

Chemical Analysis Report

NE-DIST-2021-08-19-01

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

Event Description: **LSJR North**
Request ID: **RQ-2021-07-19-31**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 14-SEP-2021 10:48



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: Tributary to Trout at Bessent Rd.

Collection Date/Time: 08/18/2021 09:50

Field ID: G2NE1207

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270414	EPA 180.1 Rev. 2.0	Turbidity	11		NTU	P402710	
	SM 2320 B-2011	Total Alkalinity	83		mg CaCO3/L	P402850	
	SM 2540 D-2011	TSS	9	I	mg/L	P403197	
	SM 4500 F-C-2011	Fluoride	0.13		mg F/L	P402852	
2270415	EPA 350.1 Rev. 2.0	Ammonia-N	0.16		mg N/L	P403077	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P403154	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P402937	
	EPA 365.1 Rev. 2.0	Total-P	0.23		mg P/L	P402820	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P403239	
2270416	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.13		mg P/L	P402698	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Tributary to Trout at Capper Rd.

Collection Date/Time: 08/18/2021 10:10

Field ID: G2NE1208

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270417	EPA 180.1 Rev. 2.0	Turbidity	12		NTU	P402710	
	EPA 300.0 Rev. 2.1	Chloride	24		mg Cl/L	P403163	
		Sulfate	8.6		mg SO4/L	P403165	
		Color (true)	100		PCU	P402712	
	SM 2320 B-2011	Total Alkalinity	83		mg CaCO3/L	P402850	
	SM 2540 C-2011	TDS	156		mg/L	P403216	
	SM 2540 D-2011	TSS	8	I	mg/L	P403195	
	SM 4500 F-C-2011	Fluoride	0.12		mg F/L	P402852	
2270418	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P403077	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.66		mg N/L	P403154	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P402937	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P402820	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P403239	
2270419	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.071		mg P/L	P402698	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

Sample Location: Blockhouse 100m abv Irma Rd.

Collection Date/Time: 08/18/2021 10:30

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270411	EPA 180.1 Rev. 2.0	Turbidity	9.4		NTU	P402710	
	EPA 300.0 Rev. 2.1	Chloride	21	A	mg Cl/L	P403163	
		Sulfate	9.0	A	mg SO4/L	P403165	
	SM 2120 B-2011	Color (true)	130		PCU	P402712	
	SM 2320 B-2011	Total Alkalinity	60		mg CaCO3/L	P402850	
	SM 2540 C-2011	TDS	135		mg/L	P403216	
	SM 2540 D-2011	TSS	3	I	mg/L	P403195	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P402852	
2270412	EPA 350.1 Rev. 2.0	Ammonia-N	0.085		mg N/L	P403033	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.67		mg N/L	P403154	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P403069	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P402818	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P403239	
2270413	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.068		mg P/L	P402698	
2270449	EPA 8270E	Aldrin	0.70	U	ng/L	P402612	
		Alpha-BHC	0.11	U	ng/L	P402612	
		Alpha-Chlordane	0.22	U	ng/L	P402612	
		Beta-BHC	0.11	U	ng/L	P402612	
		Beta-Cyfluthrin**	1.3	U	ng/L	P402612	
		Bifenthrin**	0.54	U	ng/L	P402612	
		Carbophenothion	0.97	U	ng/L	P402612	MS, RPD
		Chlorothalonil	0.54	U	ng/L	P402612	
		Cis-Nonachlor**	0.22	U	ng/L	P402612	
		Cypermethrin	1.6	U	ng/L	P402612	
		Dacthal**	0.16	U	ng/L	P402612	
		DDD-p,p'	0.27	U	ng/L	P402612	
		DDE-p,p'	0.22	U	ng/L	P402612	
		DDT-p,p'	0.27	U	ng/L	P402612	
		Delta-BHC	0.43	U	ng/L	P402612	
		Deltamethrin**	1.3	UJ	ng/L	P402612	RPD
		Dichlobenil**	0.11	U	ng/L	P402612	MS
		Dicofol	1.3	U	ng/L	P402612	
		Dieldrin	0.43	U	ng/L	P402612	
		Endosulfan I	0.43	U	ng/L	P402612	
		Endosulfan II	0.43	U	ng/L	P402612	
		Endosulfan Sulfate	0.32	U	ng/L	P402612	
		Endrin	0.43	U	ng/L	P402612	
		Endrin Aldehyde	0.81	U	ng/L	P402612	MS
		Endrin Ketone	0.43	U	ng/L	P402612	
		Esfenvalerate**	0.81	U	ng/L	P402612	
		Ethalfuralin**	0.16	U	ng/L	P402612	
		Fenpropathrin**	0.27	U	ng/L	P402612	
		Gamma-BHC	0.13	U	ng/L	P402612	

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270449	EPA 8270E	Gamma-Chlordane	0.22	U	ng/L	P402612	
		Heptachlor	0.22	U	ng/L	P402612	
		Heptachlor Epoxide	0.27	U	ng/L	P402612	
		Hexachlorobenzene	1.1	U	ng/L	P402612	
		Kepone**	5.4	UJ	ng/L	P402612	CCV, RPD
		Lambda-Cyhalothrin**	0.81	U	ng/L	P402612	
		Methoxychlor	0.32	U	ng/L	P402612	
		MGK-264**	0.22	U	ng/L	P402612	
		Mirex	0.75	UJ	ng/L	P402612	LCS
		Permethrin	1.7	U	ng/L	P402612	
		Phenothrin**	0.97	U	ng/L	P402612	RPD
		Piperonyl Butoxide**	0.16	U	ng/L	P402612	
		Prallethrin**	2.2	U	ng/L	P402612	MS, RPD
		Tau-Fluvalinate**	0.27	U	ng/L	P402612	
		Tetramethrin**	0.81	U	ng/L	P402612	MS, RPD
		Trans-Nonachlor**	0.22	U	ng/L	P402612	
		Triclosan Methyl**	0.16	U	ng/L	P402612	
		Trifluralin	0.22	U	ng/L	P402612	
2270490	EPA 8276	Chlordane	5.4	U	ng/L	P402612	
		Toxaphene	32	U	ng/L	P402612	
	EPA 200.7 Rev. 4.4	Barium	36.8		ug/L	P402737	
		Calcium	23.0		mg/L	P402737	
		Iron	2.15E+03		ug/L	P402737	
		Magnesium	4.46		mg/L	P402737	
		Manganese	22.7		ug/L	P402737	
		Potassium	1.8		mg/L	P402737	
		Sodium	15.2		mg/L	P402737	
		Zinc	5.6	I	ug/L	P402737	
	EPA 200.8 Rev. 5.4	Aluminum	177		ug/L	P402737	
		Antimony	0.071	I	ug/L	P402737	
		Arsenic	0.98		ug/L	P402737	
		Beryllium	0.042		ug/L	P402737	
		Boron**	33.1		ug/L	P402737	
		Cadmium	0.020	U	ug/L	P402737	
		Chromium	0.74	I	ug/L	P402737	
		Copper	1.20		ug/L	P402737	
		Lead	0.33	I	ug/L	P402737	
		Nickel	0.57	I	ug/L	P402737	
		Selenium	0.20	U	ug/L	P402737	
		Silver	0.010	U	ug/L	P402737	
		Thallium	0.10	U	ug/L	P402737	
	SM 2340B	Hardness	75.7		mg/L	P402737	

Ref. Method and Comment:

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

EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.

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

Sample Location: Blockhouse CR @ Duval Rd.

Collection Date/Time: 08/18/2021 10:45

Field ID: 20030746

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270491	EPA 200.7 Rev. 4.4	Barium	25.7		ug/L	P402737	
		Calcium	22.5		mg/L	P402737	
		Iron	1.98E+03		ug/L	P402737	
		Magnesium	4.67		mg/L	P402737	
		Manganese	23.3		ug/L	P402737	
		Potassium	1.5		mg/L	P402737	
		Sodium	10.2		mg/L	P402737	
	EPA 200.8 Rev. 5.4	Zinc	6.1	I	ug/L	P402737	
		Aluminum	163		ug/L	P402737	
		Antimony	0.081	I	ug/L	P402737	
		Arsenic	0.98		ug/L	P402737	
		Beryllium	0.033	I	ug/L	P402737	
		Boron**	25.2		ug/L	P402737	
		Cadmium	0.020	U	ug/L	P402737	
		Chromium	0.52	I	ug/L	P402737	
		Copper	0.98		ug/L	P402737	
		Lead	0.30	I	ug/L	P402737	
		Nickel	0.57	I	ug/L	P402737	
		Selenium	0.20	U	ug/L	P402737	
		Silver	0.010	U	ug/L	P402737	
		Thallium	0.10	U	ug/L	P402737	
	SM 2340B	Hardness	75.3		mg/L	P402737	

Sample Location: Long BR at Evergreen Ave.

Collection Date/Time: 08/18/2021 11:15

Field ID: G2NE0735

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270405	EPA 180.1 Rev. 2.0	Turbidity	10		NTU	P402710	
	SM 2320 B-2011	Total Alkalinity	120		mg CaCO3/L	P402850	
	SM 2540 D-2011	TSS	4	I	mg/L	P403197	
	SM 4500 F-C-2011	Fluoride	0.15		mg F/L	P402852	
2270406	EPA 350.1 Rev. 2.0	Ammonia-N	0.084		mg N/L	P403033	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.47		mg N/L	P403178	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P403069	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P402818	
	SM 5310 B-2011	Organic Carbon	6.8		mg C/L	P403239	
2270407	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.026		mg P/L	P402701	
2270486	EPA 8321B	2,4-D	0.012		ug/L	P402808	
		Acesulfame K	0.29	I J	ug/L	P402720	MS
		2,4,5-T	0.0040	U	ug/L	P402808	
		AMPA	0.20	I	ug/L	P402720	
		Acetaminophen	0.012	I	ug/L	P402808	
		Acetamiprid	0.0020	U	ug/L	P402808	
		Endothall	0.25	UJ	ug/L	P402720	MS
		Glufosinate	0.10	U	ug/L	P402720	
		Glyphosate	0.18	I	ug/L	P402720	
		Afidopyropen	0.0020	U	ug/L	P402808	
		Bentazon	0.010		ug/L	P402808	
		Sucralose	0.30		ug/L	P402720	
		Benzovindiflupyr	0.0020	U	ug/L	P402808	
		Carbamazepine	8.0E-04	U	ug/L	P402808	
		Clothianidin	0.0020	U	ug/L	P402808	
		Dinotefuran	0.0020	U	ug/L	P402808	
		Diuron	0.0042	I	ug/L	P402808	
		Fenuron	0.016	U	ug/L	P402808	
		Fluridone	8.0E-04	U	ug/L	P402808	
		Imazapyr	0.053	J	ug/L	P402808	MS
		Hydrocodone	0.0020	U	ug/L	P402808	
		Ibuprofen	0.020	U	ug/L	P402808	
		Imidacloprid	0.049	J	ug/L	P402808	MS
		Linuron	0.0040	U	ug/L	P402808	
		Mandestrobin	0.0020	U	ug/L	P402808	
		MCP	0.0024	I	ug/L	P402808	
		Naproxen	0.0080	U	ug/L	P402808	
		Primidone	0.0040	U	ug/L	P402808	
		Pyraclostrobin	0.0020	U	ug/L	P402808	
		Thiamethoxam	0.0020	U	ug/L	P402808	
		Tolfenpyrad	0.0020	U	ug/L	P402808	
		Triclopyr	0.0040	U	ug/L	P402808	
2270488	EPA 200.7 Rev. 4.4	Calcium	48.0		mg/L	P402737	

Field ID: G2NE0735

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270488	EPA 200.7 Rev. 4.4	Iron	1.79E+03		ug/L	P402737	
		Magnesium	7.86		mg/L	P402737	
		Manganese	34.3		ug/L	P402737	
		Zinc	8.3	I	ug/L	P402737	
	EPA 200.8 Rev. 5.4	Aluminum	37		ug/L	P402737	
		Antimony	0.16	I	ug/L	P402737	
		Arsenic	1.08		ug/L	P402737	
		Beryllium	0.017	I	ug/L	P402737	
		Cadmium	0.020	U	ug/L	P402737	
		Chromium	0.40	U	ug/L	P402737	
		Copper	0.92		ug/L	P402737	
		Lead	0.52		ug/L	P402737	
		Nickel	0.73	I	ug/L	P402737	
		Selenium	0.27	I	ug/L	P402737	
		Silver	0.010	U	ug/L	P402737	
		Thallium	0.10	U	ug/L	P402737	

Ref. Method and Comment:

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

EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Blockhouse at Broward Rd.

Collection Date/Time: 08/18/2021 09:15

Field ID: G2NE1180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270408	EPA 180.1 Rev. 2.0	Turbidity	27		NTU	P402710	
	SM 2320 B-2011	Total Alkalinity	57		mg CaCO3/L	P402850	
	SM 2540 D-2011	TSS	50		mg/L	P403197	
	SM 4500 F-C-2011	Fluoride	0.17		mg F/L	P402852	
2270409	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P403033	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P403154	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026		mg N/L	P403069	
	EPA 365.1 Rev. 2.0	Total-P	0.21		mg P/L	P402818	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P403239	
2270410	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.074		mg P/L	P402701	
2270448	EPA 8276	Chlordane	5.1	U	ng/L	P402612	
		Toxaphene	31	U	ng/L	P402612	
2270487	EPA 8321B	2,4-D	0.023		ug/L	P402808	
		Acesulfame K	0.10	U	ug/L	P402720	MS
		2,4,5-T	0.0040	U	ug/L	P402808	
		AMPA	0.10	U	ug/L	P402720	
		Acetaminophen	0.0080	U	ug/L	P402808	
		Acetamiprid	0.0020	U	ug/L	P402808	
		Endothall	0.25	U	ug/L	P402720	MS
		Glufosinate	0.10	U	ug/L	P402720	
		Glyphosate	0.10	U	ug/L	P402720	
		Afidopyropen	0.0020	U	ug/L	P402808	
		Bentazon	0.0073		ug/L	P402808	
		Sucralose	0.42		ug/L	P402720	
		Benzovindiflupyr	0.0020	U	ug/L	P402808	
		Carbamazepine	0.0017	I	ug/L	P402808	
		Clothianidin	0.0042	I	ug/L	P402808	
		Dinotefuran	0.0020	U	ug/L	P402808	
		Diuron	0.034		ug/L	P402808	
		Fenuron	0.016	U	ug/L	P402808	
		Fluridone	0.0087		ug/L	P402808	
		Imazapyr	0.25		ug/L	P402808	MS
		Hydrocodone	0.0020	U	ug/L	P402808	
		Ibuprofen	0.020	U	ug/L	P402808	
		Imidacloprid	0.046		ug/L	P402808	MS
		Linuron	0.0040	U	ug/L	P402808	
		Mandestrobin	0.0020	U	ug/L	P402808	
		MCP	0.0024	I	ug/L	P402808	
		Naproxen	0.0080	U	ug/L	P402808	
		Primidone	0.0040	U	ug/L	P402808	
		Pyraclostrobin	0.0020	U	ug/L	P402808	
		Thiamethoxam	0.0030	I	ug/L	P402808	
		Tolfenpyrad	0.0020	U	ug/L	P402808	

Field ID: G2NE1180

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2270487	EPA 8321B	Triclopyr	0.0040	U	ug/L	P402808	
2270489	EPA 200.7 Rev. 4.4	Calcium	43.7		mg/L	P402737	
		Iron	1.35E+03		ug/L	P402737	
		Magnesium	77.3		mg/L	P402737	
		Manganese	32.7		ug/L	P402737	
		Zinc	17	I	ug/L	P402737	
	EPA 200.8 Rev. 5.4	Aluminum	588		ug/L	P402737	
		Antimony	0.14	I	ug/L	P402737	
		Arsenic	2.20		ug/L	P402737	
		Beryllium	0.073		ug/L	P402737	
		Cadmium	0.029	I	ug/L	P402737	
		Chromium	1.5	I	ug/L	P402737	
		Copper	3.05		ug/L	P402737	
		Lead	3.70		ug/L	P402737	
		Nickel	1.1	I	ug/L	P402737	
		Selenium	0.20	U	ug/L	P402737	
		Silver	0.010	U	ug/L	P402737	
		Thallium	0.10	U	ug/L	P402737	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
 EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
 EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report

Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P402710

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P402737

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P402737

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 300.0 Rev. 2.1
Batch ID: P403163

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403165

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403033

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403077

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403154

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403178

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402937

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403069

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402818

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402820

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402698

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402701

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402612

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402612

Component	Result	Code	Units
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.70	U	ng/L
Mirex	0.70	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P402612

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P402720

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: P402808

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	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: P402712

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011

Batch ID: P402850

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P403216

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P403195

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P403197

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P402852

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P403239

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: P402737

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	106		P	85 - 115
Calcium	101		P	85 - 115
Iron	106		P	85 - 115
Magnesium	101		P	85 - 115
Manganese	101		P	85 - 115
Potassium	105		P	85 - 115
Sodium	102		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402737

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	103		P	85 - 115
Beryllium	99.2		P	85 - 115
Boron	100		P	85 - 115
Cadmium	99.5		P	85 - 115
Chromium	99.5		P	85 - 115
Copper	102		P	85 - 115
Lead	102		P	85 - 115
Nickel	102		P	85 - 115
Selenium	100		P	85 - 115
Silver	105		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403163

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403165

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P403033

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P403077

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403154

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403178

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402937

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403069

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: P402818

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: P402820

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: P402698

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402701

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

Reference Method: EPA 8270E
Batch ID: P402612

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	46.4	48.6	P/P	20 - 150
Alpha-BHC	94.7	95.4	P/P	50 - 150
Alpha-Chlordane	66.2	67.2	P/P	50 - 150
Beta-BHC	111	108	P/P	50 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P402612

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	97.7	73.5	P/P	50 - 150
Bifenthrin	78.8	63.2	P/P	40 - 150
Carbophenothion	42.3	39.4	P/P	20 - 150
Chlorothalonil	120	113	P/P	20 - 150
Cis-Nonachlor	64.0	58.2	P/P	50 - 150
Cypermethrin	102	76.5	P/P	50 - 150
Dacthal	93.2	94.0	P/P	50 - 150
DDD-p,p'	71.1	64.3	P/P	50 - 150
DDE-p,p'	73.1	77.3	P/P	50 - 150
DDT-p,p'	68.9	67.6	P/P	50 - 150
Delta-BHC	119	115	P/P	50 - 150
Deltamethrin	111	74.6	P/P	50 - 150
Dichlobenil	73.5	75.2	P/P	40 - 150
Dicofol	64.3	58.0	P/P	50 - 150
Dieldrin	75.8	78.0	P/P	50 - 150
Endosulfan I	75.2	78.6	P/P	50 - 150
Endosulfan II	87.4	73.3	P/P	50 - 150
Endosulfan Sulfate	89.7	83.5	P/P	50 - 150
Endrin	77.2	68.3	P/P	50 - 150
Endrin Aldehyde	64.3	57.7	P/P	50 - 150
Endrin Ketone	92.0	82.3	P/P	50 - 150
Esfenvalerate	107	79.8	P/P	50 - 180
Ethalfuralin	64.6	66.3	P/P	50 - 150
Fenpropathrin	78.3	65.9	P/P	50 - 150
Gamma-BHC	102	101	P/P	50 - 150
Gamma-Chlordane	64.7	66.4	P/P	50 - 150
Heptachlor	59.7	62.7	P/P	50 - 150
Heptachlor Epoxide	74.4	78.4	P/P	50 - 150
Hexachlorobenzene	63.0	62.6	P/P	50 - 150
Kepone	86.4	56.7	P/P	30 - 180
Lambda-Cyhalothrin	104	81.5	P/P	50 - 200
Methoxychlor	85.6	79.5	P/P	50 - 150
MGK-264	88.5	92.1	P/P	30 - 150
Mirex	49.5	46.1	F/F	50 - 180
Permethrin	99.6	74.4	P/P	50 - 150
Phenothrin	50.2	39.7	P/P	20 - 150
Piperonyl Butoxide	95.8	85.3	P/P	50 - 150
Prallethrin	69.4	76.5	P/P	30 - 150
Tau-Fluvalinate	78.3	58.8	P/P	40 - 150
Tetramethrin	96.5	80.2	P/P	30 - 150
Trans-Nonachlor	62.2	65.8	P/P	50 - 150
Triclosan Methyl	75.3	77.9	P/P	50 - 150
Trifluralin	66.3	66.0	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P402612

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	83.6	78.7	P/P	56 - 117
Toxaphene	67.9	67.1	P/P	45 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P402720

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	87.4		P	40 - 150
AMPA	97.9		P	40 - 160
Endothall	126		P	40 - 150
Glufosinate	104		P	40 - 160
Glyphosate	91.6		P	40 - 160
Sucralose	106		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402808

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	82.9		P	40 - 150
2,4,5-T	87.1		P	40 - 150
Acetaminophen	75.1		P	30 - 150
Acetamiprid	80.5		P	40 - 150
Afidopyropen	65.6		P	40 - 150
Bentazon	92.0		P	30 - 150
Benzovindiflupyr	78.8		P	40 - 150
Carbamazepine	77.0		P	40 - 150
Clothianidin	74.8		P	40 - 150
Dinotefuran	75.8		P	40 - 150
Diuron	96.1		P	40 - 150
Fenuron	85.3		P	40 - 150
Fluridone	81.8		P	40 - 150
Hydrocodone	77.3		P	40 - 150
Ibuprofen	71.7		P	40 - 150
Imazapyr	91.6		P	40 - 150
Imidacloprid	85.0		P	40 - 150
Linuron	79.4		P	40 - 150
Mandestrobin	77.6		P	40 - 150
MCPP	87.3		P	40 - 150
Naproxen	58.1		P	40 - 150
Primidone	87.9		P	40 - 150
Pyraclostrobin	66.5		P	40 - 150
Thiamethoxam	78.0		P	40 - 150
Tolfenpyrad	35.0		P	30 - 150
Triclopyr	76.0		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P402712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P402850

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P402852

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P403239

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.1		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402737

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270375	Barium	103		P	80 - 120
2270375	Calcium	99.9		P	80 - 120
2270375	Iron	103		P	80 - 120
2270375	Magnesium	101		P	80 - 120
2270375	Manganese	99.4		P	80 - 120
2270375	Potassium	108		P	80 - 120
2270375	Sodium	102		P	80 - 120
2270375	Zinc	100		P	80 - 120
2270488	Barium	102	104	P/P	80 - 120
2270488	Calcium	97.5		P	80 - 120
2270488	Iron	104	106	P/P	80 - 120
2270488	Magnesium	99.6		P	80 - 120
2270488	Manganese	98.8	101	P/P	80 - 120
2270488	Potassium	106	105	P/P	80 - 120
2270488	Sodium	102		P	80 - 120
2270488	Zinc	98.6	98.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402737

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270375	Aluminum	97.2		P	80 - 120
2270375	Antimony	101		P	80 - 120
2270375	Arsenic	101		P	80 - 120
2270375	Beryllium	94.2		P	80 - 120
2270375	Boron	99.6		P	80 - 120
2270375	Cadmium	99.2		P	80 - 120
2270375	Chromium	98.4		P	80 - 120
2270375	Copper	97.8		P	80 - 120
2270375	Lead	102		P	80 - 120
2270375	Nickel	98.2		P	80 - 120
2270375	Selenium	97.1		P	80 - 120
2270375	Silver	102		P	80 - 120
2270375	Thallium	107		P	80 - 120
2270488	Aluminum	97.1	97.7	P/P	80 - 120
2270488	Antimony	102	103	P/P	80 - 120
2270488	Arsenic	103	103	P/P	80 - 120
2270488	Beryllium	96.1	96.9	P/P	80 - 120
2270488	Boron	100	100	P/P	80 - 120
2270488	Cadmium	101	102	P/P	80 - 120
2270488	Chromium	102	102	P/P	80 - 120
2270488	Copper	96.5	96.7	P/P	80 - 120
2270488	Lead	102	102	P/P	80 - 120
2270488	Nickel	97.5	98.0	P/P	80 - 120
2270488	Selenium	98.0	98.3	P/P	80 - 120
2270488	Silver	103	103	P/P	80 - 120
2270488	Thallium	107	107	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403163

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403163

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270411	Chloride	99.5		P	90 - 110
2270555	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403165

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270411	Sulfate	99.6		P	90 - 110
2270555	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403033

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270110	Ammonia-N	95.6	96.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270542	Ammonia-N	96.2	96.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403178

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270389	Kjeldahl Nitrogen	100	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402937

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270418	NO2NO3-N	94.8		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403069

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270390	NO2NO3-N	96.5	95.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402818

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270131	Total-P	103	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402820

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270695	Total-P	104	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402698

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270543	O-Phosphate-P	98.9	99.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270391	O-Phosphate-P	105	103	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P402612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270127	Aldrin	46.0	40.3	P/P	20 - 170
2270127	Alpha-BHC	93.7	87.0	P/P	50 - 170
2270127	Alpha-Chlordane	73.4	64.2	P/P	50 - 170
2270127	Beta-BHC	122	125	P/P	50 - 170
2270127	Beta-Cyfluthrin	102	81.2	P/P	50 - 170
2270127	Bifenthrin	60.3	49.1	P/P	40 - 170
2270127	Carbophenothion	0.0102	0.882	F/F	20 - 170
2270127	Chlorothalonil	140	129	P/P	20 - 170
2270127	Cis-Nonachlor	67.7	58.5	P/P	50 - 170
2270127	Cypermethrin	74.0	57.5	P/P	50 - 170
2270127	Dacthal	91.3	83.5	P/P	50 - 170
2270127	DDD-p,p'	73.2	68.6	P/P	50 - 170
2270127	DDE-p,p'	73.7	68.9	P/P	50 - 170
2270127	DDT-p,p'	69.6	60.9	P/P	50 - 170
2270127	Delta-BHC	127	124	P/P	50 - 170
2270127	Deltamethrin	98.1	74.8	P/P	50 - 170
2270127	Dichlobenil	32.3	40.5	F/P	40 - 170
2270127	Dicofol	57.3	50.4	P/P	50 - 170
2270127	Dieldrin	79.5	69.4	P/P	50 - 170
2270127	Endosulfan I	82.7	71.0	P/P	50 - 170
2270127	Endosulfan II	68.6	54.4	P/P	50 - 170
2270127	Endosulfan Sulfate	62.4	51.9	P/P	50 - 170
2270127	Endrin	63.1	68.0	P/P	50 - 170
2270127	Endrin Aldehyde	31.5	26.8	F/F	50 - 170
2270127	Endrin Ketone	111	88.3	P/P	50 - 170
2270127	Esfenvalerate	91.4	70.7	P/P	50 - 180
2270127	Ethalfuralin	52.1	55.8	P/P	50 - 170
2270127	Fenpropathrin	62.0	51.3	P/P	50 - 170
2270127	Gamma-BHC	107	111	P/P	50 - 170
2270127	Gamma-Chlordane	71.0	62.5	P/P	50 - 170
2270127	Heptachlor	64.8	52.2	P/P	50 - 170
2270127	Heptachlor Epoxide	81.4	70.7	P/P	50 - 170
2270127	Hexachlorobenzene	62.8	56.3	P/P	50 - 170
2270127	Kepone	68.6	41.9	P/P	30 - 180
2270127	Lambda-Cyhalothrin	86.1	66.3	P/P	50 - 200
2270127	Methoxychlor	91.8	75.4	P/P	50 - 170
2270127	MGK-264	72.8	72.6	P/P	30 - 170
2270127	Mirex	58.1	52.0	P/P	50 - 180
2270127	Permethrin	84.7	75.5	P/P	50 - 170
2270127	Phenothrin	23.4	33.7	P/P	20 - 170

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270127	Piperonyl Butoxide	66.3	61.0	P/P	50 - 170
2270127	Prallethrin	3.54	2.40	F/F	30 - 170
2270127	Tau-Fluvalinate	72.8	54.3	P/P	40 - 170
2270127	Tetramethrin	19.7	9.82	F/F	30 - 170
2270127	Trans-Nonachlor	72.5	61.1	P/P	50 - 170
2270127	Triclosan Methyl	75.8	68.3	P/P	50 - 170
2270127	Trifluralin	68.4	62.0	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P402612

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270340	Chlordane	90.7	82.1	P/P	47 - 128
2270340	Toxaphene	72.9	69.9	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P402720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270486	Acesulfame K	154	134	F/P	40 - 150
2270486	AMPA	83.5	84.6	P/P	40 - 160
2270486	Endothall	155	154	F/F	40 - 150
2270486	Glufosinate	84.2	82.7	P/P	40 - 160
2270486	Glyphosate	81.2	82.2	P/P	40 - 160
2270486	Sucralose	112	110	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P402808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270486	2,4-D	107	104	P/P	40 - 150
2270486	2,4,5-T	100	99.1	P/P	40 - 150
2270486	Acetaminophen	85.7	86.3	P/P	30 - 150
2270486	Acetamiprid	94.1	94.9	P/P	40 - 150
2270486	Afidopyropen	80.2	67.1	P/P	40 - 150
2270486	Benzovindiflupyr	80.8	89.7	P/P	40 - 150
2270486	Carbamazepine	89.4	96.8	P/P	40 - 150
2270486	Clothianidin	114	102	P/P	40 - 150
2270486	Dinotefuran	101	108	P/P	40 - 150
2270486	Diuron	78.5	74.7	P/P	40 - 150
2270486	Fenuron	88.6	88.4	P/P	40 - 150
2270486	Fluridone	84.1	85.0	P/P	40 - 150
2270486	Hydrocodone	89.9	88.8	P/P	40 - 150
2270486	Ibuprofen	84.5	70.1	P/P	40 - 150
2270486	Imazapyr	157	133	F/P	40 - 150
2270486	Imidacloprid	142	151	P/F	40 - 150
2270486	Linuron	76.2	85.8	P/P	40 - 150
2270486	Mandestrobin	83.6	84.6	P/P	40 - 150
2270486	MCPP	101	104	P/P	40 - 150
2270486	Naproxen	76.5	80.5	P/P	40 - 150
2270486	Primidone	92.5	91.2	P/P	40 - 150
2270486	Pyraclostrobin	77.8	81.9	P/P	40 - 150

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P402808

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270486	Thiamethoxam	127	127	P/P	40 - 150
2270486	Tolfenpyrad	50.0	55.1	P/P	30 - 150
2270486	Triclopyr	86.8	92.8	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P402852

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270807	Fluoride	100	99.0	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P403239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270415	Organic Carbon	95.5	96.6	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P402710

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270360	Turbidity	1.08	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P402737

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270488	Barium	1.97	Spike	P	0 - 20
2270488	Calcium	0.268	Spike	P	0 - 20
2270488	Iron	1.21	Spike	P	0 - 20
2270488	Magnesium	1.05	Spike	P	0 - 20
2270488	Manganese	1.80	Spike	P	0 - 20
2270488	Potassium	1.07	Spike	P	0 - 20
2270488	Sodium	0.0696	Spike	P	0 - 20
2270488	Zinc	0.224	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P402737

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270488	Aluminum	0.626	Spike	P	0 - 20
2270488	Antimony	0.876	Spike	P	0 - 20
2270488	Arsenic	0.0239	Spike	P	0 - 20
2270488	Beryllium	0.758	Spike	P	0 - 20
2270488	Boron	0.261	Spike	P	0 - 20
2270488	Cadmium	0.818	Spike	P	0 - 20
2270488	Chromium	0.478	Spike	P	0 - 20
2270488	Copper	0.267	Spike	P	0 - 20
2270488	Lead	0.744	Spike	P	0 - 20
2270488	Nickel	0.541	Spike	P	0 - 20
2270488	Selenium	0.279	Spike	P	0 - 20
2270488	Silver	0.638	Spike	P	0 - 20
2270488	Thallium	0.701	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403163

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270411	Chloride	0.0268	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403165

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270411	Sulfate	0.650	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403033

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270110	Ammonia-N	0.528	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270542	Ammonia-N	0.180	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270409	Kjeldahl Nitrogen	11.6	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403178

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270389	Kjeldahl Nitrogen	1.99	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P402937

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270418	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403069

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270390	NO2NO3-N	0.562	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402818

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270131	Total-P	1.32	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P402820

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270695	Total-P	1.15	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402698

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270543	O-Phosphate-P	0.101	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270391	O-Phosphate-P	1.31	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P402612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270127	Aldrin	13.2	Spike	P	0 - 30
2270127	Alpha-BHC	7.39	Spike	P	0 - 30
2270127	Alpha-Chlordane	13.5	Spike	P	0 - 30
2270127	Beta-BHC	2.46	Spike	P	0 - 30
2270127	Beta-Cyfluthrin	22.3	Spike	P	0 - 30
2270127	Bifenthrin	20.5	Spike	P	0 - 30
2270127	Carbophenothion	195	Spike	F	0 - 30
2270127	Chlorothalonil	8.08	Spike	P	0 - 50
2270127	Cis-Nonachlor	14.6	Spike	P	0 - 30
2270127	Cypermethrin	25.0	Spike	P	0 - 30
2270127	Dacthal	8.89	Spike	P	0 - 30
2270127	DDD-p,p'	6.51	Spike	P	0 - 30
2270127	DDE-p,p'	6.84	Spike	P	0 - 30
2270127	DDT-p,p'	13.4	Spike	P	0 - 30
2270127	Delta-BHC	2.46	Spike	P	0 - 30
2270127	Deltamethrin	27.0	Spike	P	0 - 30
2270127	Dichlobenil	22.6	Spike	P	0 - 30
2270127	Dicofol	12.7	Spike	P	0 - 30
2270127	Dieldrin	13.5	Spike	P	0 - 30
2270127	Endosulfan I	15.1	Spike	P	0 - 30
2270127	Endosulfan II	23.2	Spike	P	0 - 30
2270127	Endosulfan Sulfate	18.4	Spike	P	0 - 30
2270127	Endrin	7.57	Spike	P	0 - 30
2270127	Endrin Aldehyde	15.9	Spike	P	0 - 30
2270127	Endrin Ketone	23.0	Spike	P	0 - 30
2270127	Esfenvalerate	25.5	Spike	P	0 - 30
2270127	Ethalfuralin	6.76	Spike	P	0 - 30
2270127	Fenpropathrin	18.7	Spike	P	0 - 30
2270127	Gamma-BHC	4.45	Spike	P	0 - 30
2270127	Gamma-Chlordane	12.8	Spike	P	0 - 30
2270127	Heptachlor	21.6	Spike	P	0 - 30
2270127	Heptachlor Epoxide	14.1	Spike	P	0 - 30
2270127	Hexachlorobenzene	10.9	Spike	P	0 - 30
2270127	Kepone	48.4	Spike	F	0 - 30
2270127	Lambda-Cyhalothrin	26.0	Spike	P	0 - 30
2270127	Methoxychlor	19.6	Spike	P	0 - 30
2270127	MGK-264	0.252	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P402612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270127	Mirex	11.1	Spike	P	0 - 30
2270127	Permethrin	11.6	Spike	P	0 - 30
2270127	Phenothrin	36.1	Spike	F	0 - 30
2270127	Piperonyl Butoxide	8.36	Spike	P	0 - 30
2270127	Prallethrin	38.5	Spike	F	0 - 30
2270127	Tau-Fluvalinate	29.2	Spike	P	0 - 30
2270127	Tetramethrin	66.8	Spike	F	0 - 30
2270127	Trans-Nonachlor	17.0	Spike	P	0 - 30
2270127	Triclosan Methyl	10.3	Spike	P	0 - 30
2270127	Trifluralin	9.81	Spike	P	0 - 30
LFB	Aldrin	4.69	LCS	P	0 - 30
LFB	Alpha-BHC	0.750	LCS	P	0 - 30
LFB	Alpha-Chlordane	1.39	LCS	P	0 - 30
LFB	Beta-BHC	2.65	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	28.3	LCS	P	0 - 30
LFB	Bifenthrin	22.0	LCS	P	0 - 30
LFB	Carbophenothion	6.99	LCS	P	0 - 30
LFB	Chlorothalonil	5.84	LCS	P	0 - 50
LFB	Cis-Nonachlor	9.50	LCS	P	0 - 30
LFB	Cypermethrin	28.6	LCS	P	0 - 30
LFB	Dacthal	0.872	LCS	P	0 - 30
LFB	DDD-p,p'	10.1	LCS	P	0 - 30
LFB	DDE-p,p'	5.53	LCS	P	0 - 30
LFB	DDT-p,p'	1.92	LCS	P	0 - 30
LFB	Delta-BHC	2.92	LCS	P	0 - 30
LFB	Deltamethrin	39.1	LCS	F	0 - 30
LFB	Dichlobenil	2.35	LCS	P	0 - 30
LFB	Dicofol	10.2	LCS	P	0 - 30
LFB	Dieldrin	2.76	LCS	P	0 - 30
LFB	Endosulfan I	4.49	LCS	P	0 - 30
LFB	Endosulfan II	17.6	LCS	P	0 - 30
LFB	Endosulfan Sulfate	7.14	LCS	P	0 - 30
LFB	Endrin	12.2	LCS	P	0 - 30
LFB	Endrin Aldehyde	10.8	LCS	P	0 - 30
LFB	Endrin Ketone	11.2	LCS	P	0 - 30
LFB	Esfenvalerate	29.3	LCS	P	0 - 30
LFB	Ethalfuralin	2.57	LCS	P	0 - 30
LFB	Fenpropathrin	17.3	LCS	P	0 - 30
LFB	Gamma-BHC	0.976	LCS	P	0 - 30
LFB	Gamma-Chlordane	2.65	LCS	P	0 - 30
LFB	Heptachlor	4.97	LCS	P	0 - 30
LFB	Heptachlor Epoxide	5.30	LCS	P	0 - 30
LFB	Hexachlorobenzene	0.742	LCS	P	0 - 30
LFB	Kepone	41.6	LCS	F	0 - 30
LFB	Lambda-Cyhalothrin	24.3	LCS	P	0 - 30
LFB	Methoxychlor	7.39	LCS	P	0 - 30
LFB	MGK-264	3.90	LCS	P	0 - 30
LFB	Mirex	6.95	LCS	P	0 - 30
LFB	Permethrin	29.1	LCS	P	0 - 30
LFB	Phenothrin	23.4	LCS	P	0 - 30
LFB	Piperonyl Butoxide	11.6	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P402612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Prallethrin	9.69	LCS	P	0 - 30
LFB	Tau-Fluvalinate	28.4	LCS	P	0 - 30
LFB	Tetramethrin	18.4	LCS	P	0 - 30
LFB	Trans-Nonachlor	5.65	LCS	P	0 - 30
LFB	Triclosan Methyl	3.43	LCS	P	0 - 30
LFB	Trifluralin	0.400	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P402612

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270340	Chlordane	9.86	Spike	P	0 - 30
2270340	Toxaphene	4.18	Spike	P	0 - 30
LFB	Chlordane	6.04	LCS	P	0 - 30
LFB	Toxaphene	1.19	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402720

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270486	Acesulfame K	13.1	Spike	P	0 - 30
2270486	AMPA	1.20	Spike	P	0 - 30
2270486	Endothall	0.531	Spike	P	0 - 30
2270486	Glufosinate	1.84	Spike	P	0 - 30
2270486	Glyphosate	1.21	Spike	P	0 - 30
2270486	Sucralose	1.31	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270486	2,4-D	2.53	Spike	P	0 - 30
2270486	2,4,5-T	1.19	Spike	P	0 - 30
2270486	Acetaminophen	0.572	Spike	P	0 - 30
2270486	Acetamiprid	0.839	Spike	P	0 - 30
2270486	Afidopyropen	17.7	Spike	P	0 - 30
2270486	Bentazon	4.63	Spike	P	0 - 30
2270486	Benzovindiflupyr	10.4	Spike	P	0 - 30
2270486	Carbamazepine	7.90	Spike	P	0 - 30
2270486	Clothianidin	10.7	Spike	P	0 - 30
2270486	Dinotefuran	5.97	Spike	P	0 - 30
2270486	Diuron	4.62	Spike	P	0 - 30
2270486	Fenuron	0.216	Spike	P	0 - 30
2270486	Fluridone	1.02	Spike	P	0 - 30
2270486	Hydrocodone	1.23	Spike	P	0 - 30
2270486	Ibuprofen	18.7	Spike	P	0 - 30
2270486	Imazapyr	11.1	Spike	P	0 - 30
2270486	Imidacloprid	4.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
 Batch ID: P402808

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270486	Linuron	11.8	Spike	P	0 - 30
2270486	Mandestrobin	1.20	Spike	P	0 - 30
2270486	MCPP	2.30	Spike	P	0 - 30
2270486	Naproxen	5.06	Spike	P	0 - 30
2270486	Primidone	1.46	Spike	P	0 - 30
2270486	Pyraclostrobin	5.05	Spike	P	0 - 30
2270486	Thiamethoxam	0.0550	Spike	P	0 - 30
2270486	Tolfenpyrad	9.75	Spike	P	0 - 30
2270486	Triclopyr	6.74	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
 Batch ID: P402712

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270495	Color (true)	1.65	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
 Batch ID: P402850

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270807	Total Alkalinity	1.71	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
 Batch ID: P403216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270130	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
 Batch ID: P402852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270807	Fluoride	0.953	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
 Batch ID: P403239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270415	Organic Carbon	0.646	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2270448
Field Sample ID: G2NE1180

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	84.3	P	29 - 92.0
EPA 8276	PCNB	72.2	P	43 - 134

Lab Sample ID: 2270449
Field Sample ID: G2NE1159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	80.6	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	54.5	P	30 - 110
EPA 8276	Decachlorobiphenyl	78.9	P	29 - 92.0
EPA 8276	PCNB	68.9	P	43 - 134

Lab Sample ID: 2270486
Field Sample ID: G2NE0735

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	107	P	30 - 160
EPA 8321B	Carbamazepine-d10	115	P	30 - 160
EPA 8321B	Diuron-d6	91.5	P	30 - 160
EPA 8321B	Endothall-d6	156	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.0	P	30 - 160
EPA 8321B	Primidone-d5	125	P	30 - 160
EPA 8321B	Sucralose-d6	110	P	30 - 160

Lab Sample ID: 2270487
Field Sample ID: G2NE1180

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	121	P	30 - 160
EPA 8321B	Acetaminophen-d4	103	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	86.1	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	31.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.8	P	30 - 160
EPA 8321B	Primidone-d5	113	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107343

Included Lab Sample IDs: 2270407, 2270410, 2270413, 2270416, 2270419

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107344

Included Lab Sample IDs: 2270405, 2270408, 2270411, 2270414, 2270417

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

Reference Method: SM 2120 B-2011

Run ID: A107345

Included Lab Sample IDs: 2270411, 2270417

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

Reference Method: EPA 8321B

Run ID: A107353

Included Lab Sample IDs: 2270486, 2270487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	106	109	P/P	60 - 160
Glufosinate	105	108	P/P	60 - 160
Glyphosate	96.2	105	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A107377

Included Lab Sample IDs: 2270486, 2270487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	89.8	90.2	P/P	60 - 160
Endothall	109	131	P/P	60 - 160
Sucralose	107	103	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107401

Included Lab Sample IDs: 2270488, 2270489, 2270490, 2270491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.7	99.0	P/P	90 - 110
Aluminum	98.7	101	P/P	90 - 110
Antimony	95.2	98.3	P/P	90 - 110
Antimony	97.9	98.8	P/P	90 - 110
Arsenic	100	98.5	P/P	90 - 110
Arsenic	98.9	99.6	P/P	90 - 110
Beryllium	93.0	96.6	P/P	90 - 110
Beryllium	95.6	93.8	P/P	90 - 110
Boron	101	102	P/P	90 - 110
Cadmium	95.4	98.8	P/P	90 - 110
Cadmium	98.8	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107401

Included Lab Sample IDs: 2270488, 2270489, 2270490, 2270491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chromium	95.5	96.1	P/P	90 - 110
Chromium	95.8	97.7	P/P	90 - 110
Copper	95.6	96.9	P/P	90 - 110
Copper	98.5	95.3	P/P	90 - 110
Lead	96.6	98.7	P/P	90 - 110
Lead	98.7	98.1	P/P	90 - 110
Nickel	95.3	97.1	P/P	90 - 110
Nickel	98.6	95.3	P/P	90 - 110
Selenium	95.7	96.5	P/P	90 - 110
Selenium	97.0	98.3	P/P	90 - 110
Silver	95.9	97.2	P/P	90 - 110
Silver	97.3	97.3	P/P	90 - 110
Thallium	102	101	P/P	90 - 110
Thallium	99.4	103	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A107408

Included Lab Sample IDs: 2270405, 2270408, 2270411, 2270414, 2270417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	103	P/P	90 - 110
Total Alkalinity	103	101	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107408

Included Lab Sample IDs: 2270405, 2270408, 2270411, 2270414, 2270417

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

Reference Method: EPA 8270E

Run ID: A107412

Included Lab Sample IDs: 2270449

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.9		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	105		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	94.0		P	80 - 120
Bifenthrin	98.7		P	80 - 120
Carbophenothion	88.5		P	80 - 120
Chlorothalonil	98.9		P	80 - 120
Cis-Nonachlor	89.1		P	80 - 120
Cypermethrin	96.2		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	90.8		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A107412
Included Lab Sample IDs: 2270449

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Deltamethrin	92.1		P	80 - 120
Dichlobenil	87.8		P	80 - 120
Dicofol	81.5		P	80 - 120
Dieldrin	101		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	89.6		P	80 - 120
Endosulfan Sulfate	85.4		P	80 - 120
Endrin	94.3		P	80 - 120
Endrin Aldehyde	85.6		P	80 - 120
Endrin Ketone	89.2		P	80 - 120
Esfenvalerate	99.8		P	80 - 120
Ethalfuralin	100		P	80 - 120
Fenpropathrin	90.7		P	80 - 120
Gamma-BHC	111		P	80 - 120
Gamma-Chlordane	106		P	80 - 120
Heptachlor	104		P	80 - 120
Heptachlor Epoxide	104		P	80 - 120
Hexachlorobenzene	98.1		P	80 - 120
Kepone	69.7*		F	80 - 120
Lambda-Cyhalothrin	94.2		P	80 - 120
Methoxychlor	99.8		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	93.9		P	80 - 120
Permethrin	92.9		P	80 - 120
Phenothrin	92.3		P	80 - 120
Piperonyl Butoxide	92.0		P	80 - 120
Prallethrin	95.0		P	80 - 120
Tau-Fluvalinate	93.7		P	80 - 120
Tetramethrin	103		P	80 - 120
Trans-Nonachlor	98.4		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	99.6		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A107416
Included Lab Sample IDs: 2270488, 2270490, 2270491

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	102	97.6	P/P	90 - 110
Calcium	98.3	98.7	P/P	90 - 110
Calcium	98.7	97.0	P/P	90 - 110
Iron	98.7	99.9	P/P	90 - 110
Iron	99.9	97.7	P/P	90 - 110
Magnesium	98.2	98.6	P/P	90 - 110
Magnesium	98.6	97.1	P/P	90 - 110
Manganese	100	98.5	P/P	90 - 110
Manganese	99.7	100	P/P	90 - 110
Potassium	101	99.8	P/P	90 - 110
Sodium	100	98.4	P/P	90 - 110
Zinc	97.8	96.2	P/P	90 - 110
Zinc	98.1	97.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107449

Included Lab Sample IDs: 2270411, 2270417

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.9	99.1	P/P	90 - 110
Sulfate	99.6	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107455

Included Lab Sample IDs: 2270415, 2270418

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

Reference Method: EPA 8321B

Run ID: A107460

Included Lab Sample IDs: 2270486, 2270487

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	94.6	92.7	P/P	50 - 150
2,4,5-T	94.6	99.0	P/P	50 - 150
Acetaminophen	98.4	97.3	P/P	60 - 160
Acetamiprid	102	108	P/P	50 - 150
Afidopyropen	99.4	97.6	P/P	50 - 150
Bentazon	116	116	P/P	50 - 160
Benzovindiflupyr	108	114	P/P	50 - 150
Carbamazepine	106	107	P/P	60 - 150
Clothianidin	87.6	84.9	P/P	60 - 150
Dinotefuran	99.2	103	P/P	50 - 150
Diuron	122	125	P/P	60 - 160
Fenuron	98.3	100	P/P	60 - 150
Fluridone	88.8	107	P/P	60 - 160
Hydrocodone	90.3	97.0	P/P	60 - 150
Ibuprofen	66.8	84.7	P/P	50 - 160
Imazapyr	100	117	P/P	50 - 150
Imidacloprid	97.1	99.2	P/P	60 - 150
Linuron	102	101	P/P	60 - 150
Mandestrobin	101	108	P/P	50 - 150
MCPP	84.3	96.4	P/P	50 - 150
Naproxen	78.9	73.5	P/P	50 - 160
Primidone	77.9	107	P/P	60 - 150
Pyraclostrobin	100	109	P/P	60 - 150
Thiamethoxam	103	97.8	P/P	50 - 150
Tolfenpyrad	97.6	101	P/P	60 - 150
Triclopyr	103	102	P/P	50 - 150

Reference Method: EPA 8276

Run ID: A107479

Included Lab Sample IDs: 2270448, 2270449

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.1		P	80 - 120
Toxaphene	106		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107480

Included Lab Sample IDs: 2270406, 2270409, 2270412, 2270415, 2270418

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107482

Included Lab Sample IDs: 2270406, 2270409, 2270412

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	99.1	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107492

Included Lab Sample IDs: 2270489

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	97.8	P/P	90 - 110
Iron	98.9	95.9	P/P	90 - 110
Magnesium	99.0	96.1	P/P	90 - 110
Manganese	100	98.7	P/P	90 - 110
Zinc	108	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107506

Included Lab Sample IDs: 2270406, 2270409, 2270412

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107511

Included Lab Sample IDs: 2270415, 2270418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.2	P/P	90 - 110
Ammonia-N	97.7	97.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107583

Included Lab Sample IDs: 2270409, 2270412, 2270415, 2270418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	98.9	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107593

Included Lab Sample IDs: 2270406, 2270409, 2270412, 2270415, 2270418

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	96.5	P/P	90 - 110
Organic Carbon	97.9	96.0	P/P	90 - 110

Quality Assurance Report

Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107598

Included Lab Sample IDs: 2270406

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

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity							1.08	
EPA 200.7 Rev. 4.4	Barium	106		103	102	104			1.97
	Calcium	101		99.9	97.5				0.268
	Iron	106		103	104	106			1.21
	Magnesium	101		101	99.6				1.05
	Manganese	101		99.4	98.8	101			1.80
	Potassium	105		108	106	105			1.07
	Sodium	102		102	102				0.0696
	Zinc	104		100	98.6	98.8			0.224
EPA 200.8 Rev. 5.4	Aluminum	100		97.1	97.7	97.2			0.626
	Antimony	101		102	103	101			0.876
	Arsenic	103		103	103	101			0.0239
	Beryllium	99.2		96.1	96.9	94.2			0.758
	Boron	100		100	100	99.6			0.261
	Cadmium	99.5		101	102	99.2			0.818
	Chromium	99.5		102	102	98.4			0.478
	Copper	102		96.5	96.7	97.8			0.267
	Lead	102		102	102	102			0.744
	Nickel	102		97.5	98.0	98.2			0.541
	Selenium	100		98.0	98.3	97.1			0.279
	Silver	105		103	103	102			0.638
	Thallium	103		107	107	107			0.701
EPA 300.0 Rev. 2.1	Chloride	100		99.5	99.9			0.0268	
	Sulfate	99.9		99.6	101			0.650	
EPA 350.1 Rev. 2.0	Ammonia-N	97.6		95.6	96.2				0.528
	Ammonia-N	98.2		96.2	96.4				0.180
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104							11.6
	Kjeldahl Nitrogen	104		100	104				1.99
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	99.5		94.8					0.0
	NO ₂ NO ₃ -N	99.5		96.5	95.5				0.562
EPA 365.1 Rev. 2.0	Total-P	105		103	102				1.32
	Total-P	102		104	106				1.15
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.5		98.9	99.0				0.101
	O-Phosphate-P	106		105	103				1.31
EPA 8270E	Aldrin	46.4	48.6	40.3	46.0	4.69			13.2
	Alpha-BHC	94.7	95.4	87.0	93.7	0.750			7.39
	Alpha-Chlordane	66.2	67.2	64.2	73.4	1.39			13.5
	Beta-BHC	111	108	125	122	2.65			2.46
	Beta-Cyfluthrin	97.7	73.5	102	81.2	28.3			22.3
	Bifenthrin	78.8	63.2	49.1	60.3	22.0			20.5
	Carbophenothion	42.3	39.4	0.882	0.0102	6.99			195
	Chlorothalonil	120	113	129	140	5.84			8.08
	Cis-Nonachlor	64.0	58.2	58.5	67.7	9.50			14.6
	Cypermethrin	102	76.5	57.5	74.0	28.6			25.0
	Dacthal	93.2	94.0	83.5	91.3	0.872			8.89
	DDD-p,p'	71.1	64.3	68.6	73.2	10.1			6.51
	DDE-p,p'	73.1	77.3	68.9	73.7	5.53			6.84
	DDT-p,p'	68.9	67.6	60.9	69.6	1.92			13.4
	Delta-BHC	119	115	124	127	2.92			2.46
	Deltamethrin	111	74.6	74.8	98.1	39.1			27.0
	Dichlobenil	73.5	75.2	40.5	32.3	2.35			22.6
	Dicofol	64.3	58.0	50.4	57.3	10.2			12.7
	Dieldrin	75.8	78.0	69.4	79.5	2.76			13.5
	Endosulfan I	75.2	78.6	71.0	82.7	4.49			15.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Endosulfan II	87.4	73.3	54.4	68.6	17.6	23.2
	Endosulfan Sulfate	89.7	83.5	51.9	62.4	7.14	18.4
	Endrin	77.2	68.3	68.0	63.1	12.2	7.57
	Endrin Aldehyde	64.3	57.7	26.8	31.5	10.8	15.9
	Endrin Ketone	92.0	82.3	111	88.3	11.2	23.0
	Esfenvalerate	107	79.8	70.7	91.4	29.3	25.5
	Ethalfuralin	64.6	66.3	55.8	52.1	2.57	6.76
	Fenpropathrin	78.3	65.9	51.3	62.0	17.3	18.7
	Gamma-BHC	102	101	111	107	0.976	4.45
	Gamma-Chlordane	64.7	66.4	62.5	71.0	2.65	12.8
	Heptachlor	59.7	62.7	52.2	64.8	4.97	21.6
	Heptachlor Epoxide	74.4	78.4	70.7	81.4	5.30	14.1
	Hexachlorobenzene	63.0	62.6	56.3	62.8	0.742	10.9
	Kepone	86.4	56.7	41.9	68.6	41.6	48.4
	Lambda-Cyhalothrin	104	81.5	66.3	86.1	24.3	26.0
	Methoxychlor	85.6	79.5	75.4	91.8	7.39	19.6
	MGK-264	88.5	92.1	72.6	72.8	3.90	0.252
	Mirex	49.5	46.1	52.0	58.1	6.95	11.1
	Permethrin	99.6	74.4	84.7	75.5	29.1	11.6
	Phenothrin	50.2	39.7	23.4	33.7	23.4	36.1
	Piperonyl Butoxide	95.8	85.3	66.3	61.0	11.6	8.36
	Prallethrin	69.4	76.5	3.54	2.40	9.69	38.5
	Tau-Fluvalinate	78.3	58.8	72.8	54.3	28.4	29.2
	Tetramethrin	96.5	80.2	19.7	9.82	18.4	66.8
	Trans-Nonachlor	62.2	65.8	72.5	61.1	5.65	17.0
	Triclosan Methyl	75.3	77.9	75.8	68.3	3.43	10.3
	Trifluralin	66.3	66.0	68.4	62.0	0.400	9.81
EPA 8276	Chlordane	83.6	78.7	90.7	82.1	6.04	9.86
	Toxaphene	67.9	67.1	72.9	69.9	1.19	4.18
EPA 8321B	2,4-D	82.9		107	104		2.53
	2,4,5-T	87.1		100	99.1		1.19
	Acesulfame K	87.4		154	134		13.1
	Acetaminophen	75.1		85.7	86.3		0.572
	Acetamiprid	80.5		94.1	94.9		0.839
	Afidopyropen	65.6		80.2	67.1		17.7
	AMPA	97.9		83.5	84.6		1.20
	Bentazon	92.0					4.63
	Benzovindiflupyr	78.8		80.8	89.7		10.4
	Carbamazepine	77.0		89.4	96.8		7.90
	Clothianidin	74.8		114	102		10.7
	Dinotefuran	75.8		101	108		5.97
	Diuron	96.1		78.5	74.7		4.62
	Endothall	126		155	154		0.531
	Fenuron	85.3		88.6	88.4		0.216
	Fluridone	81.8		84.1	85.0		1.02
	Glufosinate	104		84.2	82.7		1.84
	Glyphosate	91.6		81.2	82.2		1.21
	Hydrocodone	77.3		89.9	88.8		1.23
	Ibuprofen	71.7		84.5	70.1		18.7
	Imazapyr	91.6		157	133		11.1
	Imidacloprid	85.0		142	151		4.03
	Linuron	79.4		76.2	85.8		11.8
	Mandestrobin	77.6		83.6	84.6		1.20
	MCP	87.3		101	104		2.30

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Naproxen	58.1	76.5	80.5		5.06
	Primidone	87.9	92.5	91.2		1.46
	Pyraclostrobin	66.5	77.8	81.9		5.05
	Sucralose	106	112	110		1.31
	Thiamethoxam	78.0	127	127		0.0550
	Tolfenpyrad	35.0	50.0	55.1		9.75
	Triclopyr	76.0	86.8	92.8		6.74
SM 2120 B-2011	Color (true)	102			1.65	
SM 2320 B-2011	Total Alkalinity	101			1.71	
SM 2540 C-2011	TDS				0.0	
SM 4500 F-C-2011	Fluoride	102	100	99.0		0.953
SM 5310 B-2011	Organic Carbon	97.1	95.5	96.6		0.646

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2270405, 2270408, 2270411, 2270414, 2270417
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2270488, 2270489, 2270490, 2270491
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2270488, 2270489, 2270490, 2270491
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2270411, 2270417
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2270411, 2270417
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2270406, 2270409, 2270412, 2270415, 2270418
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2270406, 2270409, 2270412, 2270415, 2270418
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2270406, 2270409, 2270412, 2270415, 2270418
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2270406, 2270409, 2270412, 2270415, 2270418
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2270407, 2270410, 2270413, 2270416, 2270419
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2270449
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2270448, 2270449
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2270486, 2270487
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2270411, 2270417
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2270405, 2270408, 2270411, 2270414, 2270417
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2270490, 2270491
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2270411, 2270417
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2270405, 2270408, 2270411, 2270414, 2270417
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2270405, 2270408, 2270411, 2270414, 2270417
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2270406, 2270409, 2270412, 2270415, 2270418

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	08/19/2021			08/19/2021 13:01	Sarah A Nixon	2270405, 2270408, 2270411, 2270414, 2270417
EPA 200.7 Rev. 4.4	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/24/2021 07:35	Josef B Mick	2270488
	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/24/2021 08:50	Josef B Mick	2270490
	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/24/2021 08:58	Josef B Mick	2270491
	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/26/2021 19:35	Betina Topolski	2270489
EPA 200.8 Rev. 5.4	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/23/2021 21:19	Alexander Thompson	2270488
	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/24/2021 00:23	Alexander Thompson	2270489
	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/24/2021 00:32	Alexander Thompson	2270490
	08/19/2021	08/20/2021 12:50	Elliott D. Healy	08/24/2021 00:42	Alexander Thompson	2270491
EPA 300.0 Rev. 2.1	08/19/2021			08/27/2021 14:11	Lipi Saha	2270411
	08/19/2021			08/27/2021 14:59	Lipi Saha	2270417
EPA 350.1 Rev. 2.0	08/19/2021			08/26/2021 13:23	Ping Hua	2270406
	08/19/2021			08/26/2021 13:24	Ping Hua	2270409
	08/19/2021			08/26/2021 13:25	Ping Hua	2270412
	08/19/2021			08/27/2021 12:12	Ping Hua	2270418
	08/19/2021			08/27/2021 14:11	Ping Hua	2270415
EPA 351.2 Rev. 2.0	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 14:19	Alexandra J Mattheus	2270409
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 14:23	Alexandra J Mattheus	2270412
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 14:25	Alexandra J Mattheus	2270415
	08/19/2021	08/30/2021 13:42	Benjamin T. Nordmann	08/31/2021 14:27	Alexandra J Mattheus	2270418
	08/19/2021	08/31/2021 10:12	Benjamin T. Nordmann	09/01/2021 11:49	Alexandra J Mattheus	2270406
EPA 353.2 Rev. 2.0	08/19/2021			08/25/2021 08:47	Beverly Y. Sanders	2270418
	08/19/2021			08/25/2021 08:53	Beverly Y. Sanders	2270415
	08/19/2021			08/27/2021 10:20	Beverly Y. Sanders	2270406
	08/19/2021			08/27/2021 10:21	Beverly Y. Sanders	2270409
	08/19/2021			08/27/2021 10:22	Beverly Y. Sanders	2270412
EPA 365.1 Rev. 2.0	08/19/2021	08/23/2021 13:48	Simonne.V. Calhoun	08/25/2021 16:43	Shengyu Ding	2270406
	08/19/2021	08/23/2021 13:48	Simonne.V. Calhoun	08/25/2021 16:44	Shengyu Ding	2270409
	08/19/2021	08/23/2021 13:48	Simonne.V. Calhoun	08/25/2021 16:45	Shengyu Ding	2270412
	08/19/2021	08/23/2021 13:48	Simonne.V. Calhoun	08/25/2021 16:53	Shengyu Ding	2270415
	08/19/2021	08/23/2021 13:48	Simonne.V. Calhoun	08/25/2021 16:54	Shengyu Ding	2270418
EPA 365.1 Rev. 2.0 dissolved	08/19/2021			08/19/2021 13:24	James L Waggeberby	2270413
	08/19/2021			08/19/2021 13:25	James L Waggeberby	2270416
	08/19/2021			08/19/2021 13:26	James L Waggeberby	2270419
	08/19/2021			08/19/2021 14:18	James L Waggeberby	2270407
	08/19/2021			08/19/2021 14:19	James L Waggeberby	2270410
EPA 8270E	08/19/2021	08/20/2021 08:00	Fe-Val Siddell	08/24/2021 02:56	Arthur Maknenko	2270449
EPA 8276	08/19/2021	08/20/2021 08:00	Fe-Val Siddell	08/25/2021 11:07	Michael Poppell	2270448
	08/19/2021	08/20/2021 08:00	Fe-Val Siddell	08/25/2021 12:02	Michael Poppell	2270449

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	08/19/2021	08/20/2021 10:00	Juyoung Kim	08/20/2021 10:39	Juyoung Kim	2270486
	08/19/2021	08/20/2021 10:00	Juyoung Kim	08/20/2021 10:50	Juyoung Kim	2270487
	08/19/2021	08/20/2021 10:00	Juyoung Kim	08/20/2021 19:40	Pramila Ghimire	2270486
	08/19/2021	08/20/2021 10:00	Juyoung Kim	08/20/2021 19:54	Pramila Ghimire	2270487
	08/19/2021	08/24/2021 09:00	Hoor Shaik	08/25/2021 06:19	Juyoung Kim	2270486
	08/19/2021	08/24/2021 09:00	Hoor Shaik	08/25/2021 08:03	Juyoung Kim	2270487
SM 2120 B-2011	08/19/2021			08/19/2021 16:33	Sarah A Nixon	2270411
	08/19/2021			08/19/2021 16:34	Sarah A Nixon	2270417
SM 2320 B-2011	08/19/2021			08/23/2021 18:54	Sarah A Nixon	2270405
	08/19/2021			08/23/2021 19:08	Sarah A Nixon	2270411
	08/19/2021			08/23/2021 19:24	Sarah A Nixon	2270414
	08/19/2021			08/23/2021 19:39	Sarah A Nixon	2270417
	08/19/2021			08/23/2021 21:41	Sarah A Nixon	2270408
SM 2340B	08/19/2021			08/24/2021 08:50	Josef B Mick	2270490
	08/19/2021			08/24/2021 08:58	Josef B Mick	2270491
SM 2540 C-2011	08/19/2021			08/23/2021 15:36	Yijie Li	2270411, 2270417
SM 2540 D-2011	08/19/2021			08/23/2021 15:36	Yijie Li	2270405, 2270408, 2270411, 2270414, 2270417
SM 4500 F-C-2011	08/19/2021			08/23/2021 18:54	Sarah A Nixon	2270405
	08/19/2021			08/23/2021 19:08	Sarah A Nixon	2270411
	08/19/2021			08/23/2021 19:24	Sarah A Nixon	2270414
	08/19/2021			08/23/2021 19:39	Sarah A Nixon	2270417
	08/19/2021			08/23/2021 21:41	Sarah A Nixon	2270408
SM 5310 B-2011	08/19/2021			08/30/2021 20:28	Touraj Touran	2270415
	08/19/2021			08/30/2021 21:22	Touraj Touran	2270418
	08/19/2021			08/30/2021 22:04	Touraj Touran	2270406
	08/19/2021			08/30/2021 22:47	Touraj Touran	2270409
	08/19/2021			08/30/2021 23:01	Touraj Touran	2270412