

Chemical Analysis Report

TLH-ROC-2020-01-14-01

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

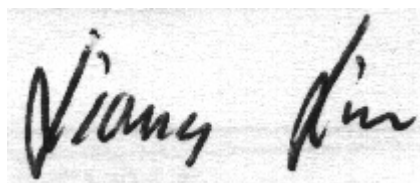
Event Description: **Run 3**
Request ID: **RQ-2020-01-13-46**
Customer: **TLH-ROC**
Project ID: **SMP**

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

Date Certified: 07-FEB-2020 14:56

A handwritten signature in black ink, appearing to read "Liang Lin", is shown on a light-colored background.

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: AUCILLA RIVER @ MOUTH

Collection Date/Time: 01/14/2020 13:35

Field ID: G1TLHR0091

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149240	EPA 180.1 Rev. 2.0	Turbidity	2.7		NTU	P377302	
	EPA 300.0 Rev. 2.1	Bromide	23		mg Br/L	P377473	
	SM 2320 B-2011	Total Alkalinity	157	A	mg CaCO3/L	P377696	
	SM 2540 D-2011	TSS	5	I	mg/L	P377208	
	SM 4500 F-C-2011	Fluoride	0.48		mg F/L	P378056	
2149241	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P377372	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24	I	mg N/L	P377426	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P377588	
	EPA 365.1 Rev. 2.0	Total-P	0.031		mg P/L	P377494	
	SM 5310 B-2011	Organic Carbon	4.1		mg C/L	P377342	
2149242	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.011		mg P/L	P377109	
2149265	EPA 200.7 Rev. 4.4	Iron	130	I	ug/L	P377532	
		Manganese	14		ug/L	P377532	
		Zinc	15	U	ug/L	P377532	
	EPA 200.8 Rev. 5.4	Aluminum	85		ug/L	P377532	
		Antimony	0.20	U	ug/L	P377532	
		Arsenic	0.80	I	ug/L	P377532	
		Cadmium	0.080	U	ug/L	P377532	
		Chromium	1.6	U	ug/L	P377532	
		Copper	3.3		ug/L	P377532	
		Lead	0.80	U	ug/L	P377532	
		Nickel	2.0	U	ug/L	P377532	
		Silver	0.040	U	ug/L	P377532	
		Thallium	0.40	U	ug/L	P377532	

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: Moore Branch @ Cody Church Rd

Collection Date/Time: 01/14/2020 14:45

Field ID: G1TLHR0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149237	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P377299	
	EPA 300.0 Rev. 2.1	Chloride	6.5		mg Cl/L	P377329	
		Sulfate	1.8		mg SO4/L	P377331	
	SM 2120 B-2011	Color (true)	81		PCU	P377333	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P377366	
	SM 2540 C-2011	TDS	47		mg/L	P377416	
	SM 2540 D-2011	TSS	3	I	mg/L	P377206	
	SM 4500 F-C-2011	Fluoride	0.035	I	mg F/L	P377370	
2149238	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	I	mg N/L	P377305	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36		mg N/L	P377326	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P377421	
	EPA 365.1 Rev. 2.0	Total-P	0.075		mg P/L	P377541	
	SM 5310 B-2011	Organic Carbon	8.3		mg C/L	P377340	
2149239	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.040		mg P/L	P377108	
2149256	EPA 8321B	Aldicarb	0.020	U	ug/L	P377040	
		Aldicarb Sulfone	0.0020	U	ug/L	P377040	
		Aldicarb Sulfoxide	0.0020	U	ug/L	P377040	
		Carbaryl	0.0020	U	ug/L	P377040	
		Carbofuran	0.0045	I	ug/L	P377040	
		3-Hydroxycarbofuran	0.0020	U	ug/L	P377040	
		Methiocarb	0.0020	U	ug/L	P377040	
		Methomyl	0.0020	U	ug/L	P377040	
		Oxamyl	0.0020	U	ug/L	P377040	
		Propoxur	0.0020	U	ug/L	P377040	
		2,4-D	0.0020	U	ug/L	P377201	
		Acesulfame K**	0.10	U	ug/L	P377170	
2149257		AMPA**	0.10	U	ug/L	P377170	
		Sucralose**	0.024	I	ug/L	P377170	
		Acetaminophen**	0.0080	U	ug/L	P377201	
		Acetamiprid**	0.0020	U	ug/L	P377201	
		Endothall**	0.25	U	ug/L	P377170	
		Glufosinate**	0.10	U	ug/L	P377170	
		Glyphosate**	0.10	U	ug/L	P377170	
		Afidopyrophen**	0.0020	UJ	ug/L	P377201	
		Bentazon	8.0E-04	U	ug/L	P377201	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P377201	
		Carbamazepine**	8.0E-04	U	ug/L	P377201	
		Clothianidin**	0.0020	U	ug/L	P377201	
		Dinotefuran**	0.0020	U	ug/L	P377201	
		Diuron	0.0020	U	ug/L	P377201	
		Fenuron	0.016	U	ug/L	P377201	
		Fluridone**	8.0E-04	U	ug/L	P377201	
		Imazapyr**	0.0040	U	ug/L	P377201	
							RPD

Field ID: G1TLHR0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149257	EPA 8321B	Hydrocodone**	0.0020	U	ug/L	P377201	MS
		Ibuprofen**	0.020	U	ug/L	P377201	
		Imidacloprid	0.0020	U	ug/L	P377201	
		Linuron	0.0040	U	ug/L	P377201	
		Mandestrobin**	0.0020	UJ	ug/L	P377201	
		MCP	0.0020	U	ug/L	P377201	
		Naproxen**	0.0080	U	ug/L	P377201	
		Primidone**	0.0040	U	ug/L	P377201	
		Pyraclostrobin**	0.0020	U	ug/L	P377201	
		Thiamethoxam**	0.0020	U	ug/L	P377201	
		Tolfenpyrad**	0.0020	U	ug/L	P377201	
		Triclopyr**	0.0040	U	ug/L	P377201	
2149262	EPA 8270E	Aldrin	4.4	U	ng/L	P377222	RPD
		Alpha-BHC	2.2	U	ng/L	P377222	
		Alpha-Chlordane	1.1	U	ng/L	P377222	
		Beta-BHC	11	U	ng/L	P377222	
		Bifenthrin**	4.4	U	ng/L	P377222	
		Delta-BHC	8.7	U	ng/L	P377222	
		Gamma-BHC	8.7	U	ng/L	P377222	
		Carbophenothion	11	U	ng/L	P377222	
		Chlorothalonil	2.2	UJ	ng/L	P377222	
		Cis-Nonachlor**	1.1	U	ng/L	P377222	
		Cypermethrin	22	U	ng/L	P377222	
		DDD-p,p'	6.5	U	ng/L	P377222	
		DDE-p,p'	6.5	U	ng/L	P377222	
		DDT-p,p'	7.6	U	ng/L	P377222	
		Dicofol	33	U	ng/L	P377222	
		Dieldrin	4.4	U	ng/L	P377222	
		Endosulfan I	4.4	U	ng/L	P377222	
		Endosulfan II	4.4	U	ng/L	P377222	
		Endosulfan Sulfate	2.2	U	ng/L	P377222	
		Endrin	2.2	U	ng/L	P377222	
		Endrin Aldehyde	2.2	U	ng/L	P377222	
		Endrin Ketone	2.2	U	ng/L	P377222	
		Ethalfuralin**	3.3	U	ng/L	P377222	
		Gamma-Chlordane	1.1	U	ng/L	P377222	
		Heptachlor	1.6	U	ng/L	P377222	
		Heptachlor Epoxide	2.2	U	ng/L	P377222	
		Hexachlorobenzene	2.2	U	ng/L	P377222	
		Methoxychlor	4.4	U	ng/L	P377222	
		Mirex	2.2	U	ng/L	P377222	
		Permethrin	11	U	ng/L	P377222	
		Trans-Nonachlor**	1.1	U	ng/L	P377222	
		Trifluralin	2.7	U	ng/L	P377222	
	EPA 8276	Chlordane	5.5	I	ng/L	P377222	

Field ID: G1TLHR0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149262	EPA 8276	Toxaphene	33	U	ng/L	P377222	
2149263	EPA 8270E	Acetochlor	0.25	U	ng/L	P377261	
		Alachlor	0.25	U	ng/L	P377261	
		Ametryn	0.61	U	ng/L	P377261	
		Atrazine	0.25	U	ng/L	P377261	
		Atrazine Desethyl	1.5	UJ	ng/L	P377261	MS, RPD
		Azinphos Methyl	2.0	U	ng/L	P377261	
		Bromacil	0.51	U	ng/L	P377261	
		Butylate	0.40	U	ng/L	P377261	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P377261	
		Chlorpyrifos Methyl	0.051	U	ng/L	P377261	
		Cyanazine	3.3	UJ	ng/L	P377261	RPD
		Demeton	1.5	U	ng/L	P377261	
		Diazinon	0.13	U	ng/L	P377261	
		Dimethenamid**	0.10	U	ng/L	P377261	
		Disulfoton	0.51	U	ng/L	P377261	
		Dithiopyr**	0.10	U	ng/L	P377261	
		EPTC	1.3	U	ng/L	P377261	RPD
		Ethion	0.15	U	ng/L	P377261	
		Ethoprop	0.10	U	ng/L	P377261	
		Fenamiphos	0.51	U	ng/L	P377261	
		Fipronil	0.25	U	ng/L	P377261	
		Fipronil Desulfinyl**	0.13	U	ng/L	P377261	
		Fipronil Sulfide	0.15	U	ng/L	P377261	
		Fipronil Sulfone	0.15	U	ng/L	P377261	
		Fonofos	0.20	U	ng/L	P377261	
		Hexazinone	0.51	U	ng/L	P377261	
		Malathion	0.35	U	ng/L	P377261	MS, RPD
		Metalaxyl	0.76	UJ	ng/L	P377261	RPD
		Metolachlor	0.51	U	ng/L	P377261	
		Metribuzin	3.3	UJ	ng/L	P377261	RPD
		Mevinphos	0.51	U	ng/L	P377261	
		Molinate	0.30	U	ng/L	P377261	
		Norflurazon	0.51	U	ng/L	P377261	
		Oxadiazon**	0.10	U	ng/L	P377261	
		Parathion Ethyl	0.25	U	ng/L	P377261	
		Parathion Methyl	0.56	U	ng/L	P377261	
		Pendimethalin	1.0	U	ng/L	P377261	
		Phorate	0.25	U	ng/L	P377261	
		Prodiamine**	0.18	U	ng/L	P377261	
		Prometon	0.91	U	ng/L	P377261	
		Prometryn	0.20	U	ng/L	P377261	
		Simazine	0.51	U	ng/L	P377261	
		Tebuconazole**	0.51	UJ	ng/L	P377261	RPD
		Terbufos	0.10	U	ng/L	P377261	

Field ID: G1TLHR0041

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2149263	EPA 8270E	Terbutylazine	0.43	U	ng/L	P377261	
2149264	EPA 200.7 Rev. 4.4	Barium	14.4		ug/L	P377256	
		Calcium	1.49		mg/L	P377256	
		Iron	550		ug/L	P377256	
		Magnesium	1.06		mg/L	P377256	
		Potassium	0.30	U	mg/L	P377256	
		Sodium	3.5		mg/L	P377256	
		Zinc	6.9	I	ug/L	P377256	
	EPA 200.8 Rev. 5.4	Aluminum	371		ug/L	P377256	
		Antimony	0.050	U	ug/L	P377256	
		Arsenic	0.24		ug/L	P377256	
		Boron**	13.5		ug/L	P377256	
		Cadmium	0.020	U	ug/L	P377256	
		Chromium	0.55	I	ug/L	P377256	
		Copper	0.40	U	ug/L	P377256	
		Lead	0.31	I	ug/L	P377256	
		Nickel	0.50	U	ug/L	P377256	
		Selenium	0.20	U	ug/L	P377256	
		Silver	0.010	U	ug/L	P377256	
		Thallium	0.10	U	ug/L	P377256	
	SM 2340B	Hardness	8.1		mg/L	P377256	

Ref. Method and Comment:

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

EPA 8321B: J - second source check standards for some analytes were not available for analysis.

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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377299

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377302

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377256

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377532

Component	Result	Code	Units
Iron	30	U	ug/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

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 200.8 Rev. 5.4
Batch ID: P377532

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377532

Component	Result	Code	Units
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
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377305

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377372

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377326

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377426

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377421

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377588

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377494

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377541

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377108

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377109

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

Reference Method: EPA 8270E
 Batch ID: P377222

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P377222

Component	Result	Code	Units
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
Methoxychlor	4.0	U	ng/L
Mirex	2.0	U	ng/L
Permethrin	10	U	ng/L
Trans-Nonachlor	1.0	U	ng/L
Trifluralin	2.5	U	ng/L

Reference Method: EPA 8270E
Batch ID: P377261

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
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
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metaxalyl	0.75	U	ng/L
Metolachlor	0.50	U	ng/L
Metribuzin	3.2	U	ng/L
Mevinphos	0.50	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E
Batch ID: P377261

Component	Result	Code	Units
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: EPA 8276
Batch ID: P377222

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

Reference Method: EPA 8321B
Batch ID: P377040

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

Reference Method: EPA 8321B
Batch ID: P377170

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: P377201

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P377201

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

Reference Method: SM 2120 B-2011
Batch ID: P377333

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P377366

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

Reference Method: SM 2320 B-2011
Batch ID: P377696

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

Reference Method: SM 2540 C-2011
Batch ID: P377416

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-2011
Batch ID: P377206

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P377208

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P378056

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P377340

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

Reference Method: SM 5310 B-2011
Batch ID: P377342

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: P377256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	101		P	85 - 115
Iron	107		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	110		P	85 - 115
Sodium	101		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377532

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Iron	104		P	85 - 115
Manganese	98.0		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	107		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	103		P	85 - 115
Boron	107		P	85 - 115
Cadmium	115		P	85 - 115
Chromium	102		P	85 - 115
Copper	106		P	85 - 115
Lead	107		P	85 - 115
Nickel	112		P	85 - 115
Selenium	105		P	85 - 115
Silver	105		P	85 - 115
Thallium	108		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377532

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	106		P	85 - 115
Arsenic	105		P	85 - 115
Cadmium	104		P	85 - 115
Chromium	103		P	85 - 115
Copper	104		P	85 - 115
Lead	109		P	85 - 115
Nickel	105		P	85 - 115
Silver	103		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	105		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377305

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377372

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377326

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377426

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377421

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	97.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377588

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO ₂ NO ₃ -N	100		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377494

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377541

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: P377108

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377109

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

Reference Method: EPA 8270E
Batch ID: P377222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.4	57.4	P/P	20 - 87.0
Alpha-BHC	91.0	89.2	P/P	65 - 142
Alpha-Chlordane	80.8	75.5	P/P	58 - 106
Beta-BHC	83.4	82.7	P/P	65 - 179
Bifenthrin	93.9	94.4	P/P	38 - 128
Carbophenothion	84.3	66.6	P/P	20 - 144
Chlorothalonil	119	82.5	P/P	20 - 214
Cis-Nonachlor	80.8	74.3	P/P	56 - 113
Cypermethrin	106	99.2	P/P	37 - 130
DDD-p,p'	87.3	79.7	P/P	66 - 119
DDE-p,p'	81.4	76.0	P/P	53 - 108
DDT-p,p'	87.5	87.6	P/P	57 - 133
Delta-BHC	95.6	92.4	P/P	68 - 187
Dicofol	90.6	92.1	P/P	66 - 123
Dieldrin	82.0	78.5	P/P	65 - 111
Endosulfan I	90.3	84.1	P/P	65 - 115
Endosulfan II	93.7	88.0	P/P	68 - 133
Endosulfan Sulfate	93.1	91.1	P/P	62 - 127
Endrin	84.5	79.0	P/P	64 - 122
Endrin Aldehyde	80.6	74.4	P/P	61 - 132
Endrin Ketone	91.5	90.4	P/P	66 - 120
Ethalfuralin	85.9	84.3	P/P	57 - 127
Gamma-BHC	101	90.6	P/P	71 - 158
Gamma-Chlordane	79.1	74.5	P/P	53 - 106
Heptachlor	76.0	74.7	P/P	45 - 96.0
Heptachlor Epoxide	80.5	76.6	P/P	64 - 109
Hexachlorobenzene	80.1	81.0	P/P	46 - 103
Methoxychlor	94.7	93.8	P/P	69 - 149

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P377222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Mirex	80.2	79.0	P/P	31 - 90.0
Permethrin	95.8	95.7	P/P	41 - 108
Trans-Nonachlor	78.6	73.3	P/P	50 - 107
Trifluralin	89.0	88.0	P/P	58 - 119

Reference Method: EPA 8270E

Batch ID: P377261

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	76.7	92.6	P/P	71 - 122
Alachlor	79.6	92.7	P/P	70 - 121
Ametryn	82.1	108	P/P	49 - 137
Atrazine	98.5	99.1	P/P	76 - 125
Atrazine Desethyl	106	78.1	P/P	31 - 144
Azinphos Methyl	106	83.7	P/P	67 - 150
Bromacil	81.2	93.9	P/P	36 - 121
Butylate	60.2	61.2	P/P	33 - 88.0
Chlorpyrifos Ethyl	89.2	91.7	P/P	73 - 117
Chlorpyrifos Methyl	92.1	87.9	P/P	68 - 121
Cyanazine	180	62.9	P/P	20 - 250
Demeton	71.4	68.6	P/P	30 - 123
Diazinon	93.4	97.8	P/P	70 - 128
Dimethenamid	77.1	94.8	P/P	66 - 122
Disulfoton	99.8	88.6	P/P	46 - 124
Dithiopyr	81.9	95.1	P/P	69 - 122
EPTC	61.9	62.8	P/P	31 - 90.0
Ethion	92.6	99.7	P/P	45 - 135
Ethoprop	92.9	88.7	P/P	59 - 118
Fenamiphos	59.0	70.1	P/P	30 - 136
Fipronil	74.3	100	P/P	57 - 127
Fipronil Desulfinyl	88.6	105	P/P	51 - 122
Fipronil Sulfide	82.4	93.2	P/P	57 - 119
Fipronil Sulfone	74.7	93.6	P/P	51 - 119
Fonofos	90.9	83.4	P/P	60 - 120
Hexazinone	91.4	101	P/P	57 - 142
Malathion	82.2	93.0	P/P	67 - 128
Metalaxyl	76.3	34.3	P/P	21 - 148
Metolachlor	82.8	98.3	P/P	70 - 120
Metribuzin	245	136	P/P	20 - 253
Mevinphos	87.9	67.0	P/P	47 - 116
Molinate	71.1	71.3	P/P	41 - 99.0
Norflurazon	87.1	105	P/P	54 - 127
Oxadiazon	79.8	96.6	P/P	65 - 122
Parathion Ethyl	87.9	97.1	P/P	71 - 113
Parathion Methyl	107	95.3	P/P	73 - 129
Pendimethalin	84.6	97.5	P/P	63 - 130
Phorate	87.6	80.5	P/P	48 - 118
Prodiamine	80.1	96.3	P/P	20 - 144
Prometon	64.7	81.6	P/P	53 - 120
Prometryn	84.1	101	P/P	63 - 119
Simazine	102	98.7	P/P	77 - 129
Tebuconazole	61.8	96.3	P/P	20 - 118

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P377261

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Terbufos	90.2	83.3	P/P	61 - 119
Terbutylazine	89.0	92.7	P/P	75 - 119

Reference Method: EPA 8276
Batch ID: P377222

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	91.1	92.7	P/P	47 - 119
Toxaphene	105	102	P/P	41 - 112

Reference Method: EPA 8321B
Batch ID: P377040

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
3-Hydroxycarbofuran	99.2		P	40 - 160
Aldicarb	76.3		P	30 - 160
Aldicarb Sulfone	115		P	40 - 160
Aldicarb Sulfoxide	105		P	40 - 160
Carbaryl	73.5		P	40 - 160
Carbofuran	80.9		P	40 - 160
Methiocarb	75.4		P	40 - 160
Methomyl	85.2		P	40 - 160
Oxamyl	113		P	40 - 160
Propoxur	84.2		P	40 - 160

Reference Method: EPA 8321B
Batch ID: P377170

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	85.5		P	40 - 150
Glufosinate	99.1		P	40 - 150
Glyphosate	104		P	40 - 140
Sucralose	90.9		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P377201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	133		P	40 - 160
Acetaminophen	92.6		P	30 - 160
Acetamiprid	98.6		P	40 - 160
Afidopyropen	104		P	40 - 160
Bentazon	72.9		P	30 - 160
Benzovindiflupyr	91.1		P	40 - 160
Carbamazepine	114		P	40 - 160
Clothianidin	104		P	40 - 160
Dinotefuran	96.3		P	40 - 160
Diuron	88.3		P	40 - 160
Fenuron	101		P	40 - 160
Fluridone	107		P	40 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P377201

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Hydrocodone	105		P	40 - 160
Ibuprofen	84.1		P	30 - 160
Imazapyr	88.5		P	40 - 160
Imidacloprid	105		P	40 - 160
Linuron	83.4		P	40 - 160
Mandestrobin	93.1		P	40 - 160
MCPP	131		P	40 - 160
Naproxen	70.6		P	40 - 160
Primidone	110		P	40 - 160
Pyraclostrobin	82.2		P	30 - 160
Thiamethoxam	104		P	40 - 160
Tolfenpyrad	48.7		P	40 - 160
Triclopyr	100		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P377333

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P377366

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 2320 B-2011
Batch ID: P377696

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	103		P	98 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.4		P	92 - 103

Reference Method: SM 4500 F-C-2011
Batch ID: P378056

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	92 - 103

Reference Method: SM 5310 B-2011
Batch ID: P377340

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P377342

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149189	Barium	99.8		P	80 - 120
2149189	Calcium	102		P	80 - 120
2149189	Iron	107		P	80 - 120
2149189	Magnesium	104		P	80 - 120
2149189	Potassium	105		P	80 - 120
2149189	Sodium	101		P	80 - 120
2149189	Zinc	104		P	80 - 120
2149400	Barium	98.7	100	P/P	80 - 120
2149400	Calcium	104		P	80 - 120
2149400	Iron	104	105	P/P	80 - 120
2149400	Magnesium	105		P	80 - 120
2149400	Potassium	102	102	P/P	80 - 120
2149400	Sodium	102		P	80 - 120
2149400	Zinc	101	102	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149265	Iron	104	103	P/P	70 - 130
2149265	Manganese	96.5	95.4	P/P	70 - 130
2149265	Zinc	101	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149189	Aluminum	106		P	80 - 120
2149189	Antimony	103		P	80 - 120
2149189	Arsenic	102		P	80 - 120
2149189	Boron	106		P	80 - 120
2149189	Cadmium	115		P	80 - 120
2149189	Chromium	91.4		P	80 - 120
2149189	Copper	102		P	80 - 120
2149189	Lead	111		P	80 - 120
2149189	Nickel	108		P	80 - 120
2149189	Selenium	103		P	80 - 120
2149189	Silver	101		P	80 - 120
2149189	Thallium	112		P	80 - 120
2149400	Aluminum	103	100	P/P	80 - 120
2149400	Antimony	102	101	P/P	80 - 120
2149400	Arsenic	100	100	P/P	80 - 120
2149400	Boron	105	104	P/P	80 - 120
2149400	Cadmium	109	110	P/P	80 - 120
2149400	Chromium	91.3	90.0	P/P	80 - 120
2149400	Copper	99.1	99.5	P/P	80 - 120
2149400	Lead	106	106	P/P	80 - 120
2149400	Nickel	105	107	P/P	80 - 120
2149400	Selenium	101	100	P/P	80 - 120
2149400	Silver	103	101	P/P	80 - 120
2149400	Thallium	107	107	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149265	Aluminum	112	109	P/P	70 - 130
2149265	Antimony	109	108	P/P	70 - 130
2149265	Arsenic	109	109	P/P	70 - 130
2149265	Cadmium	101	101	P/P	70 - 130
2149265	Chromium	101	99.8	P/P	70 - 130
2149265	Copper	114	110	P/P	70 - 130
2149265	Lead	115	115	P/P	70 - 130
2149265	Nickel	101	102	P/P	70 - 130
2149265	Silver	94.6	94.5	P/P	70 - 130
2149265	Thallium	111	111	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148883	Chloride	101		P	90 - 110
2149312	Chloride	96.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148883	Sulfate	101		P	90 - 110
2149312	Sulfate	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149696	Bromide	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377305

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149217	Ammonia-N	97.3	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377372

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149220	Ammonia-N	98.2	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377326

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149212	Kjeldahl Nitrogen	101	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P377426

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149241	Kjeldahl Nitrogen	109	99.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377421

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149560	NO2NO3-N	96.3	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P377588

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149165	NO2NO3-N	99.8	99.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377494

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148957	Total-P	98.1	97.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P377541

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149216	Total-P	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377108

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148885	O-Phosphate-P	97.2	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P377109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149242	O-Phosphate-P	94.6	96.8	P/P	90 - 110

Reference Method: EPA 8270E
 Batch ID: P377222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149393	Aldrin	61.7	61.3	P/P	32 - 82.0
2149393	Alpha-BHC	99.2	103	P/P	68 - 157
2149393	Alpha-Chlordane	68.1	66.5	P/P	54 - 108
2149393	Beta-BHC	76.3	82.8	P/P	54 - 200
2149393	Bifenthrin	106	102	P/P	49 - 124
2149393	Carbophenothion	110	112	P/P	42 - 173
2149393	Chlorothalonil	239	254	P/P	10 - 289
2149393	Cis-Nonachlor	66.5	63.5	P/P	53 - 112
2149393	Cypermethrin	107	110	P/P	43 - 141
2149393	DDD-p,p'	73.2	70.7	P/P	58 - 125

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P377222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149393	DDE-p,p'	66.4	66.3	P/P	50 - 108
2149393	DDT-p,p'	81.8	85.4	P/P	52 - 140
2149393	Delta-BHC	79.7	86.7	P/P	61 - 228
2149393	Dicofol	87.1	83.1	P/P	59 - 130
2149393	Dieldrin	74.3	70.5	P/P	57 - 121
2149393	Endosulfan I	80.1	82.8	P/P	62 - 123
2149393	Endosulfan II	80.3	78.8	P/P	48 - 163
2149393	Endosulfan Sulfate	92.9	91.6	P/P	63 - 132
2149393	Endrin	70.0	68.7	P/P	58 - 128
2149393	Endrin Aldehyde	48.2	46.7	P/P	44 - 126
2149393	Endrin Ketone	98.6	94.9	P/P	68 - 127
2149393	Ethalfuralin	89.7	89.7	P/P	55 - 131
2149393	Gamma-BHC	119	116	P/P	54 - 206
2149393	Gamma-Chlordane	67.7	66.8	P/P	52 - 105
2149393	Heptachlor	74.9	75.1	P/P	47 - 94.0
2149393	Heptachlor Epoxide	82.9	80.6	P/P	61 - 113
2149393	Hexachlorobenzene	80.6	82.0	P/P	45 - 100
2149393	Methoxychlor	94.7	95.2	P/P	63 - 153
2149393	Mirex	81.4	80.9	P/P	38 - 90.0
2149393	Permethrin	104	99.9	P/P	45 - 112
2149393	Trans-Nonachlor	65.3	63.1	P/P	50 - 103
2149393	Trifluralin	88.3	89.4	P/P	57 - 122

Reference Method: EPA 8270E
Batch ID: P377261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149402	Acetochlor	77.5	98.0	P/P	68 - 126
2149402	Alachlor	80.7	103	P/P	66 - 125
2149402	Ametryn	131	121	P/P	31 - 182
2149402	Atrazine Desethyl	140	177	P/F	13 - 161
2149402	Azinphos Methyl	93.7	118	P/P	54 - 162
2149402	Butylate	46.8	62.3	P/P	16 - 92.0
2149402	Chlorpyrifos Ethyl	90.8	103	P/P	63 - 124
2149402	Chlorpyrifos Methyl	94.6	109	P/P	64 - 125
2149402	Cyanazine	186	232	P/P	13 - 245
2149402	Demeton	82.9	77.9	P/P	20 - 154
2149402	Diazinon	101	131	P/P	66 - 141
2149402	Dimethenamid	84.6	110	P/P	50 - 130
2149402	Disulfoton	108	126	P/P	55 - 130
2149402	Dithiopyr	81.2	103	P/P	66 - 122
2149402	EPTC	47.4	70.6	P/P	15 - 93.0
2149402	Ethion	89.5	104	P/P	15 - 148
2149402	Ethoprop	74.5	93.0	P/P	59 - 126
2149402	Fenamiphos	65.4	67.8	P/P	39 - 137
2149402	Fipronil	74.5	95.8	P/P	47 - 131
2149402	Fipronil Desulfinyl	90.1	114	P/P	43 - 121
2149402	Fipronil Sulfide	83.4	93.6	P/P	29 - 134
2149402	Fipronil Sulfone	61.6	64.3	P/P	19 - 131
2149402	Fonofos	97.3	118	P/P	62 - 128
2149402	Malathion	51.6	33.0	F/F	54 - 135
2149402	Metolachlor	78.6	91.2	P/P	62 - 126

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P377261

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149402	Metribuzin	199	231	P/P	44 - 277
2149402	Mevinphos	96.5	114	P/P	44 - 135
2149402	Molinate	68.4	86.2	P/P	31 - 104
2149402	Oxadiazon	72.7	87.9	P/P	55 - 123
2149402	Parathion Ethyl	92.1	110	P/P	67 - 120
2149402	Parathion Methyl	113	134	P/P	70 - 140
2149402	Pendimethalin	91.8	108	P/P	59 - 145
2149402	Phorate	95.1	113	P/P	52 - 127
2149402	Prodiamine	93.4	116	P/P	11 - 157
2149402	Prometon	87.5	105	P/P	55 - 130
2149402	Prometryn	88.0	105	P/P	55 - 127
2149402	Simazine	106	137	P/P	58 - 159
2149402	Tebuconazole	21.9	24.7	P/P	10 - 122
2149402	Terbufos	103	126	P/P	65 - 131
2149402	Terbutylazine	92.7	121	P/P	63 - 131

Reference Method: EPA 8276
Batch ID: P377222

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149392	Chlordane	86.8	84.8	P/P	34 - 129
2149392	Toxaphene	98.8	99.6	P/P	26 - 123

Reference Method: EPA 8321B
Batch ID: P377040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148339	3-Hydroxycarbofuran	85.5	90.7	P/P	40 - 160
2148339	Aldicarb	47.9	58.5	P/P	30 - 160
2148339	Aldicarb Sulfone	117	128	P/P	40 - 160
2148339	Aldicarb Sulfoxide	60.9	49.1	P/P	40 - 160
2148339	Carbaryl	51.3	64.4	P/P	40 - 160
2148339	Carbofuran	48.3	58.3	P/P	40 - 160
2148339	Methiocarb	61.2	72.2	P/P	40 - 160
2148339	Methomyl	53.2	79.5	P/P	40 - 160
2148339	Oxamyl	87.7	95.2	P/P	40 - 160
2148339	Propoxur	43.7	54.2	P/P	40 - 160

Reference Method: EPA 8321B
Batch ID: P377170

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2148567	Acesulfame K	57.7	59.1	P/P	40 - 150
2148567	AMPA	88.0	87.8	P/P	40 - 150
2148567	Endothall	115	125	P/P	40 - 150
2148567	Glufosinate	83.8	76.0	P/P	40 - 150
2148567	Glyphosate	76.8	84.8	P/P	40 - 140
2148567	Sucralose	96.1	97.0	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P377201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149266	2,4-D	111	113	P/P	40 - 160
2149266	Acetaminophen	93.4	103	P/P	30 - 160
2149266	Acetamiprid	104	102	P/P	40 - 160
2149266	Afidopyropen	105	101	P/P	40 - 160
2149266	Bentazon	45.1	48.1	P/P	30 - 160
2149266	Benzovindiflupyr	85.8	85.6	P/P	40 - 160
2149266	Carbamazepine	72.1	88.1	P/P	40 - 160
2149266	Clothianidin	113	113	P/P	40 - 160
2149266	Dinotefuran	132	121	P/P	40 - 160
2149266	Diuron	73.8	75.3	P/P	40 - 160
2149266	Fenuron	106	111	P/P	40 - 160
2149266	Fluridone	97.2	103	P/P	40 - 160
2149266	Hydrocodone	111	114	P/P	40 - 160
2149266	Ibuprofen	88.0	78.8	P/P	30 - 160
2149266	Imazapyr	90.9	86.1	P/P	40 - 160
2149266	Imidacloprid	165	156	F/P	40 - 160
2149266	Linuron	77.8	80.4	P/P	40 - 160
2149266	Mandestrobin	89.6	90.1	P/P	40 - 160
2149266	MCP	117	124	P/P	40 - 160
2149266	Naproxen	84.0	76.8	P/P	40 - 160
2149266	Primidone	90.1	113	P/P	40 - 160
2149266	Pyraclostrobin	84.7	85.3	P/P	30 - 160
2149266	Thiamethoxam	152	147	P/P	40 - 160
2149266	Tolfenpyrad	52.0	56.6	P/P	40 - 160
2149266	Triclopyr	84.6	102	P/P	30 - 160

Reference Method: SM 4500 F-C-2011
Batch ID: P377370

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149335	Fluoride	98.5	98.5	P/P	89 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P378056

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149240	Fluoride	97.5	99.0	P/P	89 - 106

Reference Method: SM 5310 B-2011
Batch ID: P377340

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149282	Organic Carbon	97.4	98.5	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P377342

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2149241	Organic Carbon	102	103	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377299

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149278	Turbidity	3.55	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P377302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149556	Turbidity	1.68	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149400	Barium	1.45	Spike	P	0 - 20
2149400	Calcium	3.05	Spike	P	0 - 20
2149400	Iron	0.945	Spike	P	0 - 20
2149400	Magnesium	2.07	Spike	P	0 - 20
2149400	Potassium	0.394	Spike	P	0 - 20
2149400	Sodium	0.573	Spike	P	0 - 20
2149400	Zinc	1.48	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P377532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149265	Iron	0.619	Spike	P	0 - 20
2149265	Manganese	1.09	Spike	P	0 - 20
2149265	Zinc	0.0883	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149400	Aluminum	2.41	Spike	P	0 - 20
2149400	Antimony	0.796	Spike	P	0 - 20
2149400	Arsenic	0.230	Spike	P	0 - 20
2149400	Boron	0.837	Spike	P	0 - 20
2149400	Cadmium	1.28	Spike	P	0 - 20
2149400	Chromium	1.39	Spike	P	0 - 20
2149400	Copper	0.336	Spike	P	0 - 20
2149400	Lead	0.446	Spike	P	0 - 20
2149400	Nickel	1.56	Spike	P	0 - 20
2149400	Selenium	1.02	Spike	P	0 - 20
2149400	Silver	1.32	Spike	P	0 - 20
2149400	Thallium	0.111	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P377532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149265	Aluminum	2.82	Spike	P	0 - 20
2149265	Antimony	1.11	Spike	P	0 - 20
2149265	Arsenic	0.212	Spike	P	0 - 20
2149265	Cadmium	0.704	Spike	P	0 - 20
2149265	Chromium	1.21	Spike	P	0 - 20
2149265	Copper	2.95	Spike	P	0 - 20
2149265	Lead	0.767	Spike	P	0 - 20
2149265	Nickel	0.633	Spike	P	0 - 20
2149265	Silver	0.0945	Spike	P	0 - 20
2149265	Thallium	0.108	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377329

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149312	Chloride	0.124	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377331

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149312	Sulfate	0.424	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P377473

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149696	Bromide	2.11	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377305

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149217	Ammonia-N	1.34	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P377372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149220	Ammonia-N	1.75	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377326

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377326

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149212	Kjeldahl Nitrogen	3.98	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P377426

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149241	Kjeldahl Nitrogen	8.18	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149560	NO2NO3-N	0.496	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P377588

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149165	NO2NO3-N	0.442	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377494

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148957	Total-P	0.245	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P377541

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149216	Total-P	0.912	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377108

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148885	O-Phosphate-P	0.615	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P377109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149242	O-Phosphate-P	2.05	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149393	Aldrin	0.700	Spike	P	0 - 30
2149393	Alpha-BHC	3.75	Spike	P	0 - 30
2149393	Alpha-Chlordane	2.30	Spike	P	0 - 30
2149393	Beta-BHC	8.22	Spike	P	0 - 30
2149393	Bifenthrin	3.88	Spike	P	0 - 30
2149393	Carbophenothion	2.55	Spike	P	0 - 30
2149393	Chlorothalonil	6.35	Spike	P	0 - 30
2149393	Cis-Nonachlor	4.53	Spike	P	0 - 30
2149393	Cypermethrin	2.32	Spike	P	0 - 30
2149393	DDD-p,p'	3.58	Spike	P	0 - 30
2149393	DDE-p,p'	0.107	Spike	P	0 - 30
2149393	DDT-p,p'	4.34	Spike	P	0 - 30
2149393	Delta-BHC	8.46	Spike	P	0 - 30
2149393	Dicofol	4.68	Spike	P	0 - 30
2149393	Dieldrin	3.45	Spike	P	0 - 30
2149393	Endosulfan I	3.33	Spike	P	0 - 30
2149393	Endosulfan II	1.92	Spike	P	0 - 30
2149393	Endosulfan Sulfate	1.40	Spike	P	0 - 30
2149393	Endrin	1.88	Spike	P	0 - 30
2149393	Endrin Aldehyde	3.07	Spike	P	0 - 30
2149393	Endrin Ketone	3.78	Spike	P	0 - 30
2149393	Ethalfuralin	0.0712	Spike	P	0 - 30
2149393	Gamma-BHC	3.23	Spike	P	0 - 30
2149393	Gamma-Chlordane	1.35	Spike	P	0 - 30
2149393	Heptachlor	0.356	Spike	P	0 - 30
2149393	Heptachlor Epoxide	2.42	Spike	P	0 - 30
2149393	Hexachlorobenzene	1.74	Spike	P	0 - 30
2149393	Methoxychlor	0.472	Spike	P	0 - 30
2149393	Mirex	0.666	Spike	P	0 - 30
2149393	Permethrin	4.27	Spike	P	0 - 30
2149393	Trans-Nonachlor	3.39	Spike	P	0 - 30
2149393	Trifluralin	1.24	Spike	P	0 - 30
LFB	Aldrin	5.36	LCS	P	0 - 30
LFB	Alpha-BHC	1.99	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.73	LCS	P	0 - 30
LFB	Beta-BHC	0.750	LCS	P	0 - 30
LFB	Bifenthrin	0.623	LCS	P	0 - 30
LFB	Carbophenothion	23.4	LCS	P	0 - 30
LFB	Chlorothalonil	36.1	LCS	F	0 - 30
LFB	Cis-Nonachlor	8.30	LCS	P	0 - 30
LFB	Cypermethrin	6.33	LCS	P	0 - 30
LFB	DDD-p,p'	9.08	LCS	P	0 - 30
LFB	DDE-p,p'	6.81	LCS	P	0 - 30
LFB	DDT-p,p'	0.104	LCS	P	0 - 30
LFB	Delta-BHC	3.42	LCS	P	0 - 30
LFB	Dicofol	1.60	LCS	P	0 - 30
LFB	Dieldrin	4.41	LCS	P	0 - 30
LFB	Endosulfan I	7.10	LCS	P	0 - 30
LFB	Endosulfan II	6.26	LCS	P	0 - 30
LFB	Endosulfan Sulfate	2.18	LCS	P	0 - 30
LFB	Endrin	6.67	LCS	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endrin Aldehyde	7.98	LCS	P	0 - 30
LFB	Endrin Ketone	1.17	LCS	P	0 - 30
LFB	Ethalfuralin	1.95	LCS	P	0 - 30
LFB	Gamma-BHC	10.4	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.95	LCS	P	0 - 30
LFB	Heptachlor	1.77	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.00	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.06	LCS	P	0 - 30
LFB	Methoxychlor	0.917	LCS	P	0 - 30
LFB	Mirex	1.56	LCS	P	0 - 30
LFB	Permethrin	0.0955	LCS	P	0 - 30
LFB	Trans-Nonachlor	6.95	LCS	P	0 - 30
LFB	Trifluralin	1.09	LCS	P	0 - 30

Reference Method: EPA 8270E

Batch ID: P377261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149402	Acetochlor	23.3	Spike	P	0 - 30
2149402	Alachlor	24.4	Spike	P	0 - 30
2149402	Ametryn	7.90	Spike	P	0 - 30
2149402	Atrazine	7.97	Spike	P	0 - 30
2149402	Atrazine Desethyl	23.2	Spike	P	0 - 30
2149402	Azinphos Methyl	23.3	Spike	P	0 - 30
2149402	Bromacil	20.4	Spike	P	0 - 30
2149402	Butylate	28.4	Spike	P	0 - 30
2149402	Chlorpyrifos Ethyl	12.8	Spike	P	0 - 30
2149402	Chlorpyrifos Methyl	14.1	Spike	P	0 - 30
2149402	Cyanazine	22.1	Spike	P	0 - 30
2149402	Demeton	6.20	Spike	P	0 - 30
2149402	Diazinon	25.9	Spike	P	0 - 30
2149402	Dimethenamid	20.4	Spike	P	0 - 30
2149402	Disulfoton	15.1	Spike	P	0 - 30
2149402	Dithiopyr	23.6	Spike	P	0 - 30
2149402	EPTC	39.3	Spike	F	0 - 30
2149402	Ethion	14.9	Spike	P	0 - 30
2149402	Ethoprop	22.1	Spike	P	0 - 30
2149402	Fenamiphos	3.60	Spike	P	0 - 30
2149402	Fipronil	25.0	Spike	P	0 - 30
2149402	Fipronil Desulfinyl	23.7	Spike	P	0 - 30
2149402	Fipronil Sulfide	11.5	Spike	P	0 - 30
2149402	Fipronil Sulfone	4.37	Spike	P	0 - 30
2149402	Fonofos	18.9	Spike	P	0 - 30
2149402	Hexazinone	14.2	Spike	P	0 - 30
2149402	Malathion	44.0	Spike	F	0 - 30
2149402	Metalaxyl	19.0	Spike	P	0 - 30
2149402	Metolachlor	13.8	Spike	P	0 - 30
2149402	Metribuzin	14.9	Spike	P	0 - 30
2149402	Mevinphos	16.6	Spike	P	0 - 30
2149402	Molinate	23.1	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P377261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149402	Norflurazon	8.18	Spike	P	0 - 30
2149402	Oxadiazon	16.6	Spike	P	0 - 30
2149402	Parathion Ethyl	17.4	Spike	P	0 - 30
2149402	Parathion Methyl	16.6	Spike	P	0 - 30
2149402	Pendimethalin	15.8	Spike	P	0 - 30
2149402	Phorate	17.2	Spike	P	0 - 30
2149402	Prodiamine	21.6	Spike	P	0 - 30
2149402	Prometon	18.4	Spike	P	0 - 30
2149402	Prometryn	18.0	Spike	P	0 - 30
2149402	Simazine	23.3	Spike	P	0 - 30
2149402	Tebuconazole	12.0	Spike	P	0 - 30
2149402	Terbufos	20.1	Spike	P	0 - 30
2149402	Terbutylazine	26.1	Spike	P	0 - 30
LFB	Acetochlor	18.7	LCS	P	0 - 30
LFB	Alachlor	15.1	LCS	P	0 - 30
LFB	Ametryn	27.0	LCS	P	0 - 30
LFB	Atrazine	0.533	LCS	P	0 - 30
LFB	Atrazine Desethyl	30.4	LCS	F	0 - 30
LFB	Azinphos Methyl	23.5	LCS	P	0 - 30
LFB	Bromacil	14.5	LCS	P	0 - 30
LFB	Butylate	1.68	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	2.69	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	4.66	LCS	P	0 - 30
LFB	Cyanazine	96.6	LCS	F	0 - 30
LFB	Demeton	4.02	LCS	P	0 - 30
LFB	Diazinon	4.65	LCS	P	0 - 30
LFB	Dimethenamid	20.6	LCS	P	0 - 30
LFB	Disulfoton	11.9	LCS	P	0 - 30
LFB	Dithiopyr	14.9	LCS	P	0 - 30
LFB	EPTC	1.45	LCS	P	0 - 30
LFB	Ethion	7.40	LCS	P	0 - 30
LFB	Ethoprop	4.62	LCS	P	0 - 30
LFB	Fenamiphos	17.3	LCS	P	0 - 30
LFB	Fipronil	29.5	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	16.7	LCS	P	0 - 30
LFB	Fipronil Sulfide	12.3	LCS	P	0 - 30
LFB	Fipronil Sulfone	22.4	LCS	P	0 - 30
LFB	Fonofos	8.62	LCS	P	0 - 30
LFB	Hexazinone	9.51	LCS	P	0 - 30
LFB	Malathion	12.4	LCS	P	0 - 30
LFB	Metalaxyl	75.8	LCS	F	0 - 30
LFB	Metolachlor	17.1	LCS	P	0 - 30
LFB	Metribuzin	57.3	LCS	F	0 - 30
LFB	Mevinphos	27.0	LCS	P	0 - 30
LFB	Molinate	0.283	LCS	P	0 - 30
LFB	Norflurazon	18.3	LCS	P	0 - 30
LFB	Oxadiazon	19.1	LCS	P	0 - 30
LFB	Parathion Ethyl	9.97	LCS	P	0 - 30
LFB	Parathion Methyl	11.7	LCS	P	0 - 30
LFB	Pendimethalin	14.2	LCS	P	0 - 30
LFB	Phorate	8.41	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P377261

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prodiamine	18.4	LCS	P	0 - 30
LFB	Prometon	23.1	LCS	P	0 - 30
LFB	Prometryn	17.8	LCS	P	0 - 30
LFB	Simazine	2.77	LCS	P	0 - 30
LFB	Tebuconazole	43.7	LCS	F	0 - 30
LFB	Terbufos	8.04	LCS	P	0 - 30
LFB	Terbutylazine	4.08	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P377222

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149392	Chlordane	2.29	Spike	P	0 - 30
2149392	Toxaphene	0.825	Spike	P	0 - 30
LFB	Chlordane	1.70	LCS	P	0 - 30
LFB	Toxaphene	2.57	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148339	3-Hydroxycarbofuran	5.99	Spike	P	0 - 30
2148339	Aldicarb	20.0	Spike	P	0 - 30
2148339	Aldicarb Sulfone	9.04	Spike	P	0 - 30
2148339	Aldicarb Sulfoxide	21.3	Spike	P	0 - 30
2148339	Carbaryl	22.6	Spike	P	0 - 30
2148339	Carbofuran	18.7	Spike	P	0 - 30
2148339	Methiocarb	16.4	Spike	P	0 - 30
2148339	Methomyl	39.5	Spike	F	0 - 30
2148339	Oxamyl	8.25	Spike	P	0 - 30
2148339	Propoxur	21.4	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377170

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148567	Acesulfame K	2.53	Spike	P	0 - 30
2148567	AMPA	0.188	Spike	P	0 - 30
2148567	Endothall	8.10	Spike	P	0 - 30
2148567	Glufosinate	9.77	Spike	P	0 - 30
2148567	Glyphosate	7.79	Spike	P	0 - 30
2148567	Sucralose	0.884	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P377201

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

Reference Method: EPA 8321B
Batch ID: P377201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149266	2,4-D	2.11	Spike	P	0 - 30
2149266	Acetaminophen	9.74	Spike	P	0 - 30
2149266	Acetamiprid	2.21	Spike	P	0 - 30
2149266	Afidopyropen	4.73	Spike	P	0 - 30
2149266	Bentazon	2.38	Spike	P	0 - 30
2149266	Benzovindiflupyr	0.298	Spike	P	0 - 30
2149266	Carbamazepine	18.5	Spike	P	0 - 30
2149266	Clothianidin	0.0384	Spike	P	0 - 30
2149266	Dinotefuran	6.19	Spike	P	0 - 30
2149266	Diuron	1.99	Spike	P	0 - 30
2149266	Fenuron	4.80	Spike	P	0 - 30
2149266	Fluridone	5.79	Spike	P	0 - 30
2149266	Hydrocodone	2.80	Spike	P	0 - 30
2149266	Ibuprofen	11.0	Spike	P	0 - 30
2149266	Imazapyr	3.73	Spike	P	0 - 30
2149266	Imidacloprid	4.85	Spike	P	0 - 30
2149266	Linuron	3.26	Spike	P	0 - 30
2149266	Mandestrobin	0.643	Spike	P	0 - 30
2149266	MCPP	6.20	Spike	P	0 - 30
2149266	Naproxen	8.88	Spike	P	0 - 30
2149266	Primidone	20.9	Spike	P	0 - 30
2149266	Pyraclostrobin	0.777	Spike	P	0 - 30
2149266	Thiamethoxam	2.87	Spike	P	0 - 30
2149266	Tolfenpyrad	8.40	Spike	P	0 - 30
2149266	Triclopyr	18.3	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P377333

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149311	Color (true)	0.0870	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P377366

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149335	Total Alkalinity	0.767	Sample	P	0 - 2.8

Reference Method: SM 2320 B-2011
Batch ID: P377696

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149240	Total Alkalinity	1.21	Sample	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 2540 C-2011
 Batch ID: P377416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2148837	TDS	1.01	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P377370

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149335	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-2011
 Batch ID: P378056

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149240	Fluoride	0.953	Spike	P	0 - 2.5

Reference Method: SM 5310 B-2011
 Batch ID: P377340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149282	Organic Carbon	0.829	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
 Batch ID: P377342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2149241	Organic Carbon	1.20	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2149256
Field Sample ID: G1TLHR0041

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Carbaryl-d7	68.6	P	30 - 160

Lab Sample ID: 2149257
Field Sample ID: G1TLHR0041

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	103	P	30 - 160
EPA 8321B	Diuron-d6	90.3	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Endothall-d6	109	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	87.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	84.2	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160
EPA 8321B	Sucralose-d6	108	P	30 - 160

Lab Sample ID: 2149262
Field Sample ID: G1TLHR0041

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	98.6	P	44 - 112
EPA 8270E	Tetrachloro-m-xylene	79.3	P	34 - 106
EPA 8276	Decachlorobiphenyl	81.8	P	26 - 97.0
EPA 8276	PCNB	115	P	38 - 141

Lab Sample ID: 2149263
Field Sample ID: G1TLHR0041

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Simazine-d10	107	P	72 - 135
EPA 8270E	Terbufos-d10	93.5	P	57 - 134

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96846

Included Lab Sample IDs: 2149240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	102	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A96853

Included Lab Sample IDs: 2149237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.0	100	P/P	90 - 110
Sulfate	99.4	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A96878

Included Lab Sample IDs: 2149239, 2149242

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	96.7	96.7	P/P	90 - 110
O-Phosphate-P	97.8	98.7	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A96937

Included Lab Sample IDs: 2149256

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
3-Hydroxycarbofuran	115	111	P/P	60 - 150
Aldicarb	106	79.3	P/P	60 - 150
Aldicarb Sulfone	115	117	P/P	50 - 150
Aldicarb Sulfoxide	122	111	P/P	50 - 150
Carbaryl	112	102	P/P	60 - 150
Carbofuran	111	105	P/P	50 - 150
Methiocarb	107	109	P/P	50 - 150
Methomyl	93.4	111	P/P	50 - 150
Oxamyl	116	120	P/P	50 - 150
Propoxur	111	109	P/P	50 - 150

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A96947

Included Lab Sample IDs: 2149237, 2149240

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	100	P/P	95 - 105
Turbidity	99.5	101	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96950

Included Lab Sample IDs: 2149238

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A96960

Included Lab Sample IDs: 2149237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	101	P/P	85 - 115

Reference Method: SM 5310 B-2011

Run ID: A96961

Included Lab Sample IDs: 2149238, 2149241

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A96974

Included Lab Sample IDs: 2149238

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	97.0	98.0	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A96976

Included Lab Sample IDs: 2149237

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	104	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A96976

Included Lab Sample IDs: 2149237

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A96977

Included Lab Sample IDs: 2149241

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

Reference Method: EPA 8321B

Run ID: A96999

Included Lab Sample IDs: 2149257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.9	80.7	P/P	60 - 160
Glufosinate	86.9	92.3	P/P	60 - 160
Glyphosate	85.7	96.4	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A97000
Included Lab Sample IDs: 2149257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	115	82.9	P/P	60 - 160
Endothall	89.1	106	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A97013
Included Lab Sample IDs: 2149263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	103		P	80 - 120
Ametryn	96.1		P	80 - 120
Atrazine	99.9		P	80 - 120
Atrazine Desethyl	113		P	80 - 120
Azinphos Methyl	94.9		P	80 - 120
Bromacil	98.9		P	80 - 120
Butylate	105		P	80 - 120
Chlorpyrifos Ethyl	98.5		P	80 - 120
Chlorpyrifos Methyl	97.8		P	80 - 120
Cyanazine	110		P	80 - 120
Demeton	96.1		P	80 - 120
Diazinon	97.7		P	80 - 120
Dimethenamid	102		P	80 - 120
Disulfoton	99.9		P	80 - 120
Dithiopyr	97.8		P	80 - 120
EPTC	100		P	80 - 120
Ethion	97.3		P	80 - 120
Ethoprop	97.8		P	80 - 120
Fenamiphos	99.1		P	80 - 120
Fipronil	97.2		P	80 - 120
Fipronil Desulfinyl	98.2		P	80 - 120
Fipronil Sulfide	94.3		P	80 - 120
Fipronil Sulfone	94.8		P	80 - 120
Fonofos	95.1		P	80 - 120
Hexazinone	100		P	80 - 120
Malathion	102		P	80 - 120
Metalaxyl	100		P	80 - 120
Metolachlor	108		P	80 - 120
Metribuzin	101		P	80 - 120
Mevinphos	95.9		P	80 - 120
Molinate	101		P	80 - 120
Norflurazon	98.3		P	80 - 120
Oxadiazon	107		P	80 - 120
Parathion Ethyl	100		P	80 - 120
Parathion Methyl	103		P	80 - 120
Pendimethalin	103		P	80 - 120
Phorate	98.8		P	80 - 120
Prodiamine	89.7		P	80 - 120
Prometon	99.3		P	80 - 120
Prometryn	101		P	80 - 120
Simazine	103		P	80 - 120
Tebuconazole	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A97013

Included Lab Sample IDs: 2149263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Terbufos	98.4		P	80 - 120
Terbutylazine	102		P	80 - 120

Reference Method: EPA 8321B

Run ID: A97022

Included Lab Sample IDs: 2149257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	91.1	106	P/P	50 - 150
Acetaminophen	96.0	98.2	P/P	60 - 160
Acetamiprid	114	109	P/P	50 - 150
Afidopyropen	99.6	100	P/P	50 - 150
Bentazon	86.0	99.3	P/P	50 - 160
Benzovindiflupyr	99.9	101	P/P	50 - 150
Carbamazepine	108	107	P/P	60 - 150
Clothianidin	119	116	P/P	60 - 150
Dinotefuran	96.7	103	P/P	50 - 150
Diuron	116	99.5	P/P	60 - 150
Fenuron	108	110	P/P	60 - 150
Fluridone	111	98.4	P/P	60 - 160
Hydrocodone	107	94.9	P/P	60 - 150
Ibuprofen	94.3	109	P/P	50 - 160
Imazapyr	84.5	88.5	P/P	50 - 150
Imidacloprid	103	100	P/P	60 - 150
Linuron	97.1	103	P/P	60 - 150
Mandestrobin	107	106	P/P	50 - 150
MCPP	89.9	94.3	P/P	50 - 150
Naproxen	116	100	P/P	50 - 160
Primidone	111	113	P/P	60 - 150
Pyraclostrobin	96.8	96.8	P/P	60 - 150
Thiamethoxam	113	107	P/P	50 - 150
Tolfenpyrad	96.8	91.5	P/P	60 - 150
Triclopyr	100	98.6	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97041

Included Lab Sample IDs: 2149264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	99.4	99.0	P/P	90 - 110
Calcium	98.0	99.9	P/P	90 - 110
Iron	99.2	99.8	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Potassium	100	99.7	P/P	90 - 110
Sodium	100	101	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97052

Included Lab Sample IDs: 2149238

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.6	103	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A97061

Included Lab Sample IDs: 2149262

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	89.6		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	92.8		P	80 - 120
Beta-BHC	104		P	80 - 120
Bifenthrin	98.7		P	80 - 120
Carbophenothion	94.7		P	80 - 120
Chlorothalonil	104		P	80 - 120
Cis-Nonachlor	91.3		P	80 - 120
Cypermethrin	97.7		P	80 - 120
DDD-p,p'	94.4		P	80 - 120
DDE-p,p'	92.2		P	80 - 120
DDT-p,p'	97.1		P	80 - 120
Delta-BHC	106		P	80 - 120
Dicofol	101		P	80 - 120
Dieldrin	93.1		P	80 - 120
Endosulfan I	93.0		P	80 - 120
Endosulfan II	95.4		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	94.5		P	80 - 120
Endrin Aldehyde	92.0		P	80 - 120
Endrin Ketone	99.3		P	80 - 120
Ethalfuralin	97.2		P	80 - 120
Gamma-BHC	88.9		P	80 - 120
Gamma-Chlordane	92.2		P	80 - 120
Heptachlor	87.5		P	80 - 120
Heptachlor Epoxide	91.8		P	80 - 120
Hexachlorobenzene	101		P	80 - 120
Methoxychlor	102		P	80 - 120
Mirex	101		P	80 - 120
Permethrin	100		P	80 - 120
Trans-Nonachlor	91.9		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A97068

Included Lab Sample IDs: 2149241

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A97079

Included Lab Sample IDs: 2149241

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	99.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A97081

Included Lab Sample IDs: 2149265

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	102	103	P/P	90 - 110
Manganese	101	99.7	P/P	90 - 110
Zinc	103	103	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A97086

Included Lab Sample IDs: 2149262

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	97.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97087

Included Lab Sample IDs: 2149264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	104	P/P	90 - 110
Antimony	92.2	92.4	P/P	90 - 110
Boron	101	107	P/P	90 - 110
Chromium	100	96.8	P/P	90 - 110
Copper	104	103	P/P	90 - 110
Lead	99.7	101	P/P	90 - 110
Selenium	104	103	P/P	90 - 110
Silver	105	106	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97095

Included Lab Sample IDs: 2149264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.9	98.9	P/P	90 - 110
Thallium	97.8	97.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97097

Included Lab Sample IDs: 2149238

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A97098

Included Lab Sample IDs: 2149241

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	109	109	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A97099

Included Lab Sample IDs: 2149240

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

Reference Method: EPA 8321B

Run ID: A97109

Included Lab Sample IDs: 2149257

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	94.2	112	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97129

Included Lab Sample IDs: 2149264

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	100	101	P/P	90 - 110
Nickel	96.2	95.0	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A97228

Included Lab Sample IDs: 2149240

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97264

Included Lab Sample IDs: 2149265

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	96.0	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	100	99.7	P/P	90 - 110
Cadmium	98.6	98.2	P/P	90 - 110
Lead	103	102	P/P	90 - 110
Nickel	98.2	97.3	P/P	90 - 110
Silver	99.0	98.1	P/P	90 - 110
Thallium	99.9	99.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97279

Included Lab Sample IDs: 2149265

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	97.6	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A97279

Included Lab Sample IDs: 2149265

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

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	MS
								SMP	
EPA 180.1 Rev. 2.0	Turbidity							3.55	
	Turbidity							1.68	
EPA 200.7 Rev. 4.4	Barium	102		99.8	98.7	100			1.45
	Calcium	101		102	104				3.05
	Iron	107		107	104	105			0.945
	Iron	104		104	103				0.619
	Magnesium	103		104	105				2.07
	Manganese	98.0		96.5	95.4				1.09
	Potassium	110		105	102	102			0.394
	Sodium	101		101	102				0.573
	Zinc	101		104	101	102			1.48
	Zinc	100		101	101				0.0883
EPA 200.8 Rev. 5.4	Aluminum	107		106	103	100			2.41
	Aluminum	102		112	109				2.82
	Antimony	102		103	102	101			0.796
	Antimony	106		109	108				1.11
	Arsenic	103		100	100	102			0.230
	Arsenic	105		109	109				0.212
	Boron	107		106	105	104			0.837
	Cadmium	115		109	110	115			1.28
	Cadmium	104		101	101				0.704
	Chromium	102		91.4	91.3	90.0			1.39
	Chromium	103		101	99.8				1.21
	Copper	106		102	99.1	99.5			0.336
	Copper	104		114	110				2.95
	Lead	107		111	106	106			0.446
	Lead	109		115	115				0.767
	Nickel	112		105	107	108			1.56
	Nickel	105		101	102				0.633
	Selenium	105		103	101	100			1.02
	Silver	105		101	103	101			1.32
	Silver	103		94.6	94.5				0.0945
	Thallium	108		107	107	112			0.111
	Thallium	104		111	111				0.108
EPA 300.0 Rev. 2.1	Bromide	105		104	102				2.11
	Chloride	100		96.2	101			0.124	
	Sulfate	98.9		99.1	101			0.424	
EPA 350.1 Rev. 2.0	Ammonia-N	99.9		97.3	99.3				1.34
	Ammonia-N	99.8		98.2	100				1.75
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100		101	106				3.98
	Kjeldahl Nitrogen	101		109	99.3				8.18
EPA 353.2 Rev. 2.0	NO2NO3-N	97.5		96.3	96.8				0.496
	NO2NO3-N	100		99.8	99.4				0.442
EPA 365.1 Rev. 2.0	Total-P	101		98.1	97.9				0.245
	Total-P	104		107	106				0.912
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102		97.2	97.8				0.615
	O-Phosphate-P	98.9		94.6	96.8				2.05
EPA 8270E	Acetochlor	76.7	92.6	77.5	98.0	18.7			23.3
	Alachlor	79.6	92.7	80.7	103	15.1			24.4
	Aldrin	54.4	57.4	61.7	61.3	5.36			0.700
	Alpha-BHC	91.0	89.2	99.2	103	1.99			3.75
	Alpha-Chlordane	80.8	75.5	68.1	66.5	6.73			2.30
	Ametryn	82.1	108	131	121	27.0			7.90
	Atrazine	98.5	99.1			0.533			7.97

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Atrazine Desethyl	106	78.1	140	177	30.4		23.2
	Azinphos Methyl	106	83.7	93.7	118	23.5		23.3
	Beta-BHC	83.4	82.7	76.3	82.8	0.750		8.22
	Bifenthrin	93.9	94.4	106	102	0.623		3.88
	Bromacil	81.2	93.9			14.5		20.4
	Butylate	60.2	61.2	46.8	62.3	1.68		28.4
	Carbophenothion	84.3	66.6	110	112	23.4		2.55
	Chlorothalonil	119	82.5	239	254	36.1		6.35
	Chlorpyrifos Ethyl	89.2	91.7	90.8	103	2.69		12.8
	Chlorpyrifos Methyl	92.1	87.9	94.6	109	4.66		14.1
	Cis-Nonachlor	80.8	74.3	66.5	63.5	8.30		4.53
	Cyanazine	180	62.9	186	232	96.6		22.1
	Cypermethrin	106	99.2	107	110	6.33		2.32
	DDD-p,p'	87.3	79.7	73.2	70.7	9.08		3.58
	DDE-p,p'	81.4	76.0	66.4	66.3	6.81		0.107
	DDT-p,p'	87.5	87.6	81.8	85.4	0.104		4.34
	Delta-BHC	95.6	92.4	79.7	86.7	3.42		8.46
	Demeton	71.4	68.6	82.9	77.9	4.02		6.20
	Diazinon	93.4	97.8	101	131	4.65		25.9
	Dicofol	90.6	92.1	87.1	83.1	1.60		4.68
	Dieldrin	82.0	78.5	74.3	70.5	4.41		3.45
	Dimethenamid	77.1	94.8	84.6	110	20.6		20.4
	Disulfoton	99.8	88.6	108	126	11.9		15.1
	Dithiopyr	81.9	95.1	81.2	103	14.9		23.6
	Endosulfan I	90.3	84.1	80.1	82.8	7.10		3.33
	Endosulfan II	93.7	88.0	80.3	78.8	6.26		1.92
	Endosulfan Sulfate	93.1	91.1	92.9	91.6	2.18		1.40
	Endrin	84.5	79.0	70.0	68.7	6.67		1.88
	Endrin Aldehyde	80.6	74.4	48.2	46.7	7.98		3.07
	Endrin Ketone	91.5	90.4	98.6	94.9	1.17		3.78
	EPTC	61.9	62.8	47.4	70.6	1.45		39.3
	Ethalfuralin	85.9	84.3	89.7	89.7	1.95		0.0712
	Ethion	92.6	99.7	89.5	104	7.40		14.9
	Ethoprop	92.9	88.7	74.5	93.0	4.62		22.1
	Fenamiphos	59.0	70.1	65.4	67.8	17.3		3.60
	Fipronil	74.3	100	74.5	95.8	29.5		25.0
	Fipronil Desulfinyl	88.6	105	90.1	114	16.7		23.7
	Fipronil Sulfide	82.4	93.2	83.4	93.6	12.3		11.5
	Fipronil Sulfone	74.7	93.6	61.6	64.3	22.4		4.37
	Fonofos	90.9	83.4	97.3	118	8.62		18.9
	Gamma-BHC	101	90.6	119	116	10.4		3.23
	Gamma-Chlordane	79.1	74.5	67.7	66.8	5.95		1.35
	Heptachlor	76.0	74.7	74.9	75.1	1.77		0.356
	Heptachlor Epoxide	80.5	76.6	82.9	80.6	5.00		2.42
	Hexachlorobenzene	80.1	81.0	80.6	82.0	1.06		1.74
	Hexazinone	91.4	101			9.51		14.2
	Malathion	82.2	93.0	51.6	33.0	12.4		44.0
	Metalaxyl	76.3	34.3			75.8		19.0
	Methoxychlor	94.7	93.8	94.7	95.2	0.917		0.472
	Metolachlor	82.8	98.3	78.6	91.2	17.1		13.8
	Metribuzin	245	136	199	231	57.3		14.9
	Mevinphos	87.9	67.0	96.5	114	27.0		16.6
	Mirex	80.2	79.0	81.4	80.9	1.56		0.666
	Molinate	71.1	71.3	68.4	86.2	0.283		23.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Norflurazon	87.1	105			18.3		8.18
	Oxadiazon	79.8	96.6	72.7	87.9	19.1		16.6
	Parathion Ethyl	87.9	97.1	92.1	110	9.97		17.4
	Parathion Methyl	107	95.3	113	134	11.7		16.6
	Pendimethalin	84.6	97.5	91.8	108	14.2		15.8
	Permethrin	95.8	95.7	104	99.9	0.0955		4.27
	Phorate	87.6	80.5	95.1	113	8.41		17.2
	Prodiamine	80.1	96.3	93.4	116	18.4		21.6
	Prometon	64.7	81.6	87.5	105	23.1		18.4
	Prometryn	84.1	101	88.0	105	17.8		18.0
	Simazine	102	98.7	106	137	2.77		23.3
	Tebuconazole	61.8	96.3	21.9	24.7	43.7		12.0
	Terbufos	90.2	83.3	103	126	8.04		20.1
	Terbutylazine	89.0	92.7	92.7	121	4.08		26.1
	Trans-Nonachlor	78.6	73.3	65.3	63.1	6.95		3.39
	Trifluralin	89.0	88.0	88.3	89.4	1.09		1.24
EPA 8276	Chlordane	91.1	92.7	86.8	84.8	1.70		2.29
	Toxaphene	105	102	98.8	99.6	2.57		0.825
EPA 8321B	2,4-D	133		111	113			2.11
	3-Hydroxycarbofuran	99.2		85.5	90.7			5.99
	Acesulfame K	103		57.7	59.1			2.53
	Acetaminophen	92.6		93.4	103			9.74
	Acetamiprid	98.6		104	102			2.21
	Afidopyropen	104		105	101			4.73
	Aldicarb	76.3		47.9	58.5			20.0
	Aldicarb Sulfone	115		117	128			9.04
	Aldicarb Sulfoxide	105		49.1	60.9			21.3
	AMPA	96.4		88.0	87.8			0.188
	Bentazon	72.9		45.1	48.1			2.38
	Benzovindiflupyr	91.1		85.8	85.6			0.298
	Carbamazepine	114		72.1	88.1			18.5
	Carbaryl	73.5		51.3	64.4			22.6
	Carbofuran	80.9		48.3	58.3			18.7
	Clothianidin	104		113	113			0.0384
	Dinotefuran	96.3		132	121			6.19
	Diuron	88.3		73.8	75.3			1.99
	Endothall	85.5		115	125			8.10
	Fenuron	101		106	111			4.80
	Fluridone	107		97.2	103			5.79
	Glufosinate	99.1		83.8	76.0			9.77
	Glyphosate	104		76.8	84.8			7.79
	Hydrocodone	105		111	114			2.80
	Ibuprofen	84.1		88.0	78.8			11.0
	Imazapyr	88.5		90.9	86.1			3.73
	Imidacloprid	105		165	156			4.85
	Linuron	83.4		77.8	80.4			3.26
	Mandestrobin	93.1		89.6	90.1			0.643
	MCPP	131		117	124			6.20
	Methiocarb	75.4		61.2	72.2			16.4
	Methomyl	85.2		53.2	79.5			39.5
	Naproxen	70.6		84.0	76.8			8.88
	Oxamyl	113		95.2	87.7			8.25
	Primidone	110		90.1	113			20.9
	Propoxur	84.2		43.7	54.2			21.4

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Pyraclostrobin	82.2	84.7	85.3		0.777
	Sucralose	90.9	96.1	97.0		0.884
	Thiamethoxam	104	152	147		2.87
	Tolfenpyrad	48.7	52.0	56.6		8.40
	Triclopyr	100	84.6	102		18.3
SM 2120 B-2011	Color (true)	100			0.0870	
SM 2320 B-2011	Total Alkalinity	104			0.767	
	Total Alkalinity	103			1.21	
SM 2540 C-2011	TDS				1.01	
SM 4500 F-C-2011	Fluoride	99.4	98.5	98.5		0.0
	Fluoride	97.7	97.5	99.0		0.953
SM 5310 B-2011	Organic Carbon	98.0	97.4	98.5		0.829
	Organic Carbon	102	102	103		1.20

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2149237, 2149240
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2149264, 2149265
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2149264, 2149265
EPA 300.0 Rev. 2.1 / E31780	Bromide in aqueous matrices	2149240
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2149237
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2149237
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2149238, 2149241
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2149238, 2149241
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2149238, 2149241
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2149238, 2149241
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2149239, 2149242
EPA 8270E / E31780	Organochlorine pesticides in water matrices by GC/MS-SIM	2149262
EPA 8270E / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2149263
EPA 8276 / E31780	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2149262
EPA 8321B / E31780	Carbamates in water matrices by HPLC/MS/MS	2149256
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2149257
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2149257
SM 2120 B-2011 / E31780	True Color measured at 450 nm (not valid for NPDES monitoring)	2149237
SM 2320 B-2011 / E31780	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2149237, 2149240
SM 2340B / E31780	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2149264
SM 2540 C-2011 / E31780	Total Dissolved Solids in aqueous matrices	2149237
SM 2540 D-2011 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2149237, 2149240
SM 4500 F-C-2011 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2149237, 2149240
SM 5310 B-2011 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2149238, 2149241

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	01/14/2020			01/15/2020 18:01	Yen Ta	2149237, 2149240
EPA 200.7 Rev. 4.4	01/14/2020	01/16/2020 13:35	Elliott D. Healy	01/21/2020 13:18	Vijayalakshmi Reddy	2149264
	01/14/2020	01/22/2020 14:45	Elliott D. Healy	01/23/2020 16:47	Betina Topolski	2149265
EPA 200.8 Rev. 5.4	01/14/2020	01/16/2020 13:35	Elliott D. Healy	01/23/2020 16:03	Justin Cutchin	2149264
	01/14/2020	01/16/2020 13:35	Elliott D. Healy	01/24/2020 15:42	Alexander Thompson	2149264
	01/14/2020	01/16/2020 13:35	Elliott D. Healy	01/27/2020 17:05	Alexander Thompson	2149264
	01/14/2020	01/22/2020 14:45	Elliott D. Healy	01/31/2020 23:04	Alexander Thompson	2149265
	01/14/2020	01/22/2020 14:45	Elliott D. Healy	02/03/2020 16:18	Alexander Thompson	2149265
EPA 300.0 Rev. 2.1	01/14/2020			01/16/2020 18:15	Lipi Saha	2149237
	01/14/2020			01/17/2020 16:33	Lipi Saha	2149240
EPA 350.1 Rev. 2.0	01/14/2020			01/16/2020 15:01	Ping Hua	2149238
	01/14/2020			01/17/2020 11:44	Ping Hua	2149241
EPA 351.2 Rev. 2.0	01/14/2020	01/17/2020 09:05	Jhamieka S. Greenwood	01/22/2020 16:26	Jhamieka S. Greenwood	2149238
	01/14/2020	01/21/2020 12:05	Jhamieka S. Greenwood	01/23/2020 12:18	Virginia P. Brown	2149241
EPA 353.2 Rev. 2.0	01/14/2020			01/17/2020 12:51	Beverly Y. Sanders	2149238
	01/14/2020			01/23/2020 10:40	Beverly Y. Sanders	2149241
EPA 365.1 Rev. 2.0	01/14/2020	01/22/2020 14:24	Yen Ta	01/23/2020 14:16	Benjamin T. Nordmann	2149238
	01/14/2020	01/22/2020 14:24	Yen Ta	01/24/2020 13:35	Benjamin T. Nordmann	2149241
EPA 365.1 Rev. 2.0 dissolved	01/14/2020			01/14/2020 17:00	Julia Storbeck	2149242
	01/14/2020			01/14/2020 17:40	Julia Storbeck	2149239
EPA 8270E	01/14/2020	01/17/2020 08:00	Fe-Val Siddell	01/21/2020 18:22	Vandana T. Nagar	2149263
	01/14/2020	01/17/2020 08:30	Rasheda Ghaffari	01/22/2020 23:52	Arthur Maknenko	2149262
EPA 8276	01/14/2020	01/17/2020 08:30	Rasheda Ghaffari	01/23/2020 05:46	Michael Poppell	2149262
EPA 8321B	01/14/2020	01/15/2020 10:00	Hoor Shaik	01/15/2020 20:02	Juyoung Kim	2149256
	01/14/2020	01/15/2020 14:30	Rebecca Ware	01/15/2020 21:12	Rebecca Ware	2149257
	01/14/2020	01/15/2020 14:30	Rebecca Ware	01/16/2020 14:05	Rebecca Ware	2149257
	01/14/2020	01/15/2020 14:30	Rebecca Ware	01/23/2020 15:35	Rebecca Ware	2149257
	01/14/2020	01/17/2020 10:00	Hoor Shaik	01/18/2020 19:06	Juyoung Kim	2149257
SM 2120 B-2011	01/14/2020			01/15/2020 18:12	Madeline Funaro	2149237
SM 2320 B-2011	01/14/2020			01/17/2020 02:25	Dale L. Simmons	2149237
	01/14/2020			01/25/2020 02:54	Dale L. Simmons	2149240
SM 2340B	01/14/2020			01/21/2020 13:18	Vijayalakshmi Reddy	2149264
SM 2540 C-2011	01/14/2020			01/14/2020 17:25	Yijie Li	2149237
SM 2540 D-2011	01/14/2020			01/14/2020 17:25	Yijie Li	2149237, 2149240
SM 4500 F-C-2011	01/14/2020			01/17/2020 02:25	Dale L. Simmons	2149237
	01/14/2020			01/30/2020 01:06	Dale L. Simmons	2149240
SM 5310 B-2011	01/14/2020			01/16/2020 19:20	Lauren Lees	2149238
	01/14/2020			01/17/2020 04:53	Lauren Lees	2149241