P	63 - 130
Phorate	107	134	P/F	48 - 118
Prodiamine	55.8	33.2	P/P	20 - 144
Prometon	78.9	91.3	P/P	53 - 120
Prometryn	84.1	95.6	P/P	63 - 119
Pronamide	88.6	101	P/P	50 - 150
Propiconazole	84.0	95.8	P/P	50 - 150
Simazine	93.7	104	P/P	77 - 129
Sulfentrazone	50.6	54.1	P/P	50 - 150
Tebuconazole	46.4	57.0	P/P	20 - 118
Terbufos	81.5	104	P/P	61 - 119
Terbuthylazine	86.8	98.7	P/P	75 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P384221

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	48.1	53.8	P/P	20 - 87.0
Alpha-BHC	82.0	83.3	P/P	65 - 142
Alpha-Chlordane	79.1	84.3	P/P	58 - 106
Beta-BHC	93.6	96.2	P/P	65 - 179
Beta-Cyfluthrin	79.9	80.2	P/P	39 - 153
Bifenthrin	91.8	98.5	P/P	38 - 128
Chlorothalonil	71.3	53.9	P/P	20 - 214
Cis-Nonachlor	81.3	86.6	P/P	56 - 113
Cypermethrin	103	92.4	P/P	37 - 130
Dacthal	83.8	89.2	P/P	75 - 109
DDD-p,p'	90.0	93.4	P/P	66 - 119
DDE-p,p'	81.0	85.2	P/P	53 - 108
DDT-p,p'	96.4	85.5	P/P	57 - 133
Delta-BHC	94.7	102	P/P	68 - 187
Dicofol	66.1	67.1	P/P	66 - 123
Dieldrin	84.9	89.4	P/P	65 - 111
Endosulfan I	87.2	87.9	P/P	65 - 115
Endosulfan II	96.7	102	P/P	68 - 133
Endosulfan Sulfate	85.5	82.6	P/P	62 - 127
Endrin	91.4	95.7	P/P	64 - 122
Endrin Aldehyde	85.6	89.6	P/P	61 - 132
Endrin Ketone	88.9	93.9	P/P	66 - 120
Ethalfuralin	59.1	67.0	P/P	57 - 127
Gamma-BHC	89.4	89.0	P/P	71 - 158
Gamma-Chlordane	74.4	78.3	P/P	53 - 106
Heptachlor	66.1	69.2	P/P	45 - 96.0
Heptachlor Epoxide	81.1	84.5	P/P	64 - 109
Hexachlorobenzene	62.3	61.0	P/P	46 - 103
Lambda-Cyhalothrin	74.5	75.8	P/P	38 - 145
Methoxychlor	86.6	92.7	P/P	69 - 149
Mirex	54.8	57.3	P/P	31 - 90.0
Permethrin	88.3	87.9	P/P	41 - 108
Phenothrin	69.2	73.5	P/P	22 - 91.0
Prallethrin	72.3	76.2	P/P	32 - 92.0
Trans-Nonachlor	81.6	82.4	P/P	50 - 107
Trifluralin	64.1	67.6	P/P	58 - 119

Reference Method: EPA 8276
Batch ID: P384221

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	84.7	76.4	P/P	47 - 119
Toxaphene	89.3	71.0	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P384189

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	112		P	30 - 160
Acetaminophen	78.8		P	30 - 160
Acetamiprid	81.8		P	30 - 160
Afidopyropen	71.4		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P384189

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	69.9		P	30 - 160
Benzovindiflupyr	75.6		P	30 - 160
Carbamazepine	71.9		P	30 - 160
Clothianidin	82.2		P	30 - 160
Dinotefuran	94.0		P	30 - 160
Diuron	62.6		P	30 - 160
Fenuron	99.8		P	30 - 160
Fluridone	104		P	30 - 160
Hydrocodone	86.7		P	30 - 160
Ibuprofen	90.7		P	30 - 160
Imazapyr	84.0		P	30 - 160
Imidacloprid	102		P	30 - 160
Linuron	59.7		P	30 - 160
Mandestrobin	84.9		P	30 - 160
MCPP	105		P	30 - 160
Naproxen	75.5		P	30 - 160
Primidone	74.3		P	30 - 160
Pyraclostrobin	75.4		P	30 - 160
Thiamethoxam	88.1		P	30 - 160
Tolfenpyrad	51.7		P	30 - 160
Triclopyr	78.9		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P384190

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	86.3		P	40 - 150
AMPA	74.9		P	40 - 150
Endothall	90.6		P	40 - 150
Glufosinate	83.2		P	40 - 150
Glyphosate	79.7		P	40 - 140
Sucralose	77.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P384331

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	79.1		P	30 - 160
Aldicarb	92.3		P	30 - 160
Aldicarb Sulfone	90.0		P	30 - 160
Aldicarb Sulfoxide	99.7		P	30 - 160
Carbaryl	50.1		P	30 - 160
Carbofuran	54.2		P	30 - 160
Methiocarb	66.6		P	30 - 160
Methomyl	87.7		P	30 - 160
Oxamyl	91.4		P	30 - 160
Propoxur	59.4		P	30 - 160

Reference Method: SM 2320 B-2011
Batch ID: P384688

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

Reference Method: SM 2320 B-2011
Batch ID: P384688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P384927

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.3		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P384266

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P384895

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180365	Bromide	95.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384427

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180869	Ammonia-N	101	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384436

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180872	Ammonia-N	101	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180982	Kjeldahl Nitrogen	99.0	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384216

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180391	NO2NO3-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384217

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180872	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180793	Total-P	98.9	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180850	O-Phosphate-P	97.6	98.0	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P384079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180545	Acetochlor	99.1	85.1	P/P	68 - 126
2180545	Alachlor	101	94.0	P/P	66 - 125
2180545	Ametryn	112	103	P/P	31 - 182
2180545	Atrazine Desethyl	77.6	68.2	P/P	13 - 161

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
 Batch ID: P384079

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180545	Azinphos Methyl	115	99.0	P/P	54 - 162
2180545	Bromacil	104	87.4	P/P	34 - 144
2180545	Butylate	60.2	41.8	P/P	16 - 92.0
2180545	Carbophenothion	101	96.6	P/P	50 - 150
2180545	Chlorpyrifos Ethyl	97.2	95.2	P/P	63 - 124
2180545	Chlorpyrifos Methyl	99.9	91.9	P/P	64 - 125
2180545	Cyanazine	116	99.2	P/P	13 - 245
2180545	Demeton	92.8	77.5	P/P	20 - 154
2180545	Diazinon	98.9	88.1	P/P	66 - 141
2180545	Dimethenamid	103	91.4	P/P	50 - 130
2180545	Disulfoton	90.6	78.3	P/P	55 - 130
2180545	Dithiopyr	96.7	88.0	P/P	66 - 122
2180545	EPTC	44.4	28.8	P/P	15 - 93.0
2180545	Ethion	114	107	P/P	15 - 148
2180545	Ethoprop	96.2	80.2	P/P	59 - 126
2180545	Fenamiphos	111	105	P/P	39 - 137
2180545	Fipronil	110	96.8	P/P	47 - 131
2180545	Fipronil Desulfinyl	110	100	P/P	43 - 121
2180545	Fipronil Sulfide	105	98.0	P/P	29 - 134
2180545	Fipronil Sulfone	109	99.8	P/P	19 - 131
2180545	Flumioxazin	198	179	P/P	70 - 200
2180545	Fonofos	93.9	87.0	P/P	62 - 128
2180545	Hexazinone	99.2	99.4	P/P	58 - 154
2180545	Imazalil	85.1	79.5	P/P	50 - 150
2180545	Malathion	114	107	P/P	54 - 135
2180545	Metalaxyl	103	94.6	P/P	46 - 136
2180545	Metolachlor	93.4	80.0	P/P	62 - 126
2180545	Metribuzin	126	113	P/P	44 - 277
2180545	Mevinphos	86.1	68.8	P/P	44 - 135
2180545	Molinate	60.3	43.6	P/P	31 - 104
2180545	Naled	77.3	71.3	P/P	40 - 130
2180545	Norflurazon	107	96.2	P/P	32 - 134
2180545	Oxadiazon	90.3	91.2	P/P	55 - 123
2180545	Parathion Ethyl	90.8	87.0	P/P	67 - 120
2180545	Parathion Methyl	106	93.8	P/P	70 - 140
2180545	Pendimethalin	100	100	P/P	59 - 145
2180545	Phorate	120	107	P/P	52 - 127
2180545	Prodiamine	43.3	40.1	P/P	11 - 157
2180545	Prometon	94.8	87.3	P/P	55 - 130
2180545	Prometryn	100	92.4	P/P	55 - 127
2180545	Pronamide	112	97.7	P/P	50 - 150
2180545	Propiconazole	95.8	92.3	P/P	50 - 150
2180545	Simazine	106	97.9	P/P	58 - 159
2180545	Sulfentrazone	101	88.9	P/P	50 - 150
2180545	Tebuconazole	61.3	62.5	P/P	10 - 122
2180545	Terbufos	103	91.5	P/P	65 - 131
2180545	Terbutylazine	102	92.6	P/P	63 - 131

Reference Method: EPA 8270E
 Batch ID: P384221

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

Reference Method: EPA 8270E
Batch ID: P384221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2181722	Aldrin	55.0	54.4	P/P	32 - 82.0
2181722	Alpha-BHC	75.0	80.7	P/P	68 - 157
2181722	Alpha-Chlordane	78.5	82.5	P/P	54 - 108
2181722	Beta-BHC	84.8	101	P/P	54 - 200
2181722	Beta-Cyfluthrin	78.9	87.4	P/P	50 - 154
2181722	Bifenthrin	92.2	104	P/P	49 - 124
2181722	Chlorothalonil	38.6	60.1	P/P	10 - 289
2181722	Cis-Nonachlor	78.9	85.7	P/P	53 - 112
2181722	Cypermethrin	80.7	98.8	P/P	43 - 141
2181722	Dacthal	80.2	87.0	P/P	75 - 112
2181722	DDD-p,p'	85.5	92.9	P/P	58 - 125
2181722	DDE-p,p'	81.0	85.1	P/P	50 - 108
2181722	DDT-p,p'	82.3	87.8	P/P	52 - 140
2181722	Delta-BHC	94.1	110	P/P	61 - 228
2181722	Dicofol	62.8	62.7	P/P	59 - 130
2181722	Dieldrin	83.0	85.4	P/P	57 - 121
2181722	Endosulfan I	79.6	85.9	P/P	62 - 123
2181722	Endosulfan II	87.0	96.4	P/P	48 - 163
2181722	Endosulfan Sulfate	72.2	86.8	P/P	63 - 132
2181722	Endrin	87.1	94.9	P/P	58 - 128
2181722	Endrin Aldehyde	82.4	88.3	P/P	44 - 126
2181722	Endrin Ketone	79.1	92.6	P/P	68 - 127
2181722	Ethalfuralin	61.5	63.9	P/P	55 - 131
2181722	Gamma-BHC	81.4	93.2	P/P	54 - 206
2181722	Gamma-Chlordane	73.7	78.0	P/P	52 - 105
2181722	Heptachlor	65.4	69.0	P/P	47 - 94.0
2181722	Heptachlor Epoxide	77.4	82.8	P/P	61 - 113
2181722	Hexachlorobenzene	58.9	61.2	P/P	45 - 100
2181722	Lambda-Cyhalothrin	70.0	84.0	P/P	37 - 165
2181722	Methoxychlor	82.1	90.0	P/P	63 - 153
2181722	Mirex	57.8	62.5	P/P	38 - 90.0
2181722	Permethrin	82.0	90.6	P/P	45 - 112
2181722	Phenothrin	71.2	75.5	P/P	22 - 118
2181722	Prallethrin	64.7	59.7	P/P	21 - 114
2181722	Trans-Nonachlor	79.3	85.4	P/P	50 - 103
2181722	Trifluralin	63.6	66.9	P/P	57 - 122

Reference Method: EPA 8276
Batch ID: P384221

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2181728	Chlordane	81.9	85.7	P/P	34 - 129
2181728	Toxaphene	78.1	80.8	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P384189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180960	Acetaminophen	67.9	68.0	P/P	30 - 160
2180960	Acetamiprid	57.2	56.1	P/P	30 - 160
2180960	Afidopyropen	61.6	63.3	P/P	30 - 160
2180960	Bentazon	39.6	35.4	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P384189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180960	Benzovindiflupyr	67.1	69.4	P/P	30 - 160
2180960	Carbamazepine	48.1	49.1	P/P	30 - 160
2180960	Clothianidin	53.6	50.5	P/P	30 - 160
2180960	Dinotefuran	69.5	63.5	P/P	30 - 160
2180960	Diuron	41.0	41.0	P/P	30 - 160
2180960	Fenuron	55.3	55.1	P/P	30 - 160
2180960	Fluridone	100	98.6	P/P	30 - 160
2180960	Hydrocodone	58.6	56.8	P/P	30 - 160
2180960	Ibuprofen	76.2	69.6	P/P	30 - 160
2180960	Imazapyr	94.3	77.8	P/P	30 - 160
2180960	Imidacloprid	95.8	93.2	P/P	30 - 160
2180960	Linuron	49.1	53.3	P/P	30 - 160
2180960	Mandestrobin	75.0	73.9	P/P	30 - 160
2180960	MCP	86.6	80.7	P/P	30 - 160
2180960	Naproxen	61.5	67.1	P/P	30 - 160
2180960	Primidone	63.5	67.9	P/P	30 - 160
2180960	Pyraclostrobin	71.6	71.6	P/P	30 - 160
2180960	Thiamethoxam	68.1	66.8	P/P	30 - 160
2180960	Tolfenpyrad	61.3	62.6	P/P	30 - 160
2180960	Triclopyr	74.7	60.6	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P384190

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180714	Acesulfame K	49.7	51.1	P/P	40 - 150
2180714	AMPA	80.3	80.0	P/P	40 - 150
2180714	Endothall	93.1	97.4	P/P	40 - 150
2180714	Glufosinate	88.9	88.1	P/P	40 - 150
2180714	Glyphosate	66.0	77.6	P/P	40 - 140
2180714	Sucralose	83.5	86.8	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P384331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180800	3-Hydroxycarbofuran	54.9	53.0	P/P	30 - 160
2180800	Aldicarb	53.2	51.8	P/P	30 - 160
2180800	Aldicarb Sulfone	68.8	64.1	P/P	30 - 160
2180800	Aldicarb Sulfoxide	33.8	32.9	P/P	30 - 160
2180800	Carbaryl	30.2	32.4	P/P	30 - 160
2180800	Carbofuran	32.8	31.7	P/P	30 - 160
2180800	Methiocarb	43.3	42.6	P/P	30 - 160
2180800	Methomyl	50.7	59.2	P/P	30 - 160
2180800	Oxamyl	57.4	67.4	P/P	30 - 160
2180800	Propoxur	31.2	33.0	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
 Batch ID: P384927

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2182519	Fluoride	100	99.6	P/P	94 - 107

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P384266

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2180843	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P384162

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180807	Turbidity	1.34	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384427

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180869	Ammonia-N	0.661	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P384436

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180872	Ammonia-N	2.32	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P384261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180982	Kjeldahl Nitrogen	0.399	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180391	NO2NO3-N	0.504	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P384217

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180872	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P384245

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180793	Total-P	3.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P384235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180850	O-Phosphate-P	0.305	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P384079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180545	Acetochlor	11.8	Spike	P	0 - 30
2180545	Alachlor	7.46	Spike	P	0 - 30
2180545	Ametryn	8.57	Spike	P	0 - 30
2180545	Atrazine	12.5	Spike	P	0 - 30
2180545	Atrazine Desethyl	11.3	Spike	P	0 - 30
2180545	Azinphos Methyl	14.9	Spike	P	0 - 30
2180545	Bromacil	17.0	Spike	P	0 - 30
2180545	Butylate	36.2	Spike	F	0 - 30
2180545	Carbophenothion	4.15	Spike	P	0 - 30
2180545	Chlorpyrifos Ethyl	2.09	Spike	P	0 - 30
2180545	Chlorpyrifos Methyl	8.28	Spike	P	0 - 30
2180545	Cyanazine	15.3	Spike	P	0 - 30
2180545	Demeton	17.9	Spike	P	0 - 30
2180545	Diazinon	11.5	Spike	P	0 - 30
2180545	Dimethenamid	11.7	Spike	P	0 - 30
2180545	Disulfoton	14.6	Spike	P	0 - 30
2180545	Dithiopyr	9.48	Spike	P	0 - 30
2180545	EPTC	42.8	Spike	F	0 - 30
2180545	Ethion	6.37	Spike	P	0 - 30
2180545	Ethoprop	18.1	Spike	P	0 - 30
2180545	Fenamiphos	6.24	Spike	P	0 - 30
2180545	Fipronil	12.4	Spike	P	0 - 30
2180545	Fipronil Desulfinyl	9.43	Spike	P	0 - 30
2180545	Fipronil Sulfide	7.25	Spike	P	0 - 30
2180545	Fipronil Sulfone	8.61	Spike	P	0 - 30
2180545	Flumioxazin	10.3	Spike	P	0 - 30
2180545	Fonofos	7.57	Spike	P	0 - 30
2180545	Hexazinone	0.158	Spike	P	0 - 30
2180545	Imazalil	6.72	Spike	P	0 - 30
2180545	Malathion	6.70	Spike	P	0 - 30
2180545	Metalaxyl	8.32	Spike	P	0 - 30
2180545	Metolachlor	10.1	Spike	P	0 - 30
2180545	Metribuzin	10.3	Spike	P	0 - 30
2180545	Mevinphos	22.3	Spike	P	0 - 30
2180545	Molinate	32.2	Spike	F	0 - 30
2180545	Naled	7.96	Spike	P	0 - 30
2180545	Norflurazon	10.3	Spike	P	0 - 30
2180545	Oxadiazon	0.928	Spike	P	0 - 30
2180545	Parathion Ethyl	4.33	Spike	P	0 - 30
2180545	Parathion Methyl	11.7	Spike	P	0 - 30
2180545	Pendimethalin	0.438	Spike	P	0 - 30
2180545	Phorate	11.6	Spike	P	0 - 30
2180545	Prodiamine	7.56	Spike	P	0 - 30
2180545	Prometon	8.24	Spike	P	0 - 30
2180545	Prometryn	8.08	Spike	P	0 - 30
2180545	Pronamide	13.5	Spike	P	0 - 30
2180545	Propiconazole	3.67	Spike	P	0 - 30
2180545	Simazine	7.54	Spike	P	0 - 30
2180545	Sulfentrazone	12.8	Spike	P	0 - 30
2180545	Tebuconazole	2.01	Spike	P	0 - 30
2180545	Terbufos	12.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P384079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180545	Terbutylazine	9.61	Spike	P	0 - 30
LFB	Acetochlor	14.4	LCS	P	0 - 30
LFB	Alachlor	13.6	LCS	P	0 - 30
LFB	Ametryn	10.4	LCS	P	0 - 30
LFB	Atrazine	12.6	LCS	P	0 - 30
LFB	Atrazine Desethyl	9.78	LCS	P	0 - 30
LFB	Azinphos Methyl	11.0	LCS	P	0 - 30
LFB	Bromacil	11.9	LCS	P	0 - 30
LFB	Butylate	6.87	LCS	P	0 - 30
LFB	Carbophenothion	17.8	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	15.8	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	14.6	LCS	P	0 - 30
LFB	Cyanazine	12.9	LCS	P	0 - 30
LFB	Demeton	27.6	LCS	P	0 - 30
LFB	Diazinon	14.8	LCS	P	0 - 30
LFB	Dimethenamid	12.9	LCS	P	0 - 30
LFB	Disulfoton	30.0	LCS	P	0 - 30
LFB	Dithiopyr	15.8	LCS	P	0 - 30
LFB	EPTC	4.59	LCS	P	0 - 30
LFB	Ethion	18.2	LCS	P	0 - 30
LFB	Ethoprop	15.5	LCS	P	0 - 30
LFB	Fenamiphos	27.7	LCS	P	0 - 30
LFB	Fipronil	12.6	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	10.6	LCS	P	0 - 30
LFB	Fipronil Sulfide	16.3	LCS	P	0 - 30
LFB	Fipronil Sulfone	14.6	LCS	P	0 - 30
LFB	Flumioxazin	1.28	LCS	P	0 - 30
LFB	Fonofos	23.4	LCS	P	0 - 30
LFB	Hexazinone	10.2	LCS	P	0 - 30
LFB	Imazalil	16.2	LCS	P	0 - 30
LFB	Malathion	13.2	LCS	P	0 - 30
LFB	Metalaxyl	14.8	LCS	P	0 - 30
LFB	Metolachlor	17.0	LCS	P	0 - 30
LFB	Metribuzin	12.8	LCS	P	0 - 30
LFB	Mevinphos	17.2	LCS	P	0 - 30
LFB	Molinate	11.5	LCS	P	0 - 30
LFB	Naled	15.1	LCS	P	0 - 30
LFB	Norflurazon	13.2	LCS	P	0 - 30
LFB	Oxadiazon	14.7	LCS	P	0 - 30
LFB	Parathion Ethyl	15.5	LCS	P	0 - 30
LFB	Parathion Methyl	18.4	LCS	P	0 - 30
LFB	Pendimethalin	21.1	LCS	P	0 - 30
LFB	Phorate	22.7	LCS	P	0 - 30
LFB	Prodiamine	50.7	LCS	F	0 - 30
LFB	Prometon	14.6	LCS	P	0 - 30
LFB	Prometryn	12.8	LCS	P	0 - 30
LFB	Pronamide	13.2	LCS	P	0 - 30
LFB	Propiconazole	13.1	LCS	P	0 - 30
LFB	Simazine	10.2	LCS	P	0 - 30
LFB	Sulfentrazone	6.76	LCS	P	0 - 30
LFB	Tebuconazole	20.4	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P384079

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Terbufos	23.9	LCS	P	0 - 30
LFB	Terbutylazine	12.8	LCS	P	0 - 30

Reference Method: EPA 8270E
Batch ID: P384221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2181722	Aldrin	1.23	Spike	P	0 - 30
2181722	Alpha-BHC	7.32	Spike	P	0 - 30
2181722	Alpha-Chlordane	4.97	Spike	P	0 - 30
2181722	Beta-BHC	17.8	Spike	P	0 - 30
2181722	Beta-Cyfluthrin	10.3	Spike	P	0 - 30
2181722	Bifenthrin	11.7	Spike	P	0 - 30
2181722	Chlorothalonil	43.5	Spike	F	0 - 30
2181722	Cis-Nonachlor	8.24	Spike	P	0 - 30
2181722	Cypermethrin	20.2	Spike	P	0 - 30
2181722	Dacthal	8.03	Spike	P	0 - 30
2181722	DDD-p,p'	8.28	Spike	P	0 - 30
2181722	DDE-p,p'	4.99	Spike	P	0 - 30
2181722	DDT-p,p'	6.48	Spike	P	0 - 30
2181722	Delta-BHC	15.4	Spike	P	0 - 30
2181722	Dicofol	0.222	Spike	P	0 - 30
2181722	Dieldrin	2.81	Spike	P	0 - 30
2181722	Endosulfan I	7.62	Spike	P	0 - 30
2181722	Endosulfan II	10.3	Spike	P	0 - 30
2181722	Endosulfan Sulfate	18.3	Spike	P	0 - 30
2181722	Endrin	8.61	Spike	P	0 - 30
2181722	Endrin Aldehyde	6.93	Spike	P	0 - 30
2181722	Endrin Ketone	15.8	Spike	P	0 - 30
2181722	Ethalfuralin	3.89	Spike	P	0 - 30
2181722	Gamma-BHC	13.6	Spike	P	0 - 30
2181722	Gamma-Chlordane	5.75	Spike	P	0 - 30
2181722	Heptachlor	5.42	Spike	P	0 - 30
2181722	Heptachlor Epoxide	6.80	Spike	P	0 - 30
2181722	Hexachlorobenzene	3.81	Spike	P	0 - 30
2181722	Lambda-Cyhalothrin	18.2	Spike	P	0 - 30
2181722	Methoxychlor	9.21	Spike	P	0 - 30
2181722	Mirex	7.82	Spike	P	0 - 30
2181722	Permethrin	10.0	Spike	P	0 - 30
2181722	Phenothrin	5.83	Spike	P	0 - 30
2181722	Prallethrin	7.95	Spike	P	0 - 30
2181722	Trans-Nonachlor	7.32	Spike	P	0 - 30
2181722	Trifluralin	5.08	Spike	P	0 - 30
LFB	Aldrin	11.2	LCS	P	0 - 30
LFB	Alpha-BHC	1.53	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.29	LCS	P	0 - 30
LFB	Beta-BHC	2.67	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	0.407	LCS	P	0 - 30
LFB	Bifenthrin	7.02	LCS	P	0 - 30
LFB	Chlorothalonil	27.8	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P384221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Cis-Nonachlor	6.25	LCS	P	0 - 30
LFB	Cypermethrin	10.9	LCS	P	0 - 30
LFB	Dacthal	6.27	LCS	P	0 - 30
LFB	DDD-p,p'	3.70	LCS	P	0 - 30
LFB	DDE-p,p'	5.02	LCS	P	0 - 30
LFB	DDT-p,p'	12.0	LCS	P	0 - 30
LFB	Delta-BHC	7.06	LCS	P	0 - 30
LFB	Dicofol	1.59	LCS	P	0 - 30
LFB	Dieldrin	5.15	LCS	P	0 - 30
LFB	Endosulfan I	0.790	LCS	P	0 - 30
LFB	Endosulfan II	5.15	LCS	P	0 - 30
LFB	Endosulfan Sulfate	3.43	LCS	P	0 - 30
LFB	Endrin	4.61	LCS	P	0 - 30
LFB	Endrin Aldehyde	4.53	LCS	P	0 - 30
LFB	Endrin Ketone	5.43	LCS	P	0 - 30
LFB	Ethalfuralin	12.5	LCS	P	0 - 30
LFB	Gamma-BHC	0.433	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.18	LCS	P	0 - 30
LFB	Heptachlor	4.53	LCS	P	0 - 30
LFB	Heptachlor Epoxide	4.04	LCS	P	0 - 30
LFB	Hexachlorobenzene	2.19	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	1.73	LCS	P	0 - 30
LFB	Methoxychlor	6.84	LCS	P	0 - 30
LFB	Mirex	4.44	LCS	P	0 - 30
LFB	Permethrin	0.524	LCS	P	0 - 30
LFB	Phenothrin	5.98	LCS	P	0 - 30
LFB	Prallethrin	5.21	LCS	P	0 - 30
LFB	Trans-Nonachlor	0.900	LCS	P	0 - 30
LFB	Trifluralin	5.32	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P384221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2181728	Chlordane	4.62	Spike	P	0 - 30
2181728	Toxaphene	3.33	Spike	P	0 - 30
LFB	Chlordane	10.4	LCS	P	0 - 30
LFB	Toxaphene	22.8	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P384189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180960	2,4-D	5.32	Spike	P	0 - 30
2180960	Acetaminophen	0.148	Spike	P	0 - 30
2180960	Acetamiprid	1.98	Spike	P	0 - 30
2180960	Afidopyropen	2.72	Spike	P	0 - 30
2180960	Bentazon	5.86	Spike	P	0 - 30
2180960	Benzovindiflupyr	3.40	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P384189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180960	Carbamazepine	1.67	Spike	P	0 - 30
2180960	Clothianidin	5.38	Spike	P	0 - 30
2180960	Dinotefuran	9.03	Spike	P	0 - 30
2180960	Diuron	0.0735	Spike	P	0 - 30
2180960	Fenuron	0.424	Spike	P	0 - 30
2180960	Fluridone	1.35	Spike	P	0 - 30
2180960	Hydrocodone	3.00	Spike	P	0 - 30
2180960	Ibuprofen	9.15	Spike	P	0 - 30
2180960	Imazapyr	10.7	Spike	P	0 - 30
2180960	Imidacloprid	2.59	Spike	P	0 - 30
2180960	Linuron	8.26	Spike	P	0 - 30
2180960	Mandestrobin	1.40	Spike	P	0 - 30
2180960	MCP	7.09	Spike	P	0 - 30
2180960	Naproxen	8.72	Spike	P	0 - 30
2180960	Primidone	6.62	Spike	P	0 - 30
2180960	Pyraclostrobin	0.0440	Spike	P	0 - 30
2180960	Thiamethoxam	1.90	Spike	P	0 - 30
2180960	Tolfenpyrad	2.17	Spike	P	0 - 30
2180960	Triclopyr	20.8	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P384190

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180714	Acesulfame K	2.77	Spike	P	0 - 30
2180714	AMPA	0.322	Spike	P	0 - 30
2180714	Endothall	4.57	Spike	P	0 - 30
2180714	Glufosinate	0.963	Spike	P	0 - 30
2180714	Glyphosate	13.4	Spike	P	0 - 30
2180714	Sucralose	2.89	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P384331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180800	3-Hydroxycarbofuran	3.56	Spike	P	0 - 30
2180800	Aldicarb	2.59	Spike	P	0 - 30
2180800	Aldicarb Sulfone	7.03	Spike	P	0 - 30
2180800	Aldicarb Sulfoxide	2.67	Spike	P	0 - 30
2180800	Carbaryl	6.93	Spike	P	0 - 30
2180800	Carbofuran	3.24	Spike	P	0 - 30
2180800	Methiocarb	1.71	Spike	P	0 - 30
2180800	Methomyl	15.4	Spike	P	0 - 30
2180800	Oxamyl	16.0	Spike	P	0 - 30
2180800	Propoxur	5.58	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P384688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180904	Total Alkalinity	2.27	Sample	P	0 - 8.1

Reference Method: SM 2540 D-2011
Batch ID: P384727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180842	TSS	5.41	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P384927

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2182519	Fluoride	0.457	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P384266

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2180843	Organic Carbon	0.347	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2180889
Field Sample ID: G4NW0501

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	126	P	30 - 160
EPA 8321B	Acetaminophen-d4	91.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.9	P	30 - 160
EPA 8321B	Diuron-d6	67.8	P	30 - 160
EPA 8321B	Endothall-d6	731	F	30 - 160
EPA 8321B	Endothall-d6	731	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	54.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	54.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.9	P	30 - 160
EPA 8321B	Primidone-d5	82.8	P	30 - 160
EPA 8321B	Sucralose-d6	67.8	P	30 - 160
EPA 8321B	Sucralose-d6	67.8	P	30 - 160

Lab Sample ID: 2180890
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	40.5	P	30 - 160

Lab Sample ID: 2180891
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	107	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	57.6	P	30 - 160
EPA 8321B	Diuron-d6	57.3	P	30 - 160
EPA 8321B	Endothall-d6	696	F	30 - 160
EPA 8321B	Endothall-d6	696	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	60.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	60.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	68.5	P	30 - 160
EPA 8321B	Primidone-d5	79.4	P	30 - 160
EPA 8321B	Sucralose-d6	68.8	P	30 - 160
EPA 8321B	Sucralose-d6	68.8	P	30 - 160

Lab Sample ID: 2180892
Field Sample ID: G4NW0450

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	61.0	P	30 - 160
EPA 8321B	Diuron-d6	61.3	P	30 - 160
EPA 8321B	Endothall-d6	681	F	30 - 160
EPA 8321B	Endothall-d6	681	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	45.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	45.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.8	P	30 - 160
EPA 8321B	Primidone-d5	69.9	P	30 - 160
EPA 8321B	Sucralose-d6	68.9	P	30 - 160
EPA 8321B	Sucralose-d6	68.9	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2180893
Field Sample ID: G4NW0451

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	86.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.6	P	30 - 160
EPA 8321B	Diuron-d6	56.0	P	30 - 160
EPA 8321B	Endothall-d6	701	F	30 - 160
EPA 8321B	Endothall-d6	701	F	30 - 160
EPA 8321B	Glyphosate 13C 15N	64.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	64.7	P	30 - 160
EPA 8321B	Ibuprofen-d3	60.4	P	30 - 160
EPA 8321B	Primidone-d5	77.5	P	30 - 160
EPA 8321B	Sucralose-d6	69.3	P	30 - 160
EPA 8321B	Sucralose-d6	69.3	P	30 - 160

Lab Sample ID: 2180894
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	80.6	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	47.1	P	34 - 106
EPA 8276	Decachlorobiphenyl	59.0	P	26 - 97.0
EPA 8276	PCNB	66.2	P	38 - 141

Lab Sample ID: 2180895
Field Sample ID: G4NW0402

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	115	P	72 - 135
EPA 8270E	Terbufos-d10	106	P	57 - 134

Lab Sample ID: 2180896
Field Sample ID: G4NW0450

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	82.8	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	43.9	P	34 - 106
EPA 8276	Decachlorobiphenyl	61.1	P	26 - 97.0
EPA 8276	PCNB	64.1	P	38 - 141

Lab Sample ID: 2180897
Field Sample ID: G4NW0451

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	77.2	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	42.9	P	34 - 106
EPA 8276	Decachlorobiphenyl	56.1	P	26 - 97.0
EPA 8276	PCNB	64.7	P	38 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A99720

Included Lab Sample IDs: 2180868, 2180871, 2180874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	102	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A99738

Included Lab Sample IDs: 2180869, 2180872, 2180875

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A99744

Included Lab Sample IDs: 2180870, 2180873, 2180876

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.4	95.3	P/P	90 - 110
O-Phosphate-P	98.9	97.8	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A99754

Included Lab Sample IDs: 2180869, 2180872, 2180875

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

Reference Method: EPA 8321B

Run ID: A99760

Included Lab Sample IDs: 2180889, 2180891, 2180892, 2180893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	76.9	79.1	P/P	60 - 160
Glufosinate	101	101	P/P	60 - 160
Glyphosate	109	106	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A99781

Included Lab Sample IDs: 2180869, 2180872, 2180875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.0	99.8	P/P	90 - 110
Total-P	99.8	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99793

Included Lab Sample IDs: 2180889, 2180891, 2180892, 2180893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	78.4	70.3	P/P	60 - 160
Endothall	103	104	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A99807

Included Lab Sample IDs: 2180869, 2180872, 2180875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.4	91.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A99808

Included Lab Sample IDs: 2180869, 2180872, 2180875

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	102	P/P	90 - 110
Ammonia-N	101	100	P/P	90 - 110
Ammonia-N	103	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A99828

Included Lab Sample IDs: 2180889, 2180891, 2180892, 2180893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	89.5	97.3	P/P	50 - 150
2,4-D	97.3	88.1	P/P	50 - 150
Acetaminophen	107	114	P/P	60 - 160
Acetaminophen	114	112	P/P	60 - 160
Acetamiprid	111	114	P/P	50 - 150
Acetamiprid	114	111	P/P	50 - 150
Afidopyropen	95.8	119	P/P	50 - 150
Afidopyropen	99.8	95.8	P/P	50 - 150
Bentazon	109	143	P/P	50 - 160
Bentazon	117	109	P/P	50 - 160
Benzovindiflupyr	93.7	98.1	P/P	50 - 150
Benzovindiflupyr	98.1	89.0	P/P	50 - 150
Carbamazepine	101	107	P/P	60 - 150
Carbamazepine	107	101	P/P	60 - 150
Clothianidin	94.0	97.5	P/P	60 - 150
Clothianidin	97.5	89.8	P/P	60 - 150
Dinotefuran	104	97.2	P/P	50 - 150
Dinotefuran	97.2	92.9	P/P	50 - 150
Diuron	104	109	P/P	60 - 160
Diuron	109	110	P/P	60 - 160
Fenuron	95.1	91.2	P/P	60 - 150
Fenuron	95.8	95.1	P/P	60 - 150
Fluridone	112	124	P/P	60 - 160
Fluridone	118	112	P/P	60 - 160
Hydrocodone	111	118	P/P	60 - 150
Hydrocodone	119	111	P/P	60 - 150
Ibuprofen	109	70.7	P/P	50 - 160
Ibuprofen	70.7	94.9	P/P	50 - 160
Imazapyr	111	84.4	P/P	50 - 150
Imazapyr	84.4	73.5	P/P	50 - 150
Imidacloprid	96.5	95.3	P/P	60 - 150
Imidacloprid	98.7	96.5	P/P	60 - 150
Linuron	93.2	93.8	P/P	60 - 150
Linuron	95.2	93.2	P/P	60 - 150
Mandestrobin	101	104	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A99828

Included Lab Sample IDs: 2180889, 2180891, 2180892, 2180893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Mandestrobin	98.9	101	P/P	50 - 150
MCP	102	96.9	P/P	50 - 150
MCP	106	102	P/P	50 - 150
Naproxen	121	73.5	P/P	50 - 160
Naproxen	73.5	85.3	P/P	50 - 160
Primidone	84.4	91.8	P/P	60 - 150
Primidone	92.7	84.4	P/P	60 - 150
Pyraclostrobin	101	97.7	P/P	60 - 150
Pyraclostrobin	97.7	97.8	P/P	60 - 150
Thiamethoxam	114	118	P/P	50 - 150
Thiamethoxam	118	108	P/P	50 - 150
Tolfenpyrad	110	97.6	P/P	60 - 150
Tolfenpyrad	99.3	110	P/P	60 - 150
Triclopyr	86.9	88.6	P/P	50 - 150
Triclopyr	97.8	86.9	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A99846

Included Lab Sample IDs: 2180890

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	125	110	P/P	60 - 150
Aldicarb	139	107	P/P	60 - 150
Aldicarb Sulfone	123	103	P/P	50 - 150
Aldicarb Sulfoxide	131	108	P/P	50 - 150
Carbaryl	116	123	P/P	60 - 150
Carbofuran	107	111	P/P	50 - 150
Methiocarb	129	122	P/P	50 - 150
Methomyl	125	97.7	P/P	50 - 150
Oxamyl	122	105	P/P	50 - 150
Propoxur	108	106	P/P	50 - 150

Reference Method: EPA 8270E

Run ID: A99873

Included Lab Sample IDs: 2180895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.8		P	80 - 120
Alachlor	101		P	80 - 120
Ametryn	102		P	80 - 120
Atrazine	99.5		P	80 - 120
Atrazine Desethyl	102		P	80 - 120
Azinphos Methyl	102		P	80 - 120
Bromacil	101		P	80 - 120
Butylate	96.1		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorpyrifos Ethyl	100		P	80 - 120
Chlorpyrifos Methyl	101		P	80 - 120
Cyanazine	104		P	80 - 120
Demeton	97.2		P	80 - 120
Diazinon	98.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A99873
Included Lab Sample IDs: 2180895

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dimethenamid	98.8		P	80 - 120
Disulfoton	98.1		P	80 - 120
Dithiopyr	100		P	80 - 120
EPTC	102		P	80 - 120
Ethion	101		P	80 - 120
Ethoprop	99.3		P	80 - 120
Fenamiphos	103		P	80 - 120
Fipronil	101		P	80 - 120
Fipronil Desulfinyl	104		P	80 - 120
Fipronil Sulfide	102		P	80 - 120
Fipronil Sulfone	101		P	80 - 120
Flumioxazin	88.3		P	80 - 120
Fonofos	97.3		P	80 - 120
Hexazinone	100		P	80 - 120
Imazalil	108		P	80 - 120
Malathion	99.6		P	80 - 120
Metalaxyl	106		P	80 - 120
Metolachlor	99.0		P	80 - 120
Metribuzin	99.7		P	80 - 120
Mevinphos	95.9		P	80 - 120
Molinate	99.5		P	80 - 120
Naled	109		P	80 - 120
Norflurazon	103		P	80 - 120
Oxadiazon	102		P	80 - 120
Parathion Ethyl	95.7		P	80 - 120
Parathion Methyl	98.6		P	80 - 120
Pendimethalin	96.9		P	80 - 120
Phorate	99.3		P	80 - 120
Prodiamine	92.9		P	80 - 120
Prometon	101		P	80 - 120
Prometryn	100		P	80 - 120
Pronamide	98.9		P	80 - 120
Propiconazole	101		P	80 - 120
Simazine	96.8		P	80 - 120
Sulfentrazone	99.8		P	80 - 120
Tebuconazole	101		P	80 - 120
Terbufos	97.0		P	80 - 120
Terbuthylazine	99.6		P	80 - 120

Reference Method: EPA 8321B
Run ID: A99878
Included Lab Sample IDs: 2180889, 2180891, 2180892, 2180893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	87.6	89.1	P/P	60 - 160

Reference Method: EPA 8276
Run ID: A99879
Included Lab Sample IDs: 2180894, 2180896, 2180897

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

Reference Method: EPA 8276

Run ID: A99879

Included Lab Sample IDs: 2180894, 2180896, 2180897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.5		P	80 - 120
Chlordane	99.7		P	80 - 120
Toxaphene	108		P	80 - 120
Toxaphene	96.0		P	80 - 120

Reference Method: EPA 8270E

Run ID: A99887

Included Lab Sample IDs: 2180894, 2180896, 2180897

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	92.6		P	80 - 120
Alpha-BHC	102		P	80 - 120
Alpha-Chlordane	89.8		P	80 - 120
Beta-BHC	96.4		P	80 - 120
Beta-Cyfluthrin	81.3		P	80 - 120
Bifenthrin	96.4		P	80 - 120
Chlorothalonil	67.6*		F	80 - 120
Cis-Nonachlor	87.6		P	80 - 120
Cypermethrin	87.5		P	80 - 120
Dacthal	95.2		P	80 - 120
DDD-p,p'	91.0		P	80 - 120
DDE-p,p'	95.3		P	80 - 120
DDT-p,p'	109		P	80 - 120
Delta-BHC	93.9		P	80 - 120
Dicofol	90.5		P	80 - 120
Dieldrin	92.4		P	80 - 120
Endosulfan I	90.9		P	80 - 120
Endosulfan II	83.0		P	80 - 120
Endosulfan Sulfate	85.5		P	80 - 120
Endrin	94.3		P	80 - 120
Endrin Aldehyde	92.4		P	80 - 120
Endrin Ketone	86.4		P	80 - 120
Ethalfuralin	90.7		P	80 - 120
Gamma-BHC	97.4		P	80 - 120
Gamma-Chlordane	88.8		P	80 - 120
Heptachlor	89.3		P	80 - 120
Heptachlor Epoxide	89.9		P	80 - 120
Hexachlorobenzene	103		P	80 - 120
Lambda-Cyhalothrin	79.0*		F	80 - 120
Methoxychlor	100		P	80 - 120
Mirex	81.5		P	80 - 120
Permethrin	88.0		P	80 - 120
Phenothrin	84.8		P	80 - 120
Prallethrin	76.1*		F	80 - 120
Trans-Nonachlor	88.8		P	80 - 120
Trifluralin	91.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A99904

Included Lab Sample IDs: 2180868, 2180871, 2180874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	99.2	103	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A99977

Included Lab Sample IDs: 2180868, 2180871, 2180874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	94.0	92.6	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A99986

Included Lab Sample IDs: 2180868, 2180871, 2180874

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	101	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						1.34	
EPA 300.0 Rev. 2.1	Bromide	96.9		95.2				
EPA 350.1 Rev. 2.0	Ammonia-N	99.3		101	102			0.661
	Ammonia-N	103		101	98.0			2.32
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.3		99.0	99.5			0.399
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5		99.5	99.0			0.504
	NO2NO3-N	100		100	100			0.0
EPA 365.1 Rev. 2.0	Total-P	104		98.9	103			3.03
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4		97.6	98.0			0.305
EPA 8270E	Acetochlor	83.5	96.5	99.1	85.1	14.4		11.8
	Alachlor	86.4	98.9	101	94.0	13.6		7.46
	Aldrin	48.1	53.8	55.0	54.4	11.2		1.23
	Alpha-BHC	82.0	83.3	75.0	80.7	1.53		7.32
	Alpha-Chlordane	79.1	84.3	78.5	82.5	6.29		4.97
	Ametryn	98.6	109	112	103	10.4		8.57
	Atrazine	91.3	104			12.6		12.5
	Atrazine Desethyl	75.9	83.7	77.6	68.2	9.78		11.3
	Azinphos Methyl	106	118	115	99.0	11.0		14.9
	Beta-BHC	93.6	96.2	101	84.8	2.67		17.8
	Beta-Cyfluthrin	79.9	80.2	87.4	78.9	0.407		10.3
	Bifenthrin	91.8	98.5	104	92.2	7.02		11.7
	Bromacil	78.6	88.6	104	87.4	11.9		17.0
	Butylate	49.8	53.3	60.2	41.8	6.87		36.2
	Carbophenothion	91.0	109	101	96.6	17.8		4.15
	Chlorothalonil	71.3	53.9	38.6	60.1	27.8		43.5
	Chlorpyrifos Ethyl	90.6	106	97.2	95.2	15.8		2.09
	Chlorpyrifos Methyl	89.9	104	99.9	91.9	14.6		8.28
	Cis-Nonachlor	81.3	86.6	78.9	85.7	6.25		8.24
	Cyanazine	95.9	109	116	99.2	12.9		15.3
	Cypermethrin	103	92.4	80.7	98.8	10.9		20.2
	Dacthal	83.8	89.2	80.2	87.0	6.27		8.03
	DDD-p,p'	90.0	93.4	85.5	92.9	3.70		8.28
	DDE-p,p'	81.0	85.2	81.0	85.1	5.02		4.99
	DDT-p,p'	96.4	85.5	82.3	87.8	12.0		6.48
	Delta-BHC	94.7	102	110	94.1	7.06		15.4
	Demeton	63.5	83.8	92.8	77.5	27.6		17.9
	Diazinon	82.8	96.1	98.9	88.1	14.8		11.5
	Dicofol	66.1	67.1	62.8	62.7	1.59		0.222
	Dieldrin	84.9	89.4	83.0	85.4	5.15		2.81
	Dimethenamid	85.4	97.2	103	91.4	12.9		11.7
	Disulfoton	64.4	87.1	90.6	78.3	30.0		14.6
	Dithiopyr	81.7	95.7	96.7	88.0	15.8		9.48
	Endosulfan I	87.2	87.9	79.6	85.9	0.790		7.62
	Endosulfan II	96.7	102	87.0	96.4	5.15		10.3
	Endosulfan Sulfate	85.5	82.6	72.2	86.8	3.43		18.3
	Endrin	91.4	95.7	87.1	94.9	4.61		8.61
	Endrin Aldehyde	85.6	89.6	82.4	88.3	4.53		6.93
	Endrin Ketone	88.9	93.9	79.1	92.6	5.43		15.8
	EPTC	38.4	40.2	44.4	28.8	4.59		42.8
	Ethalfuralin	59.1	67.0	61.5	63.9	12.5		3.89
	Ethion	90.8	109	114	107	18.2		6.37
	Ethoprop	79.2	92.5	96.2	80.2	15.5		18.1
	Fenamiphos	91.4	121	111	105	27.7		6.24
	Fipronil	89.6	102	110	96.8	12.6		12.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Fipronil Desulfinyl	96.0	107	110	100	10.6		9.43
	Fipronil Sulfide	90.0	106	105	98.0	16.3		7.25
	Fipronil Sulfone	92.0	107	109	99.8	14.6		8.61
	Flumioxazin	152	151	198	179	1.28		10.3
	Fonofos	80.7	102	93.9	87.0	23.4		7.57
	Gamma-BHC	89.4	89.0	93.2	81.4	0.433		13.6
	Gamma-Chlordane	74.4	78.3	73.7	78.0	5.18		5.75
	Heptachlor	66.1	69.2	65.4	69.0	4.53		5.42
	Heptachlor Epoxide	81.1	84.5	77.4	82.8	4.04		6.80
	Hexachlorobenzene	62.3	61.0	58.9	61.2	2.19		3.81
	Hexazinone	87.5	96.8	99.2	99.4	10.2		0.158
	Imazalil	65.2	76.6	85.1	79.5	16.2		6.72
	Lambda-Cyhalothrin	74.5	75.8	70.0	84.0	1.73		18.2
	Malathion	101	115	114	107	13.2		6.70
	Metalaxyl	88.6	103	103	94.6	14.8		8.32
	Methoxychlor	86.6	92.7	82.1	90.0	6.84		9.21
	Metolachlor	81.8	97.1	93.4	80.0	17.0		10.1
	Metribuzin	107	122	126	113	12.8		10.3
	Mevinphos	70.2	83.4	86.1	68.8	17.2		22.3
	Mirex	54.8	57.3	57.8	62.5	4.44		7.82
	Molinate	50.2	56.3	60.3	43.6	11.5		32.2
	Naled	60.1	69.9	77.3	71.3	15.1		7.96
	Norflurazon	93.0	106	107	96.2	13.2		10.3
	Oxadiazon	83.6	96.9	90.3	91.2	14.7		0.928
	Parathion Ethyl	82.4	96.2	90.8	87.0	15.5		4.33
	Parathion Methyl	84.2	101	106	93.8	18.4		11.7
	Pendimethalin	85.6	106	100	100	21.1		0.438
	Permethrin	88.3	87.9	82.0	90.6	0.524		10.0
	Phenothrin	69.2	73.5	75.5	71.2	5.98		5.83
	Phorate	107	134	120	107	22.7		11.6
	Prallethrin	72.3	76.2	59.7	64.7	5.21		7.95
	Prodiamine	55.8	33.2	43.3	40.1	50.7		7.56
	Prometon	78.9	91.3	94.8	87.3	14.6		8.24
	Prometryn	84.1	95.6	100	92.4	12.8		8.08
	Pronamide	88.6	101	112	97.7	13.2		13.5
	Propiconazole	84.0	95.8	95.8	92.3	13.1		3.67
	Simazine	93.7	104	106	97.9	10.2		7.54
	Sulfentrazone	50.6	54.1	101	88.9	6.76		12.8
	Tebuconazole	46.4	57.0	61.3	62.5	20.4		2.01
	Terbufos	81.5	104	103	91.5	23.9		12.0
	Terbutylazine	86.8	98.7	102	92.6	12.8		9.61
	Trans-Nonachlor	81.6	82.4	85.4	79.3	0.900		7.32
	Trifluralin	64.1	67.6	66.9	63.6	5.32		5.08
EPA 8276	Chlordane	84.7	76.4	81.9	85.7	10.4		4.62
	Toxaphene	89.3	71.0	78.1	80.8	22.8		3.33
EPA 8321B	2,4-D	112						5.32
	3-Hydroxycarbofuran	79.1		54.9	53.0			3.56
	Acesulfame K	86.3		49.7	51.1			2.77
	Acetaminophen	78.8		67.9	68.0			0.148
	Acetamiprid	81.8		57.2	56.1			1.98
	Afidopyropen	71.4		63.3	61.6			2.72
	Aldicarb	92.3		53.2	51.8			2.59
	Aldicarb Sulfone	90.0		68.8	64.1			7.03
	Aldicarb Sulfoxide	99.7		33.8	32.9			2.67

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	AMPA	74.9	80.3	80.0			0.322
	Bentazon	69.9	35.4	39.6			5.86
	Benzovindiflupyr	75.6	69.4	67.1			3.40
	Carbamazepine	71.9	49.1	48.1			1.67
	Carbaryl	50.1	30.2	32.4			6.93
	Carbofuran	54.2	32.8	31.7			3.24
	Clothianidin	82.2	53.6	50.5			5.38
	Dinotefuran	94.0	69.5	63.5			9.03
	Diuron	62.6	41.0	41.0			0.0735
	Endothall	90.6	93.1	97.4			4.57
	Fenuron	99.8	55.3	55.1			0.424
	Fluridone	104	98.6	100			1.35
	Glufosinate	83.2	88.9	88.1			0.963
	Glyphosate	79.7	66.0	77.6			13.4
	Hydrocodone	86.7	58.6	56.8			3.00
	Ibuprofen	90.7	69.6	76.2			9.15
	Imazapyr	84.0	77.8	94.3			10.7
	Imidacloprid	102	95.8	93.2			2.59
	Linuron	59.7	53.3	49.1			8.26
	Mandestrobin	84.9	73.9	75.0			1.40
	MCPP	105	80.7	86.6			7.09
	Methiocarb	66.6	43.3	42.6			1.71
	Methomyl	87.7	50.7	59.2			15.4
	Naproxen	75.5	67.1	61.5			8.72
	Oxamyl	91.4	57.4	67.4			16.0
	Primidone	74.3	63.5	67.9			6.62
	Propoxur	59.4	31.2	33.0			5.58
	Pyraclostrobin	75.4	71.6	71.6			0.0440
	Sucralose	77.9	83.5	86.8			2.89
	Thiamethoxam	88.1	68.1	66.8			1.90
	Tolfenpyrad	51.7	62.6	61.3			2.17
	Triclopyr	78.9	60.6	74.7			20.8
SM 2320 B-2011	Total Alkalinity	101				2.27	
SM 2540 D-2011	TSS					5.41	
SM 4500 F-C-2011	Fluoride	98.3	100	99.6			0.457
SM 5310 B-2011	Organic Carbon	104	102	103			0.347

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2180868, 2180871, 2180874
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2180868, 2180871, 2180874
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2180869, 2180872, 2180875
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2180869, 2180872, 2180875
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2180869, 2180872, 2180875
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2180869, 2180872, 2180875
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2180870, 2180873, 2180876
EPA 8270E	Organochlorine pesticides in water matrices by GC/MS-SIM	2180894, 2180896, 2180897
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2180895
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2180894, 2180896, 2180897
EPA 8321B	Carbamates in water matrices by HPLC/MS/MS	2180890

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2180889, 2180891, 2180892, 2180893
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2180889, 2180891, 2180892, 2180893
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2180868, 2180871, 2180874
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2180868, 2180871, 2180874
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2180868, 2180871, 2180874
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2180869, 2180872, 2180875

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	07/07/2020			07/07/2020 16:04	Yen Ta	2180868, 2180871, 2180874
EPA 300.0 Rev. 2.1	07/07/2020			07/15/2020 22:58	Julia Storbeck	2180868
	07/07/2020			07/15/2020 23:16	Julia Storbeck	2180871
	07/07/2020			07/15/2020 23:35	Julia Storbeck	2180874
EPA 350.1 Rev. 2.0	07/07/2020			07/11/2020 10:10	Ping Hua	2180869
	07/07/2020			07/11/2020 14:38	Ping Hua	2180872
	07/07/2020			07/11/2020 16:43	Ping Hua	2180875
EPA 351.2 Rev. 2.0	07/07/2020	07/09/2020 09:30	Sima Feizi	07/10/2020 21:17	Jhamieka S. Greenwood	2180869
	07/07/2020	07/09/2020 09:30	Sima Feizi	07/10/2020 21:19	Jhamieka S. Greenwood	2180872
	07/07/2020	07/09/2020 09:30	Sima Feizi	07/10/2020 21:20	Jhamieka S. Greenwood	2180875
EPA 353.2 Rev. 2.0	07/07/2020			07/08/2020 09:30	Beverly Y. Sanders	2180869
	07/07/2020			07/08/2020 09:38	Beverly Y. Sanders	2180872
	07/07/2020			07/08/2020 09:43	Beverly Y. Sanders	2180875
EPA 365.1 Rev. 2.0	07/07/2020	07/08/2020 13:48	Yen Ta	07/10/2020 08:43	Lipi Saha	2180869, 2180872
	07/07/2020	07/08/2020 13:48	Yen Ta	07/10/2020 08:51	Lipi Saha	2180875
EPA 365.1 Rev. 2.0 dissolved	07/07/2020			07/07/2020 16:11	Carlos Miranda	2180870
	07/07/2020			07/07/2020 16:12	Carlos Miranda	2180873
	07/07/2020			07/07/2020 17:11	Carlos Miranda	2180876
EPA 8270E	07/07/2020	07/08/2020 08:00	Fe-Val Siddell	07/10/2020 18:46	Vandana T. Nagar	2180895
	07/07/2020	07/09/2020 09:00	Fe-Val Siddell	07/13/2020 21:44	Michael Poppell	2180894
	07/07/2020	07/09/2020 09:00	Fe-Val Siddell	07/13/2020 22:16	Michael Poppell	2180896
	07/07/2020	07/09/2020 09:00	Fe-Val Siddell	07/13/2020 22:48	Michael Poppell	2180897
EPA 8276	07/07/2020	07/09/2020 09:00	Fe-Val Siddell	07/15/2020 05:03	Arthur Maknenko	2180894
	07/07/2020	07/09/2020 09:00	Fe-Val Siddell	07/15/2020 05:58	Arthur Maknenko	2180896
	07/07/2020	07/09/2020 09:00	Fe-Val Siddell	07/15/2020 07:49	Arthur Maknenko	2180897
EPA 8321B	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/08/2020 18:23	Rebecca Ware	2180889
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/08/2020 18:34	Rebecca Ware	2180891
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/08/2020 18:45	Rebecca Ware	2180892
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/08/2020 18:56	Rebecca Ware	2180893
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/09/2020 14:27	Rebecca Ware	2180889
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/09/2020 14:41	Rebecca Ware	2180891
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/09/2020 14:55	Rebecca Ware	2180892
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/09/2020 15:09	Rebecca Ware	2180893
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/14/2020 13:18	Rebecca Ware	2180889
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/14/2020 13:30	Rebecca Ware	2180891
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/14/2020 13:41	Rebecca Ware	2180892
	07/07/2020	07/08/2020 12:30	Rebecca Ware	07/14/2020 13:53	Rebecca Ware	2180893
	07/07/2020	07/09/2020 09:00	Hoor Shaik	07/11/2020 16:44	Juyoung Kim	2180889
	07/07/2020	07/09/2020 09:00	Hoor Shaik	07/11/2020 17:19	Juyoung Kim	2180891
	07/07/2020	07/09/2020 09:00	Hoor Shaik	07/11/2020 18:28	Juyoung Kim	2180892

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/07/2020	07/09/2020 09:00	Hoor Shaik	07/11/2020 19:03	Juyoung Kim	2180893
	07/07/2020	07/13/2020 08:30	Hoor Shaik	07/13/2020 21:49	Juyoung Kim	2180890
SM 2320 B-2011	07/07/2020			07/16/2020 07:01	Lauren Lees	2180868
	07/07/2020			07/16/2020 07:11	Lauren Lees	2180871
	07/07/2020			07/16/2020 07:20	Lauren Lees	2180874
	07/07/2020			07/09/2020 14:12	Yijie Li	2180868, 2180871, 2180874
SM 2540 D-2011	07/07/2020			07/21/2020 03:50	Samantha Davila	2180868
SM 4500 F-C-2011	07/07/2020			07/21/2020 03:55	Samantha Davila	2180871
	07/07/2020			07/21/2020 04:01	Samantha Davila	2180874
SM 5310 B-2011	07/07/2020			07/09/2020 05:48	David Boose	2180869
	07/07/2020			07/09/2020 06:00	David Boose	2180872
	07/07/2020			07/09/2020 06:13	David Boose	2180875