

Chemical Analysis Report

NE-DIST-2021-01-26-01

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

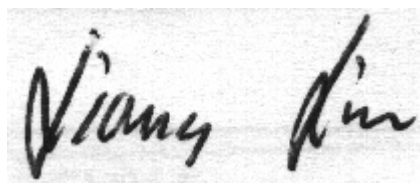
Event Description: **LSJR North 2021**
Request ID: **RQ-2021-01-25-06**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 17-FEB-2021 10:59

A handwritten signature in black ink, appearing to read "Liang Lin", 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: Blockhouse At Broward Rd.

Collection Date/Time: 01/25/2021 12:00

Field ID: G2NE1180

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221224	EPA 180.1 Rev. 2.0	Turbidity	7.9		NTU	P392994	
	EPA 300.0 Rev. 2.1	Bromide	12		mg Br/L	P393038	
	SM 2320 B-2011	Total Alkalinity	82		mg CaCO3/L	P393216	
	SM 2540 D-2011	TSS	8	I	mg/L	P393360	
	SM 4500 F-C-2011	Fluoride	0.29		mg F/L	P393219	
2221225	EPA 350.1 Rev. 2.0	Ammonia-N	0.089		mg N/L	P393459	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.72		mg N/L	P393124	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P392961	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P393526	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P393186	
2221226	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.077		mg P/L	P392945	
2221269	EPA 8270E	Aldrin	4.2	U	ng/L	P392993	
		Alpha-BHC	2.1	U	ng/L	P392993	
		Alpha-Chlordane	1.0	U	ng/L	P392993	
		Beta-BHC	8.4	U	ng/L	P392993	
		Beta-Cyfluthrin**	16	U	ng/L	P392993	
		Bifenthrin**	4.2	U	ng/L	P392993	
		Delta-BHC	8.4	U	ng/L	P392993	
		Gamma-BHC	8.4	U	ng/L	P392993	
		Carbophenothion	10	U	ng/L	P392993	
		Chlorothalonil	2.1	U	ng/L	P392993	
		Cis-Nonachlor**	1.0	U	ng/L	P392993	
		Cypermethrin	21	U	ng/L	P392993	
		Dacthal**	1.0	UJ	ng/L	P392993	MS
		DDD-p,p'	5.2	U	ng/L	P392993	
		DDE-p,p'	5.2	U	ng/L	P392993	
		DDT-p,p'	6.3	U	ng/L	P392993	
		Deltamethrin**	21	U	ng/L	P392993	
		Dicofol	31	U	ng/L	P392993	
		Dieldrin	4.2	U	ng/L	P392993	
		Endosulfan I	4.2	U	ng/L	P392993	
		Endosulfan II	4.2	U	ng/L	P392993	
		Endosulfan Sulfate	2.1	U	ng/L	P392993	
		Endrin	2.1	U	ng/L	P392993	
		Endrin Aldehyde	2.1	U	ng/L	P392993	
		Endrin Ketone	2.1	U	ng/L	P392993	
		Ethalfuralin**	3.1	U	ng/L	P392993	
		Gamma-Chlordane	1.0	U	ng/L	P392993	
		Dichlobenil**	2.1	U	ng/L	P392993	
		Esfenvalerate**	21	U	ng/L	P392993	
		Fenpropathrin**	10	UJ	ng/L	P392993	MS
		Heptachlor	1.6	U	ng/L	P392993	
		Heptachlor Epoxide	2.1	U	ng/L	P392993	

Field ID: G2NE1180

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221269	EPA 8270E	Hexachlorobenzene	2.1	U	ng/L	P392993	
		Lambda-Cyhalothrin**	16	U	ng/L	P392993	
		Methoxychlor	4.2	U	ng/L	P392993	
		Mirex	2.1	U	ng/L	P392993	
		MGK-264**	3.1	U	ng/L	P392993	
		Permethrin	10	U	ng/L	P392993	
		Phenothrin**	31	U	ng/L	P392993	
		Piperonyl Butoxide**	1.6	U	ng/L	P392993	
		Prallethrin**	26	U	ng/L	P392993	
		Tau-Fluvalinate**	3.7	U	ng/L	P392993	
		Tetramethrin**	8.4	U	ng/L	P392993	
		Trans-Nonachlor**	1.0	U	ng/L	P392993	
		Triclosan Methyl**	1.0	U	ng/L	P392993	
		Trifluralin	2.6	U	ng/L	P392993	
	EPA 8276	Chlordane	5.3	I	ng/L	P392993	
		Toxaphene	31	U	ng/L	P392993	
2221272	EPA 8321B	Acesulfame K	0.10	U	ug/L	P392897	
		2,4-D	0.0076	I	ug/L	P392788	
		AMPA	1.0	U	ug/L	P392897	
		Sucralose	0.65		ug/L	P392897	
		Acetaminophen**	0.0080	U	ug/L	P392788	
		Endothall	0.25	U	ug/L	P392897	
		Acetamiprid**	0.0020	U	ug/L	P392788	
		Glufosinate	1.0	U	ug/L	P392897	
		Glyphosate	1.0	U	ug/L	P392897	
		Afidopyropen**	0.0020	U	ug/L	P392788	
		Bentazon	0.0062		ug/L	P392788	MS
		Benzovindiflupyr**	0.0020	U	ug/L	P392788	
		Carbamazepine**	0.0014	I	ug/L	P392788	
		Clothianidin**	0.0020	U	ug/L	P392788	
		Dinotefuran**	0.0020	U	ug/L	P392788	
		Diuron	0.0095		ug/L	P392788	
		Fenuron	0.016	U	ug/L	P392788	
		Fluridone**	0.0026	I	ug/L	P392788	
		Imazapyr**	0.13		ug/L	P392788	
		Hydrocodone**	0.0020	U	ug/L	P392788	
		Ibuprofen**	0.020	U	ug/L	P392788	
		Imidacloprid	0.0062	I	ug/L	P392788	
		Linuron	0.0040	U	ug/L	P392788	
		Mandestrobin**	0.0020	U	ug/L	P392788	
		MCPP	0.0020	U	ug/L	P392788	
		Naproxen**	0.0080	U	ug/L	P392788	
		Primidone**	0.0040	U	ug/L	P392788	
		Pyraclostrobin**	0.0020	U	ug/L	P392788	
		Thiamethoxam**	0.0020	U	ug/L	P392788	

Field ID: G2NE1180

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221272	EPA 8321B	Tolfenpyrad**	0.0020	U	ug/L	P392788	
		Triclopyr**	0.0040	U	ug/L	P392788	
2221274	EPA 200.7 Rev. 4.4	Calcium	98.3		mg/L	P393322	
		Chromium	3.9	I	ug/L	P393322	
		Iron	570		ug/L	P393322	
		Magnesium	236		mg/L	P393322	
		Manganese	31		ug/L	P393322	
		Zinc	25	I	ug/L	P393322	
	EPA 200.8 Rev. 5.4	Aluminum	240	I	ug/L	P393322	
		Antimony	0.20	U	ug/L	P393322	
		Arsenic	1.35		ug/L	P393322	
		Beryllium	0.040	U	ug/L	P393322	
		Cadmium	0.080	U	ug/L	P393322	
		Copper	2.4	I	ug/L	P393322	
		Lead	1.0	I	ug/L	P393322	
		Nickel	2.0	U	ug/L	P393322	
		Selenium	0.80	U	ug/L	P393322	
		Silver	0.040	U	ug/L	P393322	
		Thallium	0.40	U	ug/L	P393322	

Ref. Method and Comment:

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

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

EPA 8321B: MDL for some parameters elevated due to matrix interference.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium and magnesium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Tributary To Trout At Capper Rd.

Collection Date/Time: 01/25/2021 12:45

Field ID: G2NE1208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221230	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P392994	
	EPA 300.0 Rev. 2.1	Bromide	0.14		mg Br/L	P393038	
	SM 2320 B-2011	Total Alkalinity	78		mg CaCO3/L	P393215	
	SM 2540 D-2011	TSS	2	IA	mg/L	P393361	
	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P393055	
2221231	EPA 350.1 Rev. 2.0	Ammonia-N	0.099		mg N/L	P393461	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.54		mg N/L	P393256	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.084		mg N/L	P393106	
	EPA 365.1 Rev. 2.0	Total-P	0.24		mg P/L	P393148	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P393186	
2221232	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P392944	

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: Blockhouse Cr @ Duval Rd

Collection Date/Time: 01/25/2021 13:15

Field ID: 20030746

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221276	EPA 200.7 Rev. 4.4	Barium	28.4		ug/L	P393014	
		Calcium	27.9		mg/L	P393014	
		Iron	1.47E+03		ug/L	P393014	
		Magnesium	7.00		mg/L	P393014	
		Manganese	25.1		ug/L	P393014	
		Potassium	2.2		mg/L	P393014	
		Sodium	14.7		mg/L	P393014	
	EPA 200.8 Rev. 5.4	Zinc	6.1	I	ug/L	P393014	
		Aluminum	118		ug/L	P393014	
		Antimony	0.11	I	ug/L	P393014	
		Arsenic	0.51		ug/L	P393014	
		Beryllium	0.024	I	ug/L	P393014	
		Boron**	24.6		ug/L	P393014	
		Cadmium	0.020	U	ug/L	P393014	
		Chromium	0.50	I	ug/L	P393014	
		Copper	0.79	I	ug/L	P393014	
		Lead	0.20	U	ug/L	P393014	
		Nickel	0.50	U	ug/L	P393014	
		Selenium	0.20	U	ug/L	P393014	
		Silver	0.010	U	ug/L	P393014	
		Thallium	0.10	U	ug/L	P393014	
	SM 2340B	Hardness	98.4		mg/L	P393014	

Sample Location: Blockhouse 100m Abv Irma Rd

Collection Date/Time: 01/25/2021 13:35

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221227	EPA 180.1 Rev. 2.0	Turbidity	8.2		NTU	P392994	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P393267	
		Sulfate	15		mg SO4/L	P393268	
	SM 2120 B-2011	Color (true)	55		PCU	P392939	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P393215	
	SM 2540 C-2011	TDS	153		mg/L	P393481	
	SM 2540 D-2011	TSS	2	I	mg/L	P393355	
2221228	SM 4500 F-C-2011	Fluoride	0.16		mg F/L	P393055	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.082		mg N/L	P393461	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.56		mg N/L	P393256	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.11		mg N/L	P393106	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P393148	
2221229	SM 5310 B-2011	Organic Carbon	10		mg C/L	P393186	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.039		mg P/L	P392944	
2221270	EPA 8270E	Aldrin	0.79	U	ng/L	P392993	
		Dieldrin	0.42	U	ng/L	P392993	
		Alpha-BHC	2.1	U	ng/L	P392993	
		Kepone**	5.8	U	ng/L	P392993	
		Alpha-Chlordane	1.1	U	ng/L	P392993	
		Beta-BHC	8.4	U	ng/L	P392993	
		Beta-Cyfluthrin**	16	U	ng/L	P392993	
		Bifenthrin**	4.2	U	ng/L	P392993	
		Delta-BHC	8.4	U	ng/L	P392993	
		Gamma-BHC	8.4	U	ng/L	P392993	
		Carbophenothion	11	U	ng/L	P392993	
		Chlorothalonil	2.1	U	ng/L	P392993	
		Cis-Nonachlor**	1.1	U	ng/L	P392993	
		Cypermethrin	21	U	ng/L	P392993	
		Dacthal**	1.1	U	ng/L	P392993	MS
		DDD-p,p'	5.3	U	ng/L	P392993	
		DDE-p,p'	5.3	U	ng/L	P392993	
		DDT-p,p'	6.3	U	ng/L	P392993	
		Deltamethrin**	21	U	ng/L	P392993	
		Dicofol	32	U	ng/L	P392993	
		Endosulfan I	4.2	U	ng/L	P392993	
		Endosulfan II	4.2	U	ng/L	P392993	
		Endosulfan Sulfate	2.1	U	ng/L	P392993	
		Endrin	2.1	U	ng/L	P392993	
		Endrin Aldehyde	2.1	U	ng/L	P392993	
		Endrin Ketone	2.1	U	ng/L	P392993	
		Ethalfuralin**	3.2	U	ng/L	P392993	
		Gamma-Chlordane	1.1	U	ng/L	P392993	
		Dichlobenil**	2.1	U	ng/L	P392993	

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221270	EPA 8270E	Esfenvalerate**	21	U	ng/L	P392993	
		Fenpropathrin**	11	U	ng/L	P392993	MS
		Heptachlor	1.6	U	ng/L	P392993	
		Heptachlor Epoxide	2.1	U	ng/L	P392993	
		Hexachlorobenzene	2.1	U	ng/L	P392993	
		Lambda-Cyhalothrin**	16	U	ng/L	P392993	
		Methoxychlor	4.2	U	ng/L	P392993	
		Mirex	2.1	U	ng/L	P392993	
		MGK-264**	3.2	U	ng/L	P392993	
		Permethrin	11	U	ng/L	P392993	
		Phenothrin**	32	U	ng/L	P392993	
		Piperonyl Butoxide**	1.6	U	ng/L	P392993	
		Prallethrin**	26	U	ng/L	P392993	
		Tau-Fluvalinate**	3.7	U	ng/L	P392993	
		Tetramethrin**	8.4	U	ng/L	P392993	
		Trans-Nonachlor**	1.1	U	ng/L	P392993	
		Triclosan Methyl**	1.1	U	ng/L	P392993	
		Trifluralin	2.6	U	ng/L	P392993	
		Chlordane	5.3	U	ng/L	P392993	
		Toxaphene	32	U	ng/L	P392993	
2221275	EPA 200.7 Rev. 4.4	Barium	37.7		ug/L	P393014	
		Calcium	26.3		mg/L	P393014	
		Iron	1.54E+03		ug/L	P393014	
		Magnesium	6.08		mg/L	P393014	
		Manganese	21.5		ug/L	P393014	
		Potassium	2.2		mg/L	P393014	
		Sodium	18.2		mg/L	P393014	
		Zinc	5.9	I	ug/L	P393014	
	EPA 200.8 Rev. 5.4	Aluminum	99		ug/L	P393014	
		Antimony	0.088	I	ug/L	P393014	
		Arsenic	0.54		ug/L	P393014	
		Beryllium	0.028	I	ug/L	P393014	
		Boron**	30.9		ug/L	P393014	
		Cadmium	0.020	U	ug/L	P393014	
		Chromium	0.47	I	ug/L	P393014	
		Copper	0.74	I	ug/L	P393014	
		Lead	0.20	U	ug/L	P393014	
		Nickel	0.50	U	ug/L	P393014	
		Selenium	0.20	U	ug/L	P393014	
		Silver	0.010	U	ug/L	P393014	
		Thallium	0.10	U	ug/L	P393014	
	SM 2340B	Hardness	90.8		mg/L	P393014	

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: Long Br At Evergreen Ave

Collection Date/Time: 01/25/2021 14:10

Field ID: G2NE0735

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221221	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P392994	
	EPA 300.0 Rev. 2.1	Bromide	0.25		mg Br/L	P393038	
	SM 2320 B-2011	Total Alkalinity	117		mg CaCO3/L	P393052	
	SM 2540 D-2011	TSS	2	I	mg/L	P393360	
	SM 4500 F-C-2011	Fluoride	0.16		mg F/L	P393055	
2221222	EPA 350.1 Rev. 2.0	Ammonia-N	0.069		mg N/L	P393460	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30		mg N/L	P393256	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P393106	
	EPA 365.1 Rev. 2.0	Total-P	0.058		mg P/L	P393148	
	SM 5310 B-2011	Organic Carbon	5.5		mg C/L	P393186	
2221223	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.019		mg P/L	P392944	
2221271	EPA 8321B	2,4-D	0.0020	U	ug/L	P392788	
		Acesulfame K	0.10	U	ug/L	P392897	
		AMPA	0.25	I	ug/L	P392897	
		Sucralose	0.25		ug/L	P392897	
		Acetaminophen**	0.0080	U	ug/L	P392788	
		Acetamiprid**	0.0020	U	ug/L	P392788	
		Endothall	0.25	U	ug/L	P392897	
		Glufosinate	0.10	U	ug/L	P392897	
		Glyphosate	0.23	I	ug/L	P392897	
		Afidopyropen**	0.0020	U	ug/L	P392788	
		Bentazon	0.0080		ug/L	P392788	MS
		Benzovindiflupyr**	0.0020	U	ug/L	P392788	
		Carbamazepine**	8.0E-04	U	ug/L	P392788	
		Clothianidin**	0.0020	U	ug/L	P392788	
		Dinotefuran**	0.0020	U	ug/L	P392788	
		Diuron	0.0020	U	ug/L	P392788	
		Fenuron	0.016	U	ug/L	P392788	
		Fluridone**	8.0E-04	U	ug/L	P392788	
		Imazapyr**	0.040		ug/L	P392788	
		Hydrocodone**	0.0020	U	ug/L	P392788	
		Ibuprofen**	0.020	U	ug/L	P392788	
		Imidacloprid	0.013		ug/L	P392788	
		Linuron	0.0040	U	ug/L	P392788	
		Mandestrobin**	0.0020	U	ug/L	P392788	
		MCPP	0.0020	U	ug/L	P392788	
		Naproxen**	0.0080	U	ug/L	P392788	
		Primidone**	0.0040	U	ug/L	P392788	
		Pyraclostrobin**	0.0020	U	ug/L	P392788	
		Thiamethoxam**	0.0020	U	ug/L	P392788	
		Tolfenpyrad**	0.0020	U	ug/L	P392788	
		Triclopyr**	0.0040	U	ug/L	P392788	
2221273	EPA 200.7 Rev. 4.4	Iron	1.65E+03		ug/L	P393014	

Field ID: G2NE0735

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2221273	EPA 200.7 Rev. 4.4	Magnesium	12.9		mg/L	P393014	
		Manganese	43.4		ug/L	P393014	
	EPA 200.8 Rev. 5.4	Zinc	8.0	I	ug/L	P393014	
		Aluminum	23		ug/L	P393014	
		Antimony	0.10	I	ug/L	P393014	
		Arsenic	0.71		ug/L	P393014	
		Beryllium	0.010	U	ug/L	P393014	
		Cadmium	0.020	U	ug/L	P393014	
		Chromium	0.40	U	ug/L	P393014	
		Copper	0.72	I	ug/L	P393014	
		Lead	0.30	I	ug/L	P393014	
		Nickel	0.51	I	ug/L	P393014	
		Selenium	0.20	U	ug/L	P393014	
		Silver	0.010	U	ug/L	P393014	
		Thallium	0.10	U	ug/L	P393014	

Ref. Method and Comment:

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P392994

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393014

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393322

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Chromium	1.0	U	ug/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393014

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393322

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393322

Component	Result	Code	Units
Cadmium	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393038

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393267

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393268

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393459

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393460

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393461

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393124

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393256

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392961

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393106

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393148

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393526

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392945

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

Reference Method: EPA 8270E
Batch ID: P392993

Component	Result	Code	Units
Aldrin	0.75	U	ng/L
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
Carbophenothion	10	U	ng/L
Chlorothalonil	2.0	U	ng/L
Cis-Nonachlor	1.0	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P392993

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

Reference Method: EPA 8276

Batch ID: P392993

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

Reference Method: EPA 8321B

Batch ID: P392788

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P392788

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

Reference Method: EPA 8321B

Batch ID: P392897

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: SM 2120 B-2011

Batch ID: P392939

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P393052

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

Reference Method: SM 2320 B-2011

Batch ID: P393215

Component	Result	Code	Units
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Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P393215

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

Reference Method: SM 2320 B-2011
Batch ID: P393216

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

Reference Method: SM 2540 C-2011
Batch ID: P393481

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393355

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393360

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P393361

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P393055

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-2011
Batch ID: P393219

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P393186

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: P393014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.6		P	85 - 115
Calcium	106		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Manganese	98.4		P	85 - 115
Potassium	100		P	85 - 115
Sodium	102		P	85 - 115
Zinc	98.1		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P393322

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	98.9		P	85 - 115
Chromium	92.2		P	85 - 115
Iron	101		P	85 - 115
Magnesium	98.7		P	85 - 115
Manganese	97.0		P	85 - 115
Zinc	94.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.6		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	97.6		P	85 - 115
Beryllium	91.5		P	85 - 115
Boron	96.3		P	85 - 115
Cadmium	94.0		P	85 - 115
Chromium	96.1		P	85 - 115
Copper	96.4		P	85 - 115
Lead	100		P	85 - 115
Nickel	96.8		P	85 - 115
Selenium	98.2		P	85 - 115
Silver	104		P	80 - 120
Thallium	99.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393322

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.4		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	97.7		P	85 - 115
Beryllium	86.9		P	85 - 115
Cadmium	94.4		P	85 - 115
Copper	94.7		P	85 - 115
Lead	98.7		P	85 - 115
Nickel	93.1		P	85 - 115
Selenium	96.3		P	85 - 115
Silver	105		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393322

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Thallium	98.3		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393038

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393267

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393268

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.2		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393459

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393460

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393124

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.2		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392961

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393106

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393148

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393526

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392945

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

Reference Method: EPA 8270E
Batch ID: P392993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	49.5	50.2	P/P	20 - 110
Aldrin	42.9	49.4	P/P	20 - 82.0
Alpha-BHC	69.0	73.3	P/P	58 - 130
Alpha-Chlordane	67.0	71.2	P/P	61 - 105
Beta-BHC	82.2	82.4	P/P	53 - 164
Beta-Cyfluthrin	58.7	60.7	P/P	40 - 140
Bifenthrin	65.5	66.1	P/P	44 - 122
Carbophenothion	43.2	53.7	P/P	20 - 161
Chlorothalonil	27.5	28.9	P/P	20 - 201
Cis-Nonachlor	69.7	73.0	P/P	60 - 110
Cypermethrin	67.8	71.4	P/P	43 - 131
Dacthal	76.2	78.4	P/P	76 - 108
DDD-p,p'	75.4	79.4	P/P	68 - 118
DDE-p,p'	67.3	71.5	P/P	56 - 107
DDT-p,p'	66.1	70.0	P/P	55 - 122
Delta-BHC	91.8	97.0	P/P	60 - 181

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P392993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Deltamethrin	70.3	78.1	P/P	51 - 139
Dichlobenil	30.1	30.3	P/P	20 - 106
Dicofol	82.1	84.4	P/P	56 - 130
Dieldrin	67.3	65.9	P/P	58 - 112
Dieldrin	74.6	77.4	P/P	67 - 111
Endosulfan I	73.0	80.0	P/P	68 - 115
Endosulfan II	88.1	84.5	P/P	69 - 133
Endosulfan Sulfate	73.8	80.0	P/P	65 - 126
Endrin	73.2	77.9	P/P	66 - 118
Endrin Aldehyde	61.0	60.1	P/P	60 - 132
Endrin Ketone	74.4	81.4	P/P	68 - 121
Esfenvalerate	63.0	66.8	P/P	42 - 116
Ethalfuralin	63.1	67.8	P/P	50 - 118
Fenpropathrin	85.4	92.9	P/P	55 - 132
Gamma-BHC	77.0	80.5	P/P	65 - 147
Gamma-Chlordane	64.9	68.4	P/P	56 - 103
Heptachlor	55.0	58.7	P/P	47 - 95.0
Heptachlor Epoxide	70.1	74.0	P/P	67 - 107
Hexachlorobenzene	58.6	63.5	P/P	45 - 99.0
Kepone	68.4	87.9	P/P	28 - 128
Lambda-Cyhalothrin	57.8	62.3	P/P	41 - 135
Methoxychlor	70.7	80.1	P/P	61 - 138
MGK-264	59.5	70.2	P/P	20 - 109
Mirex	59.1	61.1	P/P	36 - 92.0
Permethrin	66.2	68.7	P/P	45 - 111
Phenothrin	48.9	55.1	P/P	22 - 88.0
Piperonyl Butoxide	73.1	81.8	P/P	67 - 120
Prallethrin	50.3	60.5	P/P	28 - 92.0
Tau-Fluvalinate	67.3	71.2	P/P	38 - 145
Tetramethrin	75.2	74.6	P/P	29 - 150
Trans-Nonachlor	66.1	68.1	P/P	54 - 105
Triclosan Methyl	80.3	85.7	P/P	76 - 115
Trifluralin	62.5	66.5	P/P	53 - 111

Reference Method: EPA 8276

Batch ID: P392993

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.4	81.9	P/P	56 - 117
Toxaphene	108	103	P/P	45 - 116

Reference Method: EPA 8321B

Batch ID: P392788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	117		P	30 - 160
Acetaminophen	73.6		P	30 - 160
Acetamiprid	95.3		P	30 - 160
Afidopyropen	75.8		P	30 - 160
Bentazon	75.1		P	30 - 160
Benzovindiflupyr	77.3		P	30 - 160
Carbamazepine	85.2		P	30 - 160

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P392788

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Clothianidin	95.4		P	30 - 160
Dinotefuran	84.6		P	30 - 160
Diuron	60.0		P	30 - 160
Fenuron	94.1		P	30 - 160
Fluridone	83.7		P	30 - 160
Hydrocodone	93.9		P	30 - 160
Ibuprofen	99.1		P	30 - 160
Imazapyr	120		P	30 - 160
Imidacloprid	107		P	30 - 160
Linuron	71.6		P	30 - 160
Mandestrobin	77.6		P	30 - 160
MCPP	115		P	30 - 160
Naproxen	72.2		P	30 - 160
Primidone	102		P	30 - 160
Pyraclostrobin	74.9		P	30 - 160
Thiamethoxam	107		P	30 - 160
Tolfenpyrad	52.0		P	30 - 160
Triclopyr	108		P	30 - 160

Reference Method: EPA 8321B

Batch ID: P392897

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	104		P	40 - 150
Endothall	93.7		P	40 - 150
Glufosinate	102		P	40 - 150
Glyphosate	80.8		P	40 - 140
Sucralose	108		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P392939

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	90 - 110

Reference Method: SM 2320 B-2011

Batch ID: P393052

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.5		P	93 - 104

Reference Method: SM 2320 B-2011

Batch ID: P393215

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	93 - 104

Reference Method: SM 2320 B-2011

Batch ID: P393216

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: P393216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.8		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P393055

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	103		P	90 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P393219

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P393186

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221379	Barium	100		P	80 - 120
2221379	Calcium	107		P	80 - 120
2221379	Iron	109		P	80 - 120
2221379	Magnesium	114		P	80 - 120
2221379	Manganese	101		P	80 - 120
2221379	Potassium	104		P	80 - 120
2221379	Sodium	102		P	80 - 120
2221379	Zinc	108		P	80 - 120
2221555	Barium	104	103	P/P	80 - 120
2221555	Calcium	111	110	P/P	80 - 120
2221555	Iron	108	108	P/P	80 - 120
2221555	Magnesium	109	110	P/P	80 - 120
2221555	Manganese	103	102	P/P	80 - 120
2221555	Potassium	108	107	P/P	80 - 120
2221555	Sodium	106	105	P/P	80 - 120
2221555	Zinc	106	105	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393322

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221579	Chromium	93.5	91.2	P/P	70 - 130
2221579	Iron	106	101	P/P	70 - 130
2221579	Manganese	96.9	94.4	P/P	70 - 130
2221579	Zinc	98.2	95.1	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221379	Aluminum	94.8		P	80 - 120
2221379	Antimony	98.8		P	80 - 120
2221379	Arsenic	95.1		P	80 - 120
2221379	Beryllium	88.7		P	80 - 120
2221379	Boron	97.5		P	80 - 120
2221379	Cadmium	93.3		P	80 - 120
2221379	Chromium	93.2		P	80 - 120
2221379	Copper	91.2		P	80 - 120
2221379	Lead	98.3		P	80 - 120
2221379	Nickel	91.7		P	80 - 120
2221379	Selenium	94.4		P	80 - 120
2221379	Silver	105		P	80 - 120
2221379	Thallium	102		P	80 - 120
2221555	Aluminum	97.2	96.9	P/P	80 - 120
2221555	Antimony	99.9	99.2	P/P	80 - 120
2221555	Arsenic	98.0	97.4	P/P	80 - 120
2221555	Beryllium	88.9	87.8	P/P	80 - 120
2221555	Boron	97.3	98.2	P/P	80 - 120
2221555	Cadmium	94.1	93.9	P/P	80 - 120
2221555	Chromium	97.3	95.3	P/P	80 - 120
2221555	Copper	97.1	95.8	P/P	80 - 120
2221555	Lead	100	99.7	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221555	Nickel	96.5	95.6	P/P	80 - 120
2221555	Selenium	98.7	98.1	P/P	80 - 120
2221555	Silver	89.0	101	P/P	80 - 120
2221555	Thallium	101	101	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393322

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221579	Aluminum	93.2	92.8	P/P	70 - 130
2221579	Antimony	103	103	P/P	70 - 130
2221579	Arsenic	102	104	P/P	70 - 130
2221579	Beryllium	98.6	93.9	P/P	70 - 130
2221579	Cadmium	87.1	86.2	P/P	70 - 130
2221579	Copper	105	104	P/P	70 - 130
2221579	Lead	103	102	P/P	70 - 130
2221579	Nickel	95.8	96.3	P/P	70 - 130
2221579	Selenium	99.1	97.5	P/P	70 - 130
2221579	Silver	95.4	95.6	P/P	70 - 130
2221579	Thallium	101	102	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393038

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221122	Bromide	98.8	98.5	P/P	90 - 110
2221195	Bromide	99.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393267

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220858	Chloride	96.1		P	90 - 110
2221156	Chloride	96.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393268

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220858	Sulfate	96.5		P	90 - 110
2221156	Sulfate	96.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393459

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220828	Ammonia-N	98.9	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393460

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393460

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221157	Ammonia-N	98.8	98.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221294	Ammonia-N	97.9	98.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393124

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220723	Kjeldahl Nitrogen	106	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221292	Kjeldahl Nitrogen	105	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392961

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220722	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221213	NO2NO3-N	99.2	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221201	Total-P	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393526

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2223236	Total-P	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221216	O-Phosphate-P	102	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392945

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221133	O-Phosphate-P	97.7	97.3	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P392993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221269	Aldrin	51.2	50.8	P/P	29 - 83.0
2221269	Alpha-BHC	66.8	65.1	P/P	53 - 147
2221269	Alpha-Chlordane	61.1	60.2	P/P	56 - 107
2221269	Beta-BHC	62.1	61.1	P/P	43 - 182
2221269	Beta-Cyfluthrin	62.1	59.4	P/P	42 - 157
2221269	Bifenthrin	72.6	67.2	P/P	52 - 124
2221269	Carbophenothion	78.8	72.7	P/P	40 - 172
2221269	Chlorothalonil	54.0	56.8	P/P	10 - 265
2221269	Cis-Nonachlor	61.5	60.6	P/P	55 - 112
2221269	Cypermethrin	70.3	73.1	P/P	46 - 144
2221269	Dacthal	70.1	68.5	F/F	72 - 110
2221269	DDD-p,p'	64.7	62.0	P/P	58 - 123
2221269	DDE-p,p'	59.8	58.5	P/P	52 - 106
2221269	DDT-p,p'	67.6	60.9	P/P	50 - 127
2221269	Delta-BHC	86.0	90.3	P/P	56 - 222
2221269	Deltamethrin	72.3	76.5	P/P	47 - 152
2221269	Dichlobenil	47.5	43.0	P/P	22 - 99.0
2221269	Dicofol	68.5	67.2	P/P	38 - 145
2221269	Dieldrin	66.6	64.8	P/P	59 - 118
2221269	Endosulfan I	68.1	69.8	P/P	64 - 124
2221269	Endosulfan II	78.6	72.4	P/P	52 - 159
2221269	Endosulfan Sulfate	74.7	66.1	P/P	62 - 136
2221269	Endrin	64.6	64.0	P/P	57 - 126
2221269	Endrin Aldehyde	88.1	89.8	P/P	41 - 128
2221269	Endrin Ketone	73.7	71.1	P/P	67 - 129
2221269	Esfenvalerate	70.2	73.4	P/P	50 - 120
2221269	Ethalfuralin	59.0	58.1	P/P	41 - 125
2221269	Fenpropathrin	288	288	F/F	40 - 202
2221269	Gamma-BHC	91.7	75.6	P/P	58 - 180
2221269	Gamma-Chlordane	59.5	59.0	P/P	54 - 103
2221269	Heptachlor	52.3	52.8	P/P	46 - 94.0
2221269	Heptachlor Epoxide	65.3	64.4	P/P	62 - 111
2221269	Hexachlorobenzene	49.5	45.7	P/P	42 - 95.0
2221269	Lambda-Cyhalothrin	68.0	66.1	P/P	37 - 162
2221269	Methoxychlor	68.8	65.5	P/P	52 - 143
2221269	MGK-264	67.4	64.4	P/P	37 - 102
2221269	Mirex	57.7	54.7	P/P	43 - 91.0
2221269	Permethrin	67.5	65.4	P/P	48 - 113
2221269	Phenothrin	59.6	58.3	P/P	30 - 104
2221269	Piperonyl Butoxide	85.3	79.6	P/P	67 - 127
2221269	Prallethrin	53.4	55.4	P/P	28 - 102
2221269	Tau-Fluvalinate	81.7	79.9	P/P	46 - 174
2221269	Tetramethrin	109	104	P/P	28 - 176
2221269	Trans-Nonachlor	59.8	59.1	P/P	51 - 103
2221269	Triclosan Methyl	69.8	68.6	P/P	67 - 116
2221269	Trifluralin	57.7	55.3	P/P	47 - 118

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P392993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221270	Aldrin	57.9	55.2	P/P	22 - 127
2221270	Dieldrin	91.5	106	P/P	52 - 123
2221270	Kepone	103	122	P/P	18 - 138

Reference Method: EPA 8276
Batch ID: P392993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221270	Chlordane	94.8	91.9	P/P	47 - 128
2221270	Toxaphene	149	155	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P392788

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220844	2,4-D	78.3	84.5	P/P	30 - 160
2220844	Acetaminophen	87.5	84.3	P/P	30 - 160
2220844	Acetamiprid	57.5	61.1	P/P	30 - 160
2220844	Afidopyropen	59.1	62.8	P/P	30 - 160
2220844	Bentazon	20.0	19.1	F/F	30 - 160
2220844	Benzovindiflupyr	64.8	62.4	P/P	30 - 160
2220844	Carbamazepine	50.7	47.8	P/P	30 - 160
2220844	Clothianidin	60.3	62.3	P/P	30 - 160
2220844	Dinotefuran	84.8	79.0	P/P	30 - 160
2220844	Diuron	34.6	34.2	P/P	30 - 160
2220844	Fenuron	48.0	50.9	P/P	30 - 160
2220844	Fluridone	65.3	63.8	P/P	30 - 160
2220844	Hydrocodone	71.1	57.9	P/P	30 - 160
2220844	Ibuprofen	82.7	79.4	P/P	30 - 160
2220844	Imazapyr	102	96.4	P/P	30 - 160
2220844	Imidacloprid	102	97.0	P/P	30 - 160
2220844	Linuron	54.4	51.5	P/P	30 - 160
2220844	Mandestrobin	71.6	67.8	P/P	30 - 160
2220844	MCPP	82.4	80.6	P/P	30 - 160
2220844	Naproxen	85.2	98.3	P/P	30 - 160
2220844	Primidone	62.9	52.5	P/P	30 - 160
2220844	Pyraclostrobin	70.5	66.9	P/P	30 - 160
2220844	Thiamethoxam	93.3	91.9	P/P	30 - 160
2220844	Tolfenpyrad	50.5	51.0	P/P	30 - 160
2220844	Triclopyr	88.2	90.4	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P392897

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220641	Acesulfame K	107	106	P/P	40 - 150
2220641	AMPA	126	126	P/P	40 - 150
2220641	Endothall	103	106	P/P	40 - 150
2220641	Glufosinate	95.4	113	P/P	40 - 150
2220641	Glyphosate	94.1	87.8	P/P	40 - 140
2220641	Sucralose	105	106	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P393055

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221212	Fluoride	102	102	P/P	94 - 107

Reference Method: SM 4500 F-C-2011
Batch ID: P393219

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2220715	Fluoride	104	102	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P393186

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2221214	Organic Carbon	102	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P392994

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221211	Turbidity	2.35	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393014

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221555	Barium	0.543	Spike	P	0 - 20
2221555	Calcium	0.975	Spike	P	0 - 20
2221555	Iron	0.0581	Spike	P	0 - 20
2221555	Magnesium	0.567	Spike	P	0 - 20
2221555	Manganese	0.685	Spike	P	0 - 20
2221555	Potassium	0.760	Spike	P	0 - 20
2221555	Sodium	0.658	Spike	P	0 - 20
2221555	Zinc	1.00	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P393322

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221579	Calcium	1.35	Spike	P	0 - 20
2221579	Chromium	2.41	Spike	P	0 - 20
2221579	Iron	4.54	Spike	P	0 - 20
2221579	Magnesium	2.34	Spike	P	0 - 20
2221579	Manganese	2.12	Spike	P	0 - 20
2221579	Zinc	3.22	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P393014

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221555	Aluminum	0.266	Spike	P	0 - 20
2221555	Antimony	0.669	Spike	P	0 - 20
2221555	Arsenic	0.585	Spike	P	0 - 20
2221555	Beryllium	1.28	Spike	P	0 - 20
2221555	Boron	0.853	Spike	P	0 - 20
2221555	Cadmium	0.276	Spike	P	0 - 20
2221555	Chromium	2.04	Spike	P	0 - 20
2221555	Copper	1.34	Spike	P	0 - 20
2221555	Lead	0.287	Spike	P	0 - 20
2221555	Nickel	0.939	Spike	P	0 - 20
2221555	Selenium	0.554	Spike	P	0 - 20
2221555	Silver	12.3	Spike	P	0 - 20
2221555	Thallium	0.224	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P393322

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221579	Aluminum	0.377	Spike	P	0 - 20
2221579	Antimony	0.372	Spike	P	0 - 20
2221579	Arsenic	1.78	Spike	P	0 - 20
2221579	Beryllium	4.84	Spike	P	0 - 20
2221579	Cadmium	1.08	Spike	P	0 - 20
2221579	Copper	1.46	Spike	P	0 - 20
2221579	Lead	0.423	Spike	P	0 - 20
2221579	Nickel	0.542	Spike	P	0 - 20
2221579	Selenium	1.71	Spike	P	0 - 20
2221579	Silver	0.192	Spike	P	0 - 20
2221579	Thallium	0.937	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393038

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221122	Bromide	0.286	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393267

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220858	Chloride	0.391	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P393268

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220858	Sulfate	1.50	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220828	Ammonia-N	3.34	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393460

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221157	Ammonia-N	0.00405	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P393461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221294	Ammonia-N	0.604	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393124

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220723	Kjeldahl Nitrogen	1.87	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P393256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221292	Kjeldahl Nitrogen	1.41	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P392961

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220722	NO2NO3-N	0.645	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P393106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221213	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221201	Total-P	0.478	Sample	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P393526

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2223236	Total-P	0.519	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221216	O-Phosphate-P	1.36	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P392945

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221133	O-Phosphate-P	0.383	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P392993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221269	Aldrin	0.823	Spike	P	0 - 30
2221269	Alpha-BHC	2.55	Spike	P	0 - 30
2221269	Alpha-Chlordane	1.39	Spike	P	0 - 30
2221269	Beta-BHC	1.63	Spike	P	0 - 30
2221269	Beta-Cyfluthrin	4.41	Spike	P	0 - 30
2221269	Bifenthrin	7.67	Spike	P	0 - 30
2221269	Carbophenothion	8.04	Spike	P	0 - 30
2221269	Chlorothalonil	5.04	Spike	P	0 - 30
2221269	Cis-Nonachlor	1.36	Spike	P	0 - 30
2221269	Cypermethrin	3.92	Spike	P	0 - 30
2221269	Dacthal	2.39	Spike	P	0 - 30
2221269	DDD-p,p'	4.24	Spike	P	0 - 30
2221269	DDE-p,p'	2.22	Spike	P	0 - 30
2221269	DDT-p,p'	10.5	Spike	P	0 - 30
2221269	Delta-BHC	4.94	Spike	P	0 - 30
2221269	Deltamethrin	5.69	Spike	P	0 - 30
2221269	Dichlobenil	9.98	Spike	P	0 - 30
2221269	Dicofol	1.85	Spike	P	0 - 30
2221269	Dieldrin	2.80	Spike	P	0 - 30
2221269	Endosulfan I	2.46	Spike	P	0 - 30
2221269	Endosulfan II	8.21	Spike	P	0 - 30
2221269	Endosulfan Sulfate	12.1	Spike	P	0 - 30
2221269	Endrin	0.875	Spike	P	0 - 30
2221269	Endrin Aldehyde	1.88	Spike	P	0 - 30
2221269	Endrin Ketone	3.54	Spike	P	0 - 30
2221269	Esfenvalerate	4.49	Spike	P	0 - 30
2221269	Ethalfuralin	1.54	Spike	P	0 - 30
2221269	Fenpropathrin	0.142	Spike	P	0 - 30
2221269	Gamma-BHC	19.2	Spike	P	0 - 30
2221269	Gamma-Chlordane	0.837	Spike	P	0 - 30
2221269	Heptachlor	1.02	Spike	P	0 - 30
2221269	Heptachlor Epoxide	1.42	Spike	P	0 - 30
2221269	Hexachlorobenzene	8.08	Spike	P	0 - 30
2221269	Lambda-Cyhalothrin	2.73	Spike	P	0 - 30
2221269	Methoxychlor	5.01	Spike	P	0 - 30
2221269	MGK-264	4.50	Spike	P	0 - 30
2221269	Mirex	5.22	Spike	P	0 - 30
2221269	Permethrin	3.17	Spike	P	0 - 30
2221269	Phenothrin	2.20	Spike	P	0 - 30
2221269	Piperonyl Butoxide	6.85	Spike	P	0 - 30
2221269	Prallethrin	3.76	Spike	P	0 - 30
2221269	Tau-Fluvalinate	2.27	Spike	P	0 - 30
2221269	Tetramethrin	4.93	Spike	P	0 - 30
2221269	Trans-Nonachlor	1.11	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P392993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221269	Triclosan Methyl	1.77	Spike	P	0 - 30
2221269	Trifluralin	4.17	Spike	P	0 - 30
2221270	Aldrin	4.85	Spike	P	0 - 30
2221270	Dieldrin	15.1	Spike	P	0 - 30
2221270	Kepone	16.5	Spike	P	0 - 30
LFB	Aldrin	1.37	LCS	P	0 - 30
LFB	Aldrin	14.1	LCS	P	0 - 30
LFB	Alpha-BHC	5.96	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.99	LCS	P	0 - 30
LFB	Beta-BHC	0.261	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	3.30	LCS	P	0 - 30
LFB	Bifenthrin	0.905	LCS	P	0 - 30
LFB	Carbophenothion	21.7	LCS	P	0 - 30
LFB	Chlorothalonil	5.09	LCS	P	0 - 30
LFB	Cis-Nonachlor	4.59	LCS	P	0 - 30
LFB	Cypermethrin	5.17	LCS	P	0 - 30
LFB	Dacthal	2.81	LCS	P	0 - 30
LFB	DDD-p,p'	5.22	LCS	P	0 - 30
LFB	DDE-p,p'	6.03	LCS	P	0 - 30
LFB	DDT-p,p'	5.78	LCS	P	0 - 30
LFB	Delta-BHC	5.57	LCS	P	0 - 30
LFB	Deltamethrin	10.5	LCS	P	0 - 30
LFB	Dichlobenil	0.631	LCS	P	0 - 30
LFB	Dicofol	2.74	LCS	P	0 - 30
LFB	Dieldrin	2.17	LCS	P	0 - 30
LFB	Dieldrin	3.64	LCS	P	0 - 30
LFB	Endosulfan I	9.07	LCS	P	0 - 30
LFB	Endosulfan II	4.25	LCS	P	0 - 30
LFB	Endosulfan Sulfate	8.00	LCS	P	0 - 30
LFB	Endrin	6.18	LCS	P	0 - 30
LFB	Endrin Aldehyde	1.36	LCS	P	0 - 30
LFB	Endrin Ketone	9.00	LCS	P	0 - 30
LFB	Esfenvalerate	5.85	LCS	P	0 - 30
LFB	Ethalfuralin	7.20	LCS	P	0 - 30
LFB	Fenpropathrin	8.45	LCS	P	0 - 30
LFB	Gamma-BHC	4.53	LCS	P	0 - 30
LFB	Gamma-Chlordane	5.14	LCS	P	0 - 30
LFB	Heptachlor	6.55	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.41	LCS	P	0 - 30
LFB	Hexachlorobenzene	7.98	LCS	P	0 - 30
LFB	Kepone	25.0	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	7.59	LCS	P	0 - 30
LFB	Methoxychlor	12.5	LCS	P	0 - 30
LFB	MGK-264	16.5	LCS	P	0 - 30
LFB	Mirex	3.30	LCS	P	0 - 30
LFB	Permethrin	3.62	LCS	P	0 - 30
LFB	Phenothrin	12.0	LCS	P	0 - 30
LFB	Piperonyl Butoxide	11.3	LCS	P	0 - 30
LFB	Prallethrin	18.4	LCS	P	0 - 30
LFB	Tau-Fluvalinate	5.57	LCS	P	0 - 30
LFB	Tetramethrin	0.816	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P392993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Trans-Nonachlor	2.93	LCS	P	0 - 30
LFB	Triclosan Methyl	6.58	LCS	P	0 - 30
LFB	Trifluralin	6.21	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P392993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221270	Chlordane	3.11	Spike	P	0 - 30
2221270	Toxaphene	3.69	Spike	P	0 - 30
LFB	Chlordane	5.58	LCS	P	0 - 30
LFB	Toxaphene	4.44	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220844	2,4-D	6.77	Spike	P	0 - 30
2220844	Acetaminophen	3.72	Spike	P	0 - 30
2220844	Acetamiprid	6.14	Spike	P	0 - 30
2220844	Afidopyropen	6.13	Spike	P	0 - 30
2220844	Bentazon	2.64	Spike	P	0 - 30
2220844	Benzovindiflupyr	3.86	Spike	P	0 - 30
2220844	Carbamazepine	5.85	Spike	P	0 - 30
2220844	Clothianidin	3.22	Spike	P	0 - 30
2220844	Dinotefuran	7.04	Spike	P	0 - 30
2220844	Diuron	0.971	Spike	P	0 - 30
2220844	Fenuron	5.95	Spike	P	0 - 30
2220844	Fluridone	2.35	Spike	P	0 - 30
2220844	Hydrocodone	20.5	Spike	P	0 - 30
2220844	Ibuprofen	4.03	Spike	P	0 - 30
2220844	Imazapyr	4.81	Spike	P	0 - 30
2220844	Imidacloprid	5.22	Spike	P	0 - 30
2220844	Linuron	5.34	Spike	P	0 - 30
2220844	Mandestrobin	5.39	Spike	P	0 - 30
2220844	MCP	2.23	Spike	P	0 - 30
2220844	Naproxen	14.3	Spike	P	0 - 30
2220844	Primidone	18.1	Spike	P	0 - 30
2220844	Pyraclostrobin	5.22	Spike	P	0 - 30
2220844	Thiamethoxam	1.60	Spike	P	0 - 30
2220844	Tolfenpyrad	0.995	Spike	P	0 - 30
2220844	Triclopyr	2.48	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P392897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220641	Acesulfame K	0.905	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P392897

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220641	AMPA	0.326	Spike	P	0 - 30
2220641	Endothall	2.53	Spike	P	0 - 30
2220641	Glufosinate	17.1	Spike	P	0 - 30
2220641	Glyphosate	7.01	Spike	P	0 - 30
2220641	Sucralose	0.971	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P392939

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221212	Color (true)	8.40	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P393052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221212	Total Alkalinity	1.25	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P393215

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221631	Total Alkalinity	0.608	Sample	P	0 - 8.1

Reference Method: SM 2320 B-2011
Batch ID: P393216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221768	Total Alkalinity	1.09	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P393481

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221212	TDS	2.88	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P393055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221212	Fluoride	0.0	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P393219

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2220715	Fluoride	0.915	Spike	P	0 - 2.8

Reference Method: SM 5310 B-2011
Batch ID: P393186

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2221214	Organic Carbon	0.825	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2221269

Field Sample ID: G2NE1180

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	67.8	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	45.6	P	33 - 102
EPA 8276	Decachlorobiphenyl	45.2	P	29 - 92.0
EPA 8276	PCNB	65.4	P	43 - 134

Lab Sample ID: 2221270

Field Sample ID: G2NE1159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	109	P	40 - 123
EPA 8270E	Decachlorobiphenyl	64.7	P	47 - 111
EPA 8270E	Tetrachloro-m-xylene	39.9	P	31 - 100
EPA 8270E	Tetrachloro-m-xylene	37.4	P	33 - 102
EPA 8276	Decachlorobiphenyl	38.9	P	29 - 92.0
EPA 8276	PCNB	60.6	P	43 - 134

Lab Sample ID: 2221271

Field Sample ID: G2NE0735

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	88.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	72.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	60.3	P	30 - 160
EPA 8321B	Diuron-d6	49.6	P	30 - 160
EPA 8321B	Endothall-d6	84.2	P	40 - 160
EPA 8321B	Endothall-d6	84.2	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	64.6	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	64.6	P	40 - 160
EPA 8321B	Ibuprofen-d3	75.3	P	30 - 160
EPA 8321B	Primidone-d5	88.1	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160
EPA 8321B	Sucralose-d6	105	P	30 - 160

Lab Sample ID: 2221272

Field Sample ID: G2NE1180

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	76.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	50.6	P	30 - 160
EPA 8321B	Diuron-d6	41.7	P	30 - 160
EPA 8321B	Endothall-d6	60.1	P	40 - 160
EPA 8321B	Endothall-d6	60.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	46.1	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	46.1	P	40 - 160
EPA 8321B	Ibuprofen-d3	75.6	P	30 - 160
EPA 8321B	Primidone-d5	68.0	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A103148
Included Lab Sample IDs: 2221270

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A103226
Included Lab Sample IDs: 2221227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.4	97.8	P/P	90 - 110
Sulfate	97.1	97.6	P/P	90 - 110

Reference Method: SM 2120 B-2011
Run ID: A103255
Included Lab Sample IDs: 2221227

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.6	100	P/P	85 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Run ID: A103257
Included Lab Sample IDs: 2221223, 2221226, 2221229, 2221232

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A103259
Included Lab Sample IDs: 2221225

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A103266
Included Lab Sample IDs: 2221221, 2221224, 2221230

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	97.2	97.2	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A103269
Included Lab Sample IDs: 2221221, 2221224, 2221227, 2221230

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	100	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A103282
Included Lab Sample IDs: 2221271, 2221272

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

Reference Method: EPA 8321B

Run ID: A103282

Included Lab Sample IDs: 2221271, 2221272

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	103	97.1	P/P	60 - 160
AMPA	108	115	P/P	60 - 160
Endothall	98.9	104	P/P	60 - 160
Glufosinate	94.9	91.2	P/P	60 - 160
Glyphosate	90.8	88.8	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A103284

Included Lab Sample IDs: 2221221

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.8	91.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A103284

Included Lab Sample IDs: 2221221, 2221227, 2221230

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	104	107	P/P	90 - 110
Fluoride	107	109	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A103292

Included Lab Sample IDs: 2221271, 2221272

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	108	107	P/P	50 - 150
Acetaminophen	78.7	79.1	P/P	60 - 160
Acetamiprid	107	102	P/P	50 - 150
Afidopyropen	84.5	103	P/P	50 - 150
Bentazon	120	117	P/P	50 - 160
Benzovindiflupyr	101	90.8	P/P	50 - 160
Carbamazepine	101	97.8	P/P	60 - 150
Clothianidin	94.1	83.5	P/P	60 - 150
Dinotefuran	93.9	80.8	P/P	50 - 150
Diuron	109	94.1	P/P	60 - 160
Fenuron	96.9	88.0	P/P	60 - 150
Fluridone	100	89.8	P/P	60 - 160
Hydrocodone	99.8	93.3	P/P	60 - 150
Ibuprofen	104	89.4	P/P	50 - 160
Imazapyr	94.8	118	P/P	50 - 160
Imidacloprid	99.1	91.2	P/P	60 - 150
Linuron	96.5	92.8	P/P	60 - 150
Mandestrobin	99.2	98.4	P/P	50 - 150
MCPP	128	118	P/P	50 - 150
Naproxen	100	118	P/P	50 - 160
Primidone	87.3	85.1	P/P	60 - 150
Pyraclostrobin	103	94.7	P/P	60 - 150
Thiamethoxam	117	98.0	P/P	50 - 150
Tolfenpyrad	103	104	P/P	60 - 150
Triclopyr	118	109	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A103300

Included Lab Sample IDs: 2221222, 2221228, 2221231

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103332

Included Lab Sample IDs: 2221273, 2221275, 2221276

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	98.7	P/P	90 - 110
Calcium	102	104	P/P	90 - 110
Iron	101	103	P/P	90 - 110
Magnesium	102	105	P/P	90 - 110
Manganese	102	101	P/P	90 - 110
Potassium	99.0	101	P/P	90 - 110
Sodium	99.5	100	P/P	90 - 110
Zinc	105	104	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A103337

Included Lab Sample IDs: 2221222, 2221225, 2221228, 2221231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	103	102	P/P	90 - 110
Organic Carbon	99.2	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103344

Included Lab Sample IDs: 2221222, 2221228, 2221231

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103347

Included Lab Sample IDs: 2221225

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	107	104	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A103352

Included Lab Sample IDs: 2221224, 2221227, 2221230

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.9	94.9	P/P	90 - 110
Total Alkalinity	93.9	96.2	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A103352

Included Lab Sample IDs: 2221224

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

Reference Method: SM 4500 F-C-2011

Run ID: A103352

Included Lab Sample IDs: 2221224

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

Reference Method: EPA 8276

Run ID: A103354

Included Lab Sample IDs: 2221269, 2221270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	92.5		P	80 - 120
Toxaphene	93.5		P	80 - 120

Reference Method: EPA 8270E

Run ID: A103384

Included Lab Sample IDs: 2221270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dieldrin	102		P	80 - 120
Kepone	107		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A103395

Included Lab Sample IDs: 2221222, 2221228, 2221231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.7	96.4	P/P	90 - 110
Kjeldahl Nitrogen	96.4	97.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A103435

Included Lab Sample IDs: 2221274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	97.3	95.2	P/P	90 - 110
Chromium	98.8	96.7	P/P	90 - 110
Iron	98.7	96.6	P/P	90 - 110
Magnesium	97.8	97.2	P/P	90 - 110
Manganese	100	97.0	P/P	90 - 110
Zinc	102	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A103455

Included Lab Sample IDs: 2221222, 2221225, 2221228, 2221231

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.2	P/P	90 - 110
Ammonia-N	98.4	101	P/P	90 - 110
Ammonia-N	98.5	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A103488

Included Lab Sample IDs: 2221269, 2221270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	100		P	80 - 120
Beta-BHC	91.7		P	80 - 120
Beta-Cyfluthrin	108		P	80 - 120
Bifenthrin	101		P	80 - 120
Carbophenothion	95.8		P	80 - 120
Chlorothalonil	108		P	80 - 120
Cis-Nonachlor	99.0		P	80 - 120
Cypermethrin	99.9		P	80 - 120
Dacthal	99.2		P	80 - 120
DDD-p,p'	96.4		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	99.9		P	80 - 120
Delta-BHC	97.6		P	80 - 120
Deltamethrin	102		P	80 - 120
Dichlobenil	91.0		P	80 - 120
Dicofol	95.8		P	80 - 120
Dieldrin	105		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	95.4		P	80 - 120
Endosulfan Sulfate	106		P	80 - 120
Endrin	97.5		P	80 - 120
Endrin Aldehyde	108		P	80 - 120
Endrin Ketone	99.3		P	80 - 120
Esfenvalerate	97.3		P	80 - 120
Ethalfuralin	100		P	80 - 120
Fenpropathrin	93.6		P	80 - 120
Gamma-BHC	97.2		P	80 - 120
Gamma-Chlordane	99.5		P	80 - 120
Heptachlor	102		P	80 - 120
Heptachlor Epoxide	102		P	80 - 120
Hexachlorobenzene	93.6		P	80 - 120
Lambda-Cyhalothrin	98.8		P	80 - 120
Methoxychlor	99.6		P	80 - 120
MGK-264	90.1		P	80 - 120
Mirex	103		P	80 - 120
Permethrin	98.5		P	80 - 120
Phenothrin	93.5		P	80 - 120
Piperonyl Butoxide	92.6		P	80 - 120
Prallethrin	91.5		P	80 - 120
Tau-Fluvalinate	106		P	80 - 120
Tetramethrin	99.0		P	80 - 120
Trans-Nonachlor	101		P	80 - 120
Triclosan Methyl	98.2		P	80 - 120
Trifluralin	98.3		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A103516

Included Lab Sample IDs: 2221271, 2221272

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	110	108	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A103518

Included Lab Sample IDs: 2221225

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.3	100	P/P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103531

Included Lab Sample IDs: 2221273, 2221275, 2221276

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.1	98.1	P/P	90 - 110
Aluminum	98.1	98.4	P/P	90 - 110
Antimony	98.6	98.9	P/P	90 - 110
Antimony	99.4	98.6	P/P	90 - 110
Arsenic	96.2	95.3	P/P	90 - 110
Arsenic	97.1	96.2	P/P	90 - 110
Beryllium	93.1	91.4	P/P	90 - 110
Beryllium	96.2	93.1	P/P	90 - 110
Boron	104	100	P/P	90 - 110
Cadmium	95.1	96.5	P/P	90 - 110
Cadmium	95.7	95.1	P/P	90 - 110
Chromium	94.0	94.9	P/P	90 - 110
Chromium	95.2	94.0	P/P	90 - 110
Copper	93.6	93.3	P/P	90 - 110
Copper	94.9	93.6	P/P	90 - 110
Lead	98.4	99.1	P/P	90 - 110
Lead	99.1	99.4	P/P	90 - 110
Nickel	93.9	94.3	P/P	90 - 110
Nickel	95.0	93.9	P/P	90 - 110
Selenium	97.2	97.8	P/P	90 - 110
Selenium	97.8	97.3	P/P	90 - 110
Thallium	101	102	P/P	90 - 110
Thallium	102	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103547

Included Lab Sample IDs: 2221273, 2221275, 2221276

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	90.0	92.3	P/P	90 - 110
Silver	99.2	90.0	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103548

Included Lab Sample IDs: 2221274

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103548

Included Lab Sample IDs: 2221274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	100	103	P/P	90 - 110
Arsenic	99.1	101	P/P	90 - 110
Beryllium	98.3	96.7	P/P	90 - 110
Cadmium	95.7	99.1	P/P	90 - 110
Copper	100	103	P/P	90 - 110
Lead	99.6	101	P/P	90 - 110
Nickel	98.3	101	P/P	90 - 110
Selenium	95.6	98.5	P/P	90 - 110
Silver	102	106	P/P	90 - 110
Thallium	102	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A103570

Included Lab Sample IDs: 2221274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	90.9	93.8	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							2.35	
EPA 200.7 Rev. 4.4	Barium	98.6		100	104	103			0.543
	Calcium	106		107	111	110			0.975
	Calcium	98.9							1.35
	Chromium	92.2		93.5	91.2				2.41
	Iron	105		109	108	108			0.0581
	Iron	101		106	101				4.54
	Magnesium	105		114	109	110			0.567
	Magnesium	98.7							2.34
	Manganese	98.4		101	103	102			0.685
	Manganese	97.0		96.9	94.4				2.12
	Potassium	100		104	108	107			0.760
	Sodium	102		102	106	105			0.658
	Zinc	98.1		108	106	105			1.00
	Zinc	94.5		98.2	95.1				3.22
EPA 200.8 Rev. 5.4	Aluminum	96.6		97.2	96.9	94.8			0.266
	Aluminum	98.4		93.2	92.8				0.377
	Antimony	101		99.9	99.2	98.8			0.669
	Antimony	104		103	103				0.372
	Arsenic	97.6		98.0	97.4	95.1			0.585
	Arsenic	97.7		102	104				1.78
	Beryllium	91.5		88.9	87.8	88.7			1.28
	Beryllium	86.9		98.6	93.9				4.84
	Boron	96.3		97.3	98.2	97.5			0.853
	Cadmium	94.0		94.1	93.9	93.3			0.276
	Cadmium	94.4		87.1	86.2				1.08
	Chromium	96.1		97.3	95.3	93.2			2.04
	Copper	96.4		97.1	95.8	91.2			1.34
	Copper	94.7		105	104				1.46
	Lead	100		100	99.7	98.3			0.287
	Lead	98.7		103	102				0.423
	Nickel	96.8		96.5	95.6	91.7			0.939
	Nickel	93.1		95.8	96.3				0.542
	Selenium	98.2		98.7	98.1	94.4			0.554
	Selenium	96.3		99.1	97.5				1.71
	Silver	104		89.0	101	105			12.3
	Silver	105		95.4	95.6				0.192
	Thallium	99.5		101	101	102			0.224
	Thallium	98.3		101	102				0.937
EPA 300.0 Rev. 2.1	Bromide	101		98.8	98.5	99.1			0.286
	Chloride	98.0		96.1	96.9			0.391	
	Sulfate	97.2		96.5	96.5			1.50	
EPA 350.1 Rev. 2.0	Ammonia-N	100		98.9	103				3.34
	Ammonia-N	99.8		98.8	98.8				0.0040
	Ammonia-N	98.7		97.9	98.8				0.604
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	107		106	104				1.87
	Kjeldahl Nitrogen	99.2		105	103				1.41
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0		99.5	100				0.645
	NO2NO3-N	99.5		99.2	99.2				0.0
EPA 365.1 Rev. 2.0	Total-P	105		104				0.478	
	Total-P	102		103	103				0.519
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100		102	103				1.36
	O-Phosphate-P	103		97.7	97.3				0.383
EPA 8270E	Aldrin	49.5	50.2	57.9	55.2		1.37		4.85

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Aldrin	42.9	49.4	51.2	50.8	14.1		0.823
	Alpha-BHC	69.0	73.3	66.8	65.1	5.96		2.55
	Alpha-Chlordane	67.0	71.2	61.1	60.2	5.99		1.39
	Beta-BHC	82.2	82.4	62.1	61.1	0.261		1.63
	Beta-Cyfluthrin	58.7	60.7	62.1	59.4	3.30		4.41
	Bifenthrin	65.5	66.1	72.6	67.2	0.905		7.67
	Carbophenothion	43.2	53.7	78.8	72.7	21.7		8.04
	Chlorothalonil	27.5	28.9	54.0	56.8	5.09		5.04
	Cis-Nonachlor	69.7	73.0	61.5	60.6	4.59		1.36
	Cypermethrin	67.8	71.4	70.3	73.1	5.17		3.92
	Dacthal	76.2	78.4	70.1	68.5	2.81		2.39
	DDD-p,p'	75.4	79.4	64.7	62.0	5.22		4.24
	DDE-p,p'	67.3	71.5	59.8	58.5	6.03		2.22
	DDT-p,p'	66.1	70.0	67.6	60.9	5.78		10.5
	Delta-BHC	91.8	97.0	86.0	90.3	5.57		4.94
	Deltamethrin	70.3	78.1	72.3	76.5	10.5		5.69
	Dichlobenil	30.1	30.3	47.5	43.0	0.631		9.98
	Dicofol	82.1	84.4	68.5	67.2	2.74		1.85
	Dieldrin	67.3	65.9	91.5	106	2.17		15.1
	Dieldrin	74.6	77.4	66.6	64.8	3.64		2.80
	Endosulfan I	73.0	80.0	68.1	69.8	9.07		2.46
	Endosulfan II	88.1	84.5	78.6	72.4	4.25		8.21
	Endosulfan Sulfate	73.8	80.0	74.7	66.1	8.00		12.1
	Endrin	73.2	77.9	64.6	64.0	6.18		0.875
	Endrin Aldehyde	61.0	60.1	88.1	89.8	1.36		1.88
	Endrin Ketone	74.4	81.4	73.7	71.1	9.00		3.54
	Esfenvalerate	63.0	66.8	70.2	73.4	5.85		4.49
	Ethalfuralin	63.1	67.8	59.0	58.1	7.20		1.54
	Fenpropathrin	85.4	92.9	288	288	8.45		0.142
	Gamma-BHC	77.0	80.5	91.7	75.6	4.53		19.2
	Gamma-Chlordane	64.9	68.4	59.5	59.0	5.14		0.837
	Heptachlor	55.0	58.7	52.3	52.8	6.55		1.02
	Heptachlor Epoxide	70.1	74.0	65.3	64.4	5.41		1.42
	Hexachlorobenzene	58.6	63.5	49.5	45.7	7.98		8.08
	Kepone	68.4	87.9	103	122	25.0		16.5
	Lambda-Cyhalothrin	57.8	62.3	68.0	66.1	7.59		2.73
	Methoxychlor	70.7	80.1	68.8	65.5	12.5		5.01
	MGK-264	59.5	70.2	67.4	64.4	16.5		4.50
	Mirex	59.1	61.1	57.7	54.7	3.30		5.22
	Permethrin	66.2	68.7	67.5	65.4	3.62		3.17
	Phenothrin	48.9	55.1	59.6	58.3	12.0		2.20
	Piperonyl Butoxide	73.1	81.8	85.3	79.6	11.3		6.85
	Prallethrin	50.3	60.5	53.4	55.4	18.4		3.76
	Tau-Fluvalinate	67.3	71.2	81.7	79.9	5.57		2.27
	Tetramethrin	75.2	74.6	109	104	0.816		4.93
	Trans-Nonachlor	66.1	68.1	59.8	59.1	2.93		1.11
	Triclosan Methyl	80.3	85.7	69.8	68.6	6.58		1.77
	Trifluralin	62.5	66.5	57.7	55.3	6.21		4.17
EPA 8276	Chlordane	77.4	81.9	94.8	91.9	5.58		3.11
	Toxaphene	108	103	149	155	4.44		3.69
EPA 8321B	2,4-D	117		78.3	84.5			6.77
	Acesulfame K	101		107	106			0.905
	Acetaminophen	73.6		87.5	84.3			3.72
	Acetamiprid	95.3		57.5	61.1			6.14

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
			LCS	SMP	MS	
EPA 8321B	Afidopyropen	75.8	59.1	62.8		6.13
	AMPA	104	126	126		0.326
	Bentazon	75.1	20.0	19.1		2.64
	Benzovindiflupyr	77.3	64.8	62.4		3.86
	Carbamazepine	85.2	50.7	47.8		5.85
	Clothianidin	95.4	60.3	62.3		3.22
	Dinotefuran	84.6	84.8	79.0		7.04
	Diuron	60.0	34.6	34.2		0.971
	Endothall	93.7	103	106		2.53
	Fenuron	94.1	48.0	50.9		5.95
	Fluridone	83.7	65.3	63.8		2.35
	Glufosinate	102	95.4	113		17.1
	Glyphosate	80.8	94.1	87.8		7.01
	Hydrocodone	93.9	71.1	57.9		20.5
	Ibuprofen	99.1	82.7	79.4		4.03
	Imazapyr	120	102	96.4		4.81
	Imidacloprid	107	102	97.0		5.22
	Linuron	71.6	54.4	51.5		5.34
	Mandestrobin	77.6	71.6	67.8		5.39
	MCPP	115	82.4	80.6		2.23
	Naproxen	72.2	85.2	98.3		14.3
	Primidone	102	62.9	52.5		18.1
	Pyraclostrobin	74.9	70.5	66.9		5.22
	Sucralose	108	105	106		0.971
	Thiamethoxam	107	93.3	91.9		1.60
	Tolfenpyrad	52.0	50.5	51.0		0.995
	Triclopyr	108	88.2	90.4		2.48
SM 2120 B-2011	Color (true)	99.3			8.40	
SM 2320 B-2011	Total Alkalinity	95.5			1.25	
	Total Alkalinity	95.6			0.608	
	Total Alkalinity	96.8			1.09	
SM 2540 C-2011	TDS				2.88	
SM 4500 F-C-2011	Fluoride	103	102	102		0.0
	Fluoride	98.7	104	102		0.915
SM 5310 B-2011	Organic Carbon	99.9	102	101		0.825

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2221221, 2221224, 2221227, 2221230
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2221273, 2221274, 2221275, 2221276
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2221273, 2221274, 2221275, 2221276
EPA 300.0 Rev. 2.1	Bromide in aqueous matrices	2221221, 2221224, 2221230
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2221227
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2221227
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2221222, 2221225, 2221228, 2221231
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2221222, 2221225, 2221228, 2221231
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2221222, 2221225, 2221228, 2221231
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2221222, 2221225, 2221228, 2221231
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2221223, 2221226, 2221229, 2221232

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8270E	Dieldrin (ultra low level) in water matrices by GC/MS/MS	2221270
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS-SIM	2221269, 2221270
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2221269, 2221270
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2221271, 2221272
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2221271, 2221272
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2221227
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2221221, 2221224, 2221227, 2221230
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2221275, 2221276
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2221227
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2221221, 2221224, 2221227, 2221230
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2221221, 2221224, 2221227, 2221230
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2221222, 2221225, 2221228, 2221231

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	01/26/2021			01/26/2021 16:32	Yen Ta	2221221, 2221224, 2221227, 2221230
EPA 200.7 Rev. 4.4	01/26/2021	01/27/2021 16:10	Elliott D. Healy	01/29/2021 13:22	Betina Topolski	2221273
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	01/29/2021 13:28	Betina Topolski	2221275
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	01/29/2021 13:35	Betina Topolski	2221276
	01/26/2021	02/03/2021 16:10	Elliott D. Healy	02/04/2021 19:33	Betina Topolski	2221274
EPA 200.8 Rev. 5.4	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/10/2021 15:19	Alexander Thompson	2221273
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/10/2021 16:03	Alexander Thompson	2221275
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/10/2021 16:11	Alexander Thompson	2221276
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/11/2021 14:37	Alexander Thompson	2221273
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/11/2021 15:02	Alexander Thompson	2221275
	01/26/2021	01/27/2021 16:10	Elliott D. Healy	02/11/2021 15:06	Alexander Thompson	2221276
	01/26/2021	02/03/2021 16:10	Elliott D. Healy	02/11/2021 22:03	Alexander Thompson	2221274
	01/26/2021	02/03/2021 16:10	Elliott D. Healy	02/12/2021 13:30	Alexander Thompson	2221274
EPA 300.0 Rev. 2.1	01/26/2021			01/28/2021 04:46	Lipi Saha	2221221
	01/26/2021			01/28/2021 05:05	Lipi Saha	2221224
	01/26/2021			01/28/2021 05:23	Lipi Saha	2221230
	01/26/2021			01/28/2021 19:13	Lipi Saha	2221227
EPA 350.1 Rev. 2.0	01/26/2021			02/07/2021 10:09	Ping Hua	2221225
	01/26/2021			02/07/2021 10:51	Ping Hua	2221222
	01/26/2021			02/07/2021 11:06	Ping Hua	2221228
	01/26/2021			02/07/2021 11:08	Ping Hua	2221231
EPA 351.2 Rev. 2.0	01/26/2021	01/29/2021 12:30	Yen Ta	02/01/2021 14:57	Julia Storbeck	2221225
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 14:36	Julia Storbeck	2221222
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 14:41	Julia Storbeck	2221228
	01/26/2021	02/02/2021 11:48	Yen Ta	02/03/2021 14:42	Julia Storbeck	2221231
EPA 353.2 Rev. 2.0	01/26/2021			01/27/2021 10:30	Beverly Y. Sanders	2221225
	01/26/2021			01/28/2021 10:37	Beverly Y. Sanders	2221222
	01/26/2021			01/28/2021 10:38	Beverly Y. Sanders	2221228
	01/26/2021			01/28/2021 10:39	Beverly Y. Sanders	2221231
EPA 365.1 Rev. 2.0	01/26/2021	01/29/2021 17:05	Shengyu Wang	02/01/2021 12:41	Shengyu Wang	2221222
	01/26/2021	01/29/2021 17:05	Shengyu Wang	02/01/2021 12:43	Shengyu Wang	2221228
	01/26/2021	01/29/2021 17:05	Shengyu Wang	02/01/2021 12:44	Shengyu Wang	2221231
	01/26/2021	02/09/2021 13:50	Shengyu Wang	02/10/2021 13:28	Shengyu Wang	2221225
EPA 365.1 Rev. 2.0 dissolved	01/26/2021			01/26/2021 15:38	Blanca Fach	2221223, 2221229
	01/26/2021			01/26/2021 15:39	Blanca Fach	2221232
	01/26/2021			01/26/2021 15:50	Blanca Fach	2221226
EPA 8270E	01/26/2021	01/27/2021 08:00	Fe-Val Siddell	02/01/2021 14:54	Michael Poppell	2221270
	01/26/2021	01/27/2021 08:00	Fe-Val Siddell	02/02/2021 16:20	Michael Poppell	2221270
	01/26/2021	01/27/2021 08:00	Fe-Val Siddell	02/08/2021 19:49	Julie Wi	2221269
	01/26/2021	01/27/2021 08:00	Fe-Val Siddell	02/08/2021 20:21	Julie Wi	2221270

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8276	01/26/2021	01/27/2021 08:00	Fe-Val Siddell	02/02/2021 00:55	Michael Poppell	2221270
	01/26/2021	01/27/2021 08:00	Fe-Val Siddell	02/02/2021 01:50	Michael Poppell	2221269
EPA 8321B	01/26/2021	01/26/2021 13:30	Rebecca Ware	01/27/2021 20:38	Rebecca Ware	2221271
	01/26/2021	01/26/2021 13:30	Rebecca Ware	01/27/2021 20:51	Rebecca Ware	2221272
	01/26/2021	01/26/2021 13:30	Rebecca Ware	01/27/2021 21:46	Rebecca Ware	2221272
	01/26/2021	01/26/2021 13:30	Rebecca Ware	02/09/2021 15:56	Rebecca Ware	2221271
	01/26/2021	01/26/2021 13:30	Rebecca Ware	02/09/2021 16:07	Rebecca Ware	2221272
	01/26/2021	01/27/2021 09:00	Hoor Shaik	01/28/2021 23:25	Juyoung Kim	2221271
	01/26/2021	01/27/2021 09:00	Hoor Shaik	01/28/2021 23:59	Juyoung Kim	2221272
	01/26/2021			01/26/2021 21:18	Madeline Gruver	2221227
SM 2120 B-2011	01/26/2021			01/28/2021 04:31	Dale L. Simmons	2221221
SM 2320 B-2011	01/26/2021			01/29/2021 22:46	Dale L. Simmons	2221227
	01/26/2021			01/29/2021 22:56	Dale L. Simmons	2221230
	01/26/2021			01/30/2021 05:30	Dale L. Simmons	2221224
	01/26/2021			01/29/2021 13:28	Betina Topolski	2221275
SM 2340B	01/26/2021			01/29/2021 13:35	Betina Topolski	2221276
	01/26/2021			01/29/2021 15:32	Yijie Li	2221227
SM 2540 C-2011	01/26/2021			01/29/2021 15:32	Yijie Li	2221221, 2221224, 2221227, 2221230
SM 2540 D-2011	01/26/2021			01/28/2021 04:31	Dale L. Simmons	2221221
	01/26/2021			01/28/2021 05:15	Dale L. Simmons	2221227
	01/26/2021			01/28/2021 05:22	Dale L. Simmons	2221230
	01/26/2021			01/30/2021 04:29	Dale L. Simmons	2221224
	01/26/2021			01/29/2021 18:38	Madeline Gruver	2221222
SM 5310 B-2011	01/26/2021			01/29/2021 19:14	Madeline Gruver	2221225
	01/26/2021			01/29/2021 19:26	Madeline Gruver	2221228
	01/26/2021			01/29/2021 19:39	Madeline Gruver	2221231
	01/26/2021					