

Chemical Analysis Report

NE-DIST-2021-08-25-02

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

Event Description: **LSJR Southside**
Request ID: **RQ-2021-08-09-22**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 20-SEP-2021 13:17

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Miramar CR @ Gadsen Rd.

Collection Date/Time: 08/24/2021 14:05

Field ID: 20030825

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271902	EPA 8270E	Aldrin	0.68	U	ng/L	P402975	
		Alpha-BHC	0.10	U	ng/L	P402975	
		Alpha-Chlordane	0.37	I	ng/L	P402975	
		Beta-BHC	0.25	I	ng/L	P402975	
		Beta-Cyfluthrin**	1.3	U	ng/L	P402975	
		Bifenthrin**	0.52	U	ng/L	P402975	
		Carbophenothion	0.94	U	ng/L	P402975	
		Chlorothalonil	0.52	U	ng/L	P402975	
		Cis-Nonachlor**	0.21	U	ng/L	P402975	
		Cypermethrin	1.6	U	ng/L	P402975	
		Dacthal**	0.16	U	ng/L	P402975	
		DDD-p,p'	0.26	U	ng/L	P402975	
		DDE-p,p'	0.21	U	ng/L	P402975	
		DDT-p,p'	0.26	U	ng/L	P402975	
		Delta-BHC	0.42	U	ng/L	P402975	
		Deltamethrin**	1.3	U	ng/L	P402975	
		Dichlobenil**	0.10	U	ng/L	P402975	
		Dicofol	1.3	U	ng/L	P402975	
		Dieldrin	4.5		ng/L	P402975	
		Endosulfan I	0.42	U	ng/L	P402975	
		Endosulfan II	0.42	U	ng/L	P402975	
		Endosulfan Sulfate	0.31	U	ng/L	P402975	
		Endrin	0.42	UJ	ng/L	P402975	LCS, MS
		Endrin Aldehyde	0.78	UJ	ng/L	P402975	LCS, MS
		Endrin Ketone	0.42	UJ	ng/L	P402975	LCS
		Esfenvalerate**	0.78	U	ng/L	P402975	
		Ethalfuralin**	0.16	U	ng/L	P402975	
		Fenpropathrin**	0.26	U	ng/L	P402975	
		Gamma-BHC	0.13	U	ng/L	P402975	
		Gamma-Chlordane	0.69	I	ng/L	P402975	
		Heptachlor	0.21	U	ng/L	P402975	
		Heptachlor Epoxide	3.1		ng/L	P402975	
		Hexachlorobenzene	1.0	U	ng/L	P402975	
		Kepone**	5.2	UJ	ng/L	P402975	CCV
		Lambda-Cyhalothrin**	0.78	U	ng/L	P402975	
		Methoxychlor	0.31	U	ng/L	P402975	
		MGK-264**	0.21	U	ng/L	P402975	
		Mirex	0.73	U	ng/L	P402975	
		Permethrin	1.7	U	ng/L	P402975	
		Phenothrin**	0.94	U	ng/L	P402975	
		Piperonyl Butoxide**	0.16	UJ	ng/L	P402975	LCS, MS
		Prallethrin**	2.1	UJ	ng/L	P402975	LCS
		Tau-Fluvalinate**	0.26	U	ng/L	P402975	
		Tetramethrin**	0.78	UJ	ng/L	P402975	LCS, RPD

Field ID: 20030825

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271902	EPA 8270E	Trans-Nonachlor**	0.31	I	ng/L	P402975	
		Triclosan Methyl**	0.16	U	ng/L	P402975	
		Trifluralin	0.21	U	ng/L	P402975	
2271907	EPA 200.7 Rev. 4.4	Barium	42.7		ug/L	P403028	
		Calcium	45.0		mg/L	P403028	
		Iron	900		ug/L	P403028	
		Magnesium	10.5		mg/L	P403028	
		Manganese	67.0		ug/L	P403028	
		Potassium	2.7		mg/L	P403028	
		Sodium	19.8		mg/L	P403028	
	EPA 200.8 Rev. 5.4	Zinc	9.0	I	ug/L	P403028	
		Aluminum	30		ug/L	P403028	
		Antimony	0.15	I	ug/L	P403028	
		Arsenic	0.80		ug/L	P403028	
		Beryllium	0.077		ug/L	P403028	
		Boron**	55.5		ug/L	P403028	
		Cadmium	0.020	U	ug/L	P403028	
		Chromium	0.40	U	ug/L	P403028	
		Copper	1.38		ug/L	P403028	
		Lead	0.39	I	ug/L	P403028	
		Nickel	0.91	I	ug/L	P403028	
		Selenium	0.20	U	ug/L	P403028	
		Silver	0.010	U	ug/L	P403028	
		Thallium	0.10	U	ug/L	P403028	
	SM 2340B	Hardness	156		mg/L	P403028	

Ref. Method and Comment:

EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes. Precision data for piperonyl butoxide not reported due to low recoveries.

Sample Location: Miramar at San Jose

Collection Date/Time: 08/24/2021 14:15

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271893	EPA 180.1 Rev. 2.0	Turbidity	2.0		NTU	P402983	
	EPA 300.0 Rev. 2.1	Chloride	28		mg Cl/L	P403238	
		Sulfate	64		mg SO4/L	P403242	
	SM 2120 B-2011	Color (true)	29	A	PCU	P402990	
	SM 2320 B-2011	Total Alkalinity	90	A	mg CaCO3/L	P403060	
	SM 2540 C-2011	TDS	243		mg/L	P403400	
	SM 2540 D-2011	TSS	2	I	mg/L	P403393	
2271894	SM 4500 F-C-2011	Fluoride	0.14		mg F/L	P403064	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.073		mg N/L	P403139	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.46		mg N/L	P403311	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.3		mg N/L	P403182	
	EPA 365.1 Rev. 2.0	Total-P	0.064		mg P/L	P403140	
2271895	SM 5310 B-2011	Organic Carbon	6.2		mg C/L	P403373	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.042		mg P/L	P402970	
2271901	EPA 8270E	Aldrin	0.70	U	ng/L	P402975	
		Alpha-BHC	0.11	U	ng/L	P402975	
		Alpha-Chlordane	0.42	I	ng/L	P402975	
		Beta-BHC	0.67		ng/L	P402975	
		Beta-Cyfluthrin**	1.3	U	ng/L	P402975	
		Bifenthrin**	0.54	U	ng/L	P402975	
		Carbophenothion	0.97	U	ng/L	P402975	
		Chlorothalonil	0.54	U	ng/L	P402975	
		Cis-Nonachlor**	0.22	U	ng/L	P402975	
		Cypermethrin	1.6	U	ng/L	P402975	
		Dacthal**	0.16	U	ng/L	P402975	
		DDD-p,p'	0.27	U	ng/L	P402975	
		DDE-p,p'	0.22	U	ng/L	P402975	
		DDT-p,p'	0.27	U	ng/L	P402975	
		Delta-BHC	0.48	I	ng/L	P402975	
		Deltamethrin**	1.3	U	ng/L	P402975	
		Dichlobenil**	0.11	U	ng/L	P402975	
		Dicofol	1.3	U	ng/L	P402975	
		Dieldrin	15		ng/L	P402975	
		Endosulfan I	0.43	U	ng/L	P402975	
		Endosulfan II	0.43	U	ng/L	P402975	
		Endosulfan Sulfate	0.32	U	ng/L	P402975	
		Endrin	0.43	UJ	ng/L	P402975	LCS, MS
		Endrin Aldehyde	0.81	UJ	ng/L	P402975	LCS, MS
		Endrin Ketone	0.53	IJ	ng/L	P402975	LCS
		Esfenvalerate**	0.81	U	ng/L	P402975	
		Ethalfuralin**	0.16	U	ng/L	P402975	
		Fenpropathrin**	0.27	U	ng/L	P402975	
		Gamma-BHC	0.13	U	ng/L	P402975	

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271901	EPA 8270E	Gamma-Chlordane	0.97	I	ng/L	P402975	
		Heptachlor	0.22	U	ng/L	P402975	
		Heptachlor Epoxide	4.7		ng/L	P402975	
		Hexachlorobenzene	1.1	U	ng/L	P402975	
		Kepone**	5.4	UJ	ng/L	P402975	CCV
		Lambda-Cyhalothrin**	0.81	U	ng/L	P402975	
		Methoxychlor	0.32	U	ng/L	P402975	
		MGK-264**	0.22	U	ng/L	P402975	
		Mirex	0.75	U	ng/L	P402975	
		Permethrin	1.7	U	ng/L	P402975	
		Phenothrin**	0.97	U	ng/L	P402975	
		Piperonyl Butoxide**	0.16	UJ	ng/L	P402975	LCS, MS
		Prallethrin**	2.2	UJ	ng/L	P402975	LCS
		Tau-Fluvalinate**	0.27	U	ng/L	P402975	
		Tetramethrin**	0.81	UJ	ng/L	P402975	LCS, RPD
		Trans-Nonachlor**	0.38	I	ng/L	P402975	
		Triclosan Methyl**	0.16	U	ng/L	P402975	
		Trifluralin	0.22	U	ng/L	P402975	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.

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. Precision data for piperonyl butoxide not reported due to low recoveries.

Sample Location: Goodbys CR at Baymeadows

Collection Date/Time: 08/24/2021 14:50

Field ID: 20030593

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271890	EPA 180.1 Rev. 2.0	Turbidity	6.9		NTU	P402983	
	SM 2320 B-2011	Total Alkalinity	88		mg CaCO3/L	P403060	
	SM 2540 D-2011	TSS	6	I	mg/L	P403396	
	SM 4500 F-C-2011	Fluoride	0.11		mg F/L	P403064	
2271891	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P403139	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P403311	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.045		mg N/L	P403182	
	EPA 365.1 Rev. 2.0	Total-P	0.13		mg P/L	P403140	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P403373	
2271892	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.048		mg P/L	P402970	
2271900	EPA 8276	Chlordane	5.2	U	ng/L	P402975	
		Toxaphene	31	U	ng/L	P402975	
2271905	EPA 8321B	2,4-D	0.024		ug/L	P403027	
		Acesulfame K	0.10	U	ug/L	P402974	
		2,4,5-T	0.0040	U	ug/L	P403027	
		AMPA	0.35	I	ug/L	P402974	
		Acetaminophen	0.0080	U	ug/L	P403027	
		Acetamiprid	0.0020	U	ug/L	P403027	
		Endothall	0.25	U	ug/L	P402974	
		Glufosinate	0.10	U	ug/L	P402974	
		Glyphosate	0.53		ug/L	P402974	
		Afidopyropen	0.0020	U	ug/L	P403027	
		Bentazon	0.053		ug/L	P403027	
		Sucralose	0.20		ug/L	P402974	
		Benzovindiflupyr	0.0020	U	ug/L	P403027	
		Carbamazepine	8.0E-04	U	ug/L	P403027	
		Clothianidin	0.0054	I	ug/L	P403027	
		Dinotefuran	0.0033	I	ug/L	P403027	
		Diuron	0.096		ug/L	P403027	
		Fenuron	0.016	U	ug/L	P403027	
		Fluridone	0.034		ug/L	P403027	
		Imazapyr	0.22		ug/L	P403027	
		Hydrocodone	0.0020	U	ug/L	P403027	
		Ibuprofen	0.020	U	ug/L	P403027	
		Imidacloprid	0.029		ug/L	P403027	
		Linuron	0.0040	U	ug/L	P403027	
		Mandestrobin	0.0020	U	ug/L	P403027	
		MCP	0.0062	I	ug/L	P403027	
		Naproxen	0.0080	U	ug/L	P403027	
		Primidone	0.0040	U	ug/L	P403027	MS, RPD
		Pyraclostrobin	0.0020	U	ug/L	P403027	
		Thiamethoxam	0.020		ug/L	P403027	
		Tolfenpyrad	0.0020	U	ug/L	P403027	

Field ID: 20030593

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2271905	EPA 8321B	Triclopyr	0.0040	U	ug/L	P403027	
2271906	EPA 200.7 Rev. 4.4	Calcium	35.6		mg/L	P403028	
		Iron	820		ug/L	P403028	
		Magnesium	8.54		mg/L	P403028	
		Manganese	27.2		ug/L	P403028	
		Zinc	5.2	I	ug/L	P403028	
	EPA 200.8 Rev. 5.4	Aluminum	82		ug/L	P403028	
		Antimony	0.15	I	ug/L	P403028	
		Arsenic	3.24		ug/L	P403028	
		Beryllium	0.017	I	ug/L	P403028	
		Cadmium	0.020	U	ug/L	P403028	
		Chromium	0.45	I	ug/L	P403028	
		Copper	1.70		ug/L	P403028	
		Lead	0.61		ug/L	P403028	
		Nickel	0.50	U	ug/L	P403028	
		Selenium	0.20	U	ug/L	P403028	
		Silver	0.010	U	ug/L	P403028	
		Thallium	0.10	U	ug/L	P403028	

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 some analytes 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: P402983

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403028

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: P403028

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: P403238

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403139

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403311

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403182

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403140

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402970

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

Reference Method: EPA 8270E
Batch ID: P402975

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402975

Component	Result	Code	Units
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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P402975

Component	Result	Code	Units
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: P402975

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

Reference Method: EPA 8321B

Batch ID: P402974

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: P403027

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P403027

Component	Result	Code	Units
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
MCP	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: P402990

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P403060

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

Reference Method: SM 2540 C-2011
Batch ID: P403400

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P403393

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P403396

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P403064

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P403373

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: P403028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	89.9		P	85 - 115
Iron	106		P	85 - 115
Magnesium	89.1		P	85 - 115
Manganese	101		P	85 - 115
Potassium	103		P	85 - 115
Sodium	90.6		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	101		P	85 - 115
Beryllium	107		P	85 - 115
Boron	99.9		P	85 - 115
Cadmium	99.7		P	85 - 115
Chromium	98.2		P	85 - 115
Copper	99.9		P	85 - 115
Lead	100		P	85 - 115
Nickel	101		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: P403238

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403139

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403311

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P403182

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P403140

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P402970

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

Reference Method: EPA 8270E
 Batch ID: P402975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	53.3	56.3	P/P	20 - 150
Alpha-BHC	88.5	89.0	P/P	50 - 150
Alpha-Chlordane	72.1	70.1	P/P	50 - 150
Beta-BHC	117	111	P/P	50 - 150
Beta-Cyfluthrin	90.8	91.3	P/P	50 - 150
Bifenthrin	79.4	89.6	P/P	40 - 150
Carbophenothion	61.7	60.2	P/P	20 - 150
Chlorothalonil	39.2	46.7	P/P	20 - 150
Cis-Nonachlor	79.5	77.4	P/P	50 - 150
Cypermethrin	92.3	88.8	P/P	50 - 150
Dacthal	87.1	87.8	P/P	50 - 150
DDD-p,p'	85.7	81.4	P/P	50 - 150
DDE-p,p'	71.8	74.9	P/P	50 - 150
DDT-p,p'	73.4	68.5	P/P	50 - 150
Delta-BHC	124	121	P/P	50 - 150
Deltamethrin	95.2	97.8	P/P	50 - 150
Dichlobenil	76.2	69.9	P/P	40 - 150
Dicofol	79.9	68.8	P/P	50 - 150
Dieldrin	60.0	61.9	P/P	50 - 150
Endosulfan I	78.9	85.9	P/P	50 - 150
Endosulfan II	84.4	84.6	P/P	50 - 150
Endosulfan Sulfate	101	95.0	P/P	50 - 150
Endrin	4.52	4.44	F/F	50 - 150
Endrin Aldehyde	45.9	43.4	F/F	50 - 150
Endrin Ketone	160	151	F/F	50 - 150
Esfenvalerate	84.4	85.0	P/P	50 - 180
Ethalfuralin	50.6	54.2	P/P	50 - 150
Fenpropathrin	56.0	56.8	P/P	50 - 150
Gamma-BHC	92.3	92.3	P/P	50 - 150
Gamma-Chlordane	72.3	73.4	P/P	50 - 150
Heptachlor	64.4	66.2	P/P	50 - 150
Heptachlor Epoxide	79.8	79.9	P/P	50 - 150
Hexachlorobenzene	75.2	71.8	P/P	50 - 150
Kepone	82.9	68.3	P/P	30 - 180

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P402975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lambda-Cyhalothrin	97.1	98.3	P/P	50 - 200
Methoxychlor	81.2	82.0	P/P	50 - 150
MGK-264	81.9	82.0	P/P	30 - 150
Mirex	64.6	62.4	P/P	50 - 180
Permethrin	98.7	96.4	P/P	50 - 150
Phenothrin	65.4	62.4	P/P	20 - 150
Piperonyl Butoxide	0.534	0.375	F/F	50 - 150
Prallethrin	27.3	27.1	F/F	30 - 150
Tau-Fluvalinate	82.8	80.2	P/P	40 - 150
Tetramethrin	4.37	15.7	F/F	30 - 150
Trans-Nonachlor	69.3	72.5	P/P	50 - 150
Triclosan Methyl	75.8	80.0	P/P	50 - 150
Trifluralin	71.6	74.5	P/P	50 - 150

Reference Method: EPA 8276

Batch ID: P402975

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	103	99.8	P/P	56 - 117
Toxaphene	73.5	71.4	P/P	45 - 116

Reference Method: EPA 8321B

Batch ID: P402974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	78.6		P	40 - 150
AMPA	82.4		P	40 - 150
Endothall	68.1		P	40 - 150
Glufosinate	105		P	40 - 150
Glyphosate	107		P	40 - 150
Sucralose	90.2		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P403027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.8		P	40 - 150
2,4,5-T	106		P	40 - 150
Acetaminophen	80.2		P	30 - 150
Acetamiprid	96.1		P	40 - 150
Afidopyropen	83.2		P	40 - 150
Bentazon	119		P	30 - 150
Benzovindiflupyr	94.7		P	40 - 150
Carbamazepine	85.8		P	40 - 150
Clothianidin	98.4		P	40 - 150
Dinotefuran	84.8		P	40 - 150
Diuron	79.0		P	40 - 150
Fenuron	94.5		P	40 - 150
Fluridone	100		P	40 - 150
Hydrocodone	77.7		P	40 - 150
Ibuprofen	54.6		P	40 - 150
Imazapyr	85.0		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P403027

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	97.3		P	40 - 150
Linuron	83.9		P	40 - 150
Mandestrobin	95.1		P	40 - 150
MCPP	91.7		P	40 - 150
Naproxen	98.6		P	40 - 150
Primidone	84.9		P	40 - 150
Pyraclostrobin	87.5		P	40 - 150
Thiamethoxam	92.7		P	40 - 150
Tolfenpyrad	51.5		P	30 - 150
Triclopyr	97.3		P	40 - 150

Reference Method: SM 2120 B-2011

Batch ID: P402990

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

Reference Method: SM 2320 B-2011

Batch ID: P403060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	94 - 106

Reference Method: SM 4500 F-C-2011

Batch ID: P403064

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	93 - 104

Reference Method: SM 5310 B-2011

Batch ID: P403373

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	95.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P403028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271803	Barium	100		P	80 - 120
2271803	Calcium	98.6		P	80 - 120
2271803	Iron	107		P	80 - 120
2271803	Magnesium	108		P	80 - 120
2271803	Manganese	101		P	80 - 120
2271803	Potassium	105		P	80 - 120
2271803	Sodium	99.3		P	80 - 120
2271803	Zinc	102		P	80 - 120
2271907	Barium	98.7	99.2	P/P	80 - 120
2271907	Calcium	97.2		P	80 - 120
2271907	Iron	106	105	P/P	80 - 120
2271907	Magnesium	99.0		P	80 - 120
2271907	Manganese	99.1	99.6	P/P	80 - 120
2271907	Potassium	103	102	P/P	80 - 120
2271907	Sodium	101		P	80 - 120
2271907	Zinc	97.1	98.5	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P403028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271803	Aluminum	102		P	80 - 120
2271803	Antimony	104		P	80 - 120
2271803	Arsenic	102		P	80 - 120
2271803	Beryllium	104		P	80 - 120
2271803	Boron	107		P	80 - 120
2271803	Cadmium	104		P	80 - 120
2271803	Chromium	101		P	80 - 120
2271803	Copper	99.4		P	80 - 120
2271803	Lead	105		P	80 - 120
2271803	Nickel	101		P	80 - 120
2271803	Selenium	100		P	80 - 120
2271803	Silver	105		P	80 - 120
2271803	Thallium	112		P	80 - 120
2271907	Aluminum	100	102	P/P	80 - 120
2271907	Antimony	106	108	P/P	80 - 120
2271907	Arsenic	103	106	P/P	80 - 120
2271907	Beryllium	93.4	106	P/P	80 - 120
2271907	Boron	105	107	P/P	80 - 120
2271907	Cadmium	103	107	P/P	80 - 120
2271907	Chromium	103	106	P/P	80 - 120
2271907	Copper	98.4	101	P/P	80 - 120
2271907	Lead	104	105	P/P	80 - 120
2271907	Nickel	100	102	P/P	80 - 120
2271907	Selenium	101	103	P/P	80 - 120
2271907	Silver	104	105	P/P	80 - 120
2271907	Thallium	109	112	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403238

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: P403238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271671	Chloride	101		P	90 - 110
2271970	Chloride	99.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403242

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271970	Sulfate	99.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403139

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271794	Ammonia-N	94.6	95.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403311

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271869	Kjeldahl Nitrogen	104	108	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403182

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271977	NO2NO3-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403140

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2272132	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P402970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271821	O-Phosphate-P	97.0	99.4	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P402975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271901	Aldrin	60.2	60.3	P/P	20 - 170
2271901	Alpha-BHC	88.2	86.4	P/P	50 - 170
2271901	Alpha-Chlordane	67.0	71.4	P/P	50 - 170
2271901	Beta-BHC	98.4	102	P/P	50 - 170
2271901	Beta-Cyfluthrin	106	112	P/P	50 - 170
2271901	Bifenthrin	128	125	P/P	40 - 170
2271901	Carbophenothion	63.0	70.7	P/P	20 - 170
2271901	Chlorothalonil	39.8	42.5	P/P	20 - 170
2271901	Cis-Nonachlor	75.8	74.4	P/P	50 - 170

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P402975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271901	Cypermethrin	111	112	P/P	50 - 170
2271901	Dacthal	76.6	99.6	P/P	50 - 170
2271901	DDD-p,p'	84.9	90.5	P/P	50 - 170
2271901	DDE-p,p'	71.4	74.9	P/P	50 - 170
2271901	DDT-p,p'	73.6	73.4	P/P	50 - 170
2271901	Delta-BHC	105	100	P/P	50 - 170
2271901	Deltamethrin	115	121	P/P	50 - 170
2271901	Dichlobenil	71.3	76.9	P/P	40 - 170
2271901	Dicofol	62.5	63.6	P/P	50 - 170
2271901	Dieldrin	78.1	86.4	P/P	50 - 170
2271901	Endosulfan I	73.2	75.6	P/P	50 - 170
2271901	Endosulfan II	74.4	76.9	P/P	50 - 170
2271901	Endosulfan Sulfate	71.8	76.9	P/P	50 - 170
2271901	Endrin	34.6	36.2	F/F	50 - 170
2271901	Endrin Aldehyde	41.6	42.2	F/F	50 - 170
2271901	Endrin Ketone	108	113	P/P	50 - 170
2271901	Esfenvalerate	99.7	101	P/P	50 - 180
2271901	Ethalfuralin	67.7	62.0	P/P	50 - 170
2271901	Fenpropathrin	80.8	83.5	P/P	50 - 170
2271901	Gamma-BHC	94.1	93.1	P/P	50 - 170
2271901	Gamma-Chlordane	72.4	74.1	P/P	50 - 170
2271901	Heptachlor	68.2	68.1	P/P	50 - 170
2271901	Heptachlor Epoxide	69.6	88.3	P/P	50 - 170
2271901	Hexachlorobenzene	73.2	73.8	P/P	50 - 170
2271901	Kepone	70.0	75.9	P/P	30 - 180
2271901	Lambda-Cyhalothrin	136	131	P/P	50 - 200
2271901	Methoxychlor	91.0	87.8	P/P	50 - 170
2271901	MGK-264	77.7	85.6	P/P	30 - 170
2271901	Mirex	69.5	69.7	P/P	50 - 180
2271901	Permethrin	129	130	P/P	50 - 170
2271901	Phenothrin	90.5	91.2	P/P	20 - 170
2271901	Piperonyl Butoxide	0.0719	0.712	F/F	50 - 170
2271901	Prallethrin	50.5	50.6	P/P	30 - 170
2271901	Tau-Fluvalinate	95.1	101	P/P	40 - 170
2271901	Tetramethrin	81.5	82.8	P/P	30 - 170
2271901	Trans-Nonachlor	65.2	70.7	P/P	50 - 170
2271901	Triclosan Methyl	72.3	77.0	P/P	50 - 170
2271901	Trifluralin	75.4	74.2	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P402975

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2270935	Chlordane	82.6	78.9	P/P	47 - 128
2270935	Toxaphene	60.6	76.9	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P402974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271284	Acesulfame K	56.7	57.9	P/P	40 - 150
2271284	AMPA	91.0	91.7	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P402974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271284	Endothall	101	103	P/P	40 - 150
2271284	Glufosinate	107	106	P/P	40 - 150
2271284	Glyphosate	108	110	P/P	40 - 150
2271284	Sucralose	93.6	94.0	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P403027

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271466	2,4-D	105	96.8	P/P	40 - 150
2271466	2,4,5-T	111	101	P/P	40 - 150
2271466	Acetaminophen	81.5	84.3	P/P	30 - 150
2271466	Acetamiprid	91.7	84.6	P/P	40 - 150
2271466	Afidopyropen	111	99.8	P/P	40 - 150
2271466	Benzovindiflupyr	92.0	95.7	P/P	40 - 150
2271466	Carbamazepine	88.7	92.1	P/P	40 - 150
2271466	Clothianidin	68.7	70.6	P/P	40 - 150
2271466	Diuron	89.8	87.8	P/P	40 - 150
2271466	Fenuron	99.3	95.6	P/P	40 - 150
2271466	Fluridone	94.8	100	P/P	40 - 150
2271466	Hydrocodone	98.2	87.5	P/P	40 - 150
2271466	Ibuprofen	70.5	65.9	P/P	40 - 150
2271466	Imidacloprid	92.3	91.1	P/P	40 - 150
2271466	Linuron	99.3	77.0	P/P	40 - 150
2271466	Mandestrobin	104	101	P/P	40 - 150
2271466	MCPP	118	110	P/P	40 - 150
2271466	Naproxen	94.3	87.8	P/P	40 - 150
2271466	Primidone	32.3	50.6	F/P	40 - 150
2271466	Pyraclostrobin	91.3	87.3	P/P	40 - 150
2271466	Thiamethoxam	99.5	90.5	P/P	40 - 150
2271466	Tolfenpyrad	52.1	52.1	P/P	30 - 150
2271466	Triclopyr	106	96.9	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P403064

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271893	Fluoride	100	99.4	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P403373

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2271437	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P402983

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271874	Turbidity	1.22	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P403028

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271907	Barium	0.516	Spike	P	0 - 20
2271907	Calcium	0.684	Spike	P	0 - 20
2271907	Iron	0.379	Spike	P	0 - 20
2271907	Magnesium	1.07	Spike	P	0 - 20
2271907	Manganese	0.324	Spike	P	0 - 20
2271907	Potassium	0.357	Spike	P	0 - 20
2271907	Sodium	0.600	Spike	P	0 - 20
2271907	Zinc	1.44	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P403028

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271907	Aluminum	1.70	Spike	P	0 - 20
2271907	Antimony	1.85	Spike	P	0 - 20
2271907	Arsenic	2.09	Spike	P	0 - 20
2271907	Beryllium	10.7	Spike	P	0 - 20
2271907	Boron	1.10	Spike	P	0 - 20
2271907	Cadmium	3.34	Spike	P	0 - 20
2271907	Chromium	1.96	Spike	P	0 - 20
2271907	Copper	2.41	Spike	P	0 - 20
2271907	Lead	1.68	Spike	P	0 - 20
2271907	Nickel	0.996	Spike	P	0 - 20
2271907	Selenium	1.74	Spike	P	0 - 20
2271907	Silver	0.0537	Spike	P	0 - 20
2271907	Thallium	2.83	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403238

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271671	Chloride	0.720	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403242

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271671	Sulfate	0.781	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P403139

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271794	Ammonia-N	0.339	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P403311

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271869	Kjeldahl Nitrogen	2.15	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P403182

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271977	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P403140

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2272132	Total-P	1.02	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P402970

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271821	O-Phosphate-P	2.44	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P402975

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271901	Aldrin	0.0674	Spike	P	0 - 30
2271901	Alpha-BHC	2.06	Spike	P	0 - 30
2271901	Alpha-Chlordane	5.52	Spike	P	0 - 30
2271901	Beta-BHC	3.25	Spike	P	0 - 30
2271901	Beta-Cyfluthrin	5.90	Spike	P	0 - 30
2271901	Bifenthrin	2.46	Spike	P	0 - 30
2271901	Carbophenothion	11.5	Spike	P	0 - 30
2271901	Chlorothalonil	6.55	Spike	P	0 - 50
2271901	Cis-Nonachlor	1.83	Spike	P	0 - 30
2271901	Cypermethrin	1.09	Spike	P	0 - 30
2271901	Dacthal	26.2	Spike	P	0 - 30
2271901	DDD-p,p'	6.38	Spike	P	0 - 30
2271901	DDE-p,p'	4.78	Spike	P	0 - 30
2271901	DDT-p,p'	0.271	Spike	P	0 - 30
2271901	Delta-BHC	4.91	Spike	P	0 - 30
2271901	Deltamethrin	4.67	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P402975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271901	Dichlobenil	7.57	Spike	P	0 - 30
2271901	Dicofol	1.75	Spike	P	0 - 30
2271901	Dieldrin	4.33	Spike	P	0 - 30
2271901	Endosulfan I	3.32	Spike	P	0 - 30
2271901	Endosulfan II	3.42	Spike	P	0 - 30
2271901	Endosulfan Sulfate	6.88	Spike	P	0 - 30
2271901	Endrin	4.64	Spike	P	0 - 30
2271901	Endrin Aldehyde	1.39	Spike	P	0 - 30
2271901	Endrin Ketone	4.46	Spike	P	0 - 30
2271901	Esfenvalerate	1.41	Spike	P	0 - 30
2271901	Ethalfuralin	8.80	Spike	P	0 - 30
2271901	Fenpropathrin	3.30	Spike	P	0 - 30
2271901	Gamma-BHC	1.09	Spike	P	0 - 30
2271901	Gamma-Chlordane	1.65	Spike	P	0 - 30
2271901	Heptachlor	0.133	Spike	P	0 - 30
2271901	Heptachlor Epoxide	8.68	Spike	P	0 - 30
2271901	Hexachlorobenzene	0.803	Spike	P	0 - 30
2271901	Kepone	8.07	Spike	P	0 - 30
2271901	Lambda-Cyhalothrin	3.72	Spike	P	0 - 30
2271901	Methoxychlor	3.56	Spike	P	0 - 30
2271901	MGK-264	9.70	Spike	P	0 - 30
2271901	Mirex	0.274	Spike	P	0 - 30
2271901	Permethrin	0.905	Spike	P	0 - 30
2271901	Phenothrin	0.750	Spike	P	0 - 30
2271901	Prallethrin	0.236	Spike	P	0 - 30
2271901	Tau-Fluvalinate	5.57	Spike	P	0 - 30
2271901	Tetramethrin	1.57	Spike	P	0 - 30
2271901	Trans-Nonachlor	7.01	Spike	P	0 - 30
2271901	Triclosan Methyl	6.31	Spike	P	0 - 30
2271901	Trifluralin	1.59	Spike	P	0 - 30
LFB	Aldrin	5.42	LCS	P	0 - 30
LFB	Alpha-BHC	0.519	LCS	P	0 - 30
LFB	Alpha-Chlordane	2.74	LCS	P	0 - 30
LFB	Beta-BHC	5.36	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	0.624	LCS	P	0 - 30
LFB	Bifenthrin	12.0	LCS	P	0 - 30
LFB	Carbophenothion	2.48	LCS	P	0 - 30
LFB	Chlorothalonil	17.4	LCS	P	0 - 50
LFB	Cis-Nonachlor	2.71	LCS	P	0 - 30
LFB	Cypermethrin	3.84	LCS	P	0 - 30
LFB	Dacthal	0.792	LCS	P	0 - 30
LFB	DDD-p,p'	5.19	LCS	P	0 - 30
LFB	DDE-p,p'	4.32	LCS	P	0 - 30
LFB	DDT-p,p'	6.98	LCS	P	0 - 30
LFB	Delta-BHC	2.47	LCS	P	0 - 30
LFB	Deltamethrin	2.68	LCS	P	0 - 30
LFB	Dichlobenil	8.71	LCS	P	0 - 30
LFB	Dicofol	15.0	LCS	P	0 - 30
LFB	Dieldrin	3.13	LCS	P	0 - 30
LFB	Endosulfan I	8.50	LCS	P	0 - 30
LFB	Endosulfan II	0.277	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P402975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Endosulfan Sulfate	6.54	LCS	P	0 - 30
LFB	Endrin	1.58	LCS	P	0 - 30
LFB	Endrin Aldehyde	5.60	LCS	P	0 - 30
LFB	Endrin Ketone	6.15	LCS	P	0 - 30
LFB	Esfenvalerate	0.682	LCS	P	0 - 30
LFB	Ethalfuralin	6.98	LCS	P	0 - 30
LFB	Fenpropathrin	1.40	LCS	P	0 - 30
LFB	Gamma-BHC	0.0474	LCS	P	0 - 30
LFB	Gamma-Chlordane	1.48	LCS	P	0 - 30
LFB	Heptachlor	2.61	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.119	LCS	P	0 - 30
LFB	Hexachlorobenzene	4.64	LCS	P	0 - 30
LFB	Kepone	19.2	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	1.25	LCS	P	0 - 30
LFB	Methoxychlor	0.973	LCS	P	0 - 30
LFB	MGK-264	0.170	LCS	P	0 - 30
LFB	Mirex	3.46	LCS	P	0 - 30
LFB	Permethrin	2.29	LCS	P	0 - 30
LFB	Phenothrin	4.67	LCS	P	0 - 30
LFB	Prallethrin	0.821	LCS	P	0 - 30
LFB	Tau-Fluvalinate	3.19	LCS	P	0 - 30
LFB	Tetramethrin	113	LCS	F	0 - 30
LFB	Trans-Nonachlor	4.50	LCS	P	0 - 30
LFB	Triclosan Methyl	5.38	LCS	P	0 - 30
LFB	Trifluralin	4.01	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P402975

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2270935	Chlordane	4.47	Spike	P	0 - 30
2270935	Toxaphene	23.7	Spike	P	0 - 30
LFB	Chlordane	3.32	LCS	P	0 - 30
LFB	Toxaphene	2.88	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P402974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271284	Acesulfame K	2.14	Spike	P	0 - 30
2271284	AMPA	0.789	Spike	P	0 - 30
2271284	Endothall	2.32	Spike	P	0 - 30
2271284	Glufosinate	0.745	Spike	P	0 - 30
2271284	Glyphosate	2.50	Spike	P	0 - 30
2271284	Sucralose	0.483	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P403027

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271466	2,4-D	7.65	Spike	P	0 - 30
2271466	2,4,5-T	9.54	Spike	P	0 - 30
2271466	Acetaminophen	3.38	Spike	P	0 - 30
2271466	Acetamiprid	8.00	Spike	P	0 - 30
2271466	Afidopyropen	10.3	Spike	P	0 - 30
2271466	Bentazon	11.5	Spike	P	0 - 30
2271466	Benzovindiflupyr	3.81	Spike	P	0 - 30
2271466	Carbamazepine	3.45	Spike	P	0 - 30
2271466	Clothianidin	2.74	Spike	P	0 - 30
2271466	Dinotefuran	7.69	Spike	P	0 - 30
2271466	Diuron	2.22	Spike	P	0 - 30
2271466	Fenuron	3.73	Spike	P	0 - 30
2271466	Fluridone	5.58	Spike	P	0 - 30
2271466	Hydrocodone	11.5	Spike	P	0 - 30
2271466	Ibuprofen	6.74	Spike	P	0 - 30
2271466	Imazapyr	11.0	Spike	P	0 - 30
2271466	Imidacloprid	1.18	Spike	P	0 - 30
2271466	Linuron	25.3	Spike	P	0 - 30
2271466	Mandestrobin	3.39	Spike	P	0 - 30
2271466	MCP	6.59	Spike	P	0 - 30
2271466	Naproxen	7.15	Spike	P	0 - 30
2271466	Primidone	44.0	Spike	F	0 - 30
2271466	Pyraclostrobin	4.52	Spike	P	0 - 30
2271466	Thiamethoxam	9.47	Spike	P	0 - 30
2271466	Tolfenpyrad	0.0501	Spike	P	0 - 30
2271466	Triclopyr	8.83	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P402990

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271893	Color (true)	0.989	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P403060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271893	Total Alkalinity	1.36	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P403400

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271747	TDS	6.21	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P403064

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271893	Fluoride	0.457	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P403373

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2271437	Organic Carbon	0.165	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2271900
Field Sample ID: 20030593

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	59.2	P	29 - 92.0
EPA 8276	PCNB	70.7	P	43 - 134

Lab Sample ID: 2271901
Field Sample ID: G2NE1164

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.1	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	68.0	P	30 - 110

Lab Sample ID: 2271902
Field Sample ID: 20030825

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	66.2	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	51.7	P	30 - 110

Lab Sample ID: 2271905
Field Sample ID: 20030593

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	105	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	74.5	P	30 - 160
EPA 8321B	Diuron-d6	80.5	P	30 - 160
EPA 8321B	Endothall-d6	130	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	54.2	P	30 - 160
EPA 8321B	Primidone-d5	38.0	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107463

Included Lab Sample IDs: 2271892, 2271895

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107470

Included Lab Sample IDs: 2271890, 2271893

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

Reference Method: SM 2120 B-2011

Run ID: A107472

Included Lab Sample IDs: 2271893

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

Reference Method: SM 2320 B-2011

Run ID: A107502

Included Lab Sample IDs: 2271890, 2271893

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

Reference Method: SM 4500 F-C-2011

Run ID: A107502

Included Lab Sample IDs: 2271890, 2271893

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

Reference Method: EPA 8321B

Run ID: A107519

Included Lab Sample IDs: 2271905

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	78.1		P	60 - 160
Glufosinate	99.7		P	60 - 160
Glyphosate	101		P	60 - 160

Reference Method: EPA 8270E

Run ID: A107525

Included Lab Sample IDs: 2271901, 2271902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	97.8		P	80 - 120
Alpha-BHC	97.9		P	80 - 120
Alpha-Chlordane	97.1		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	108		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A107525

Included Lab Sample IDs: 2271901, 2271902

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bifenthrin	103		P	80 - 120
Carbophenothion	102		P	80 - 120
Chlorothalonil	97.7		P	80 - 120
Cis-Nonachlor	104		P	80 - 120
Cypermethrin	106		P	80 - 120
Dacthal	96.5		P	80 - 120
DDD-p,p'	103		P	80 - 120
DDE-p,p'	96.4		P	80 - 120
DDT-p,p'	98.6		P	80 - 120
Delta-BHC	103		P	80 - 120
Deltamethrin	97.4		P	80 - 120
Dichlobenil	98.0		P	80 - 120
Dicofol	91.7		P	80 - 120
Dieldrin	87.9		P	80 - 120
Endosulfan I	99.6		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	105		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	97.9		P	80 - 120
Endrin Ketone	99.7		P	80 - 120
Esfenvalerate	97.3		P	80 - 120
Ethalfuralin	96.8		P	80 - 120
Fenpropathrin	102		P	80 - 120
Gamma-BHC	109		P	80 - 120
Gamma-Chlordane	97.8		P	80 - 120
Heptachlor	98.4		P	80 - 120
Heptachlor Epoxide	97.5		P	80 - 120
Hexachlorobenzene	96.4		P	80 - 120
Kepone	77.3*		F	80 - 120
Lambda-Cyhalothrin	110		P	80 - 120
Methoxychlor	93.6		P	80 - 120
MGK-264	98.1		P	80 - 120
Mirex	104		P	80 - 120
Permethrin	103		P	80 - 120
Phenothrin	105		P	80 - 120
Piperonyl Butoxide	103		P	80 - 120
Prallethrin	104		P	80 - 120
Tau-Fluvalinate	103		P	80 - 120
Tetramethrin	114		P	80 - 120
Trans-Nonachlor	96.7		P	80 - 120
Triclosan Methyl	95.8		P	80 - 120
Trifluralin	97.8		P	80 - 120

Reference Method: EPA 8321B

Run ID: A107530

Included Lab Sample IDs: 2271905

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	65.2	101	P/P	60 - 160
Endothall	73.4	86.1	P/P	60 - 160
Sucralose	90.6	90.9	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107544

Included Lab Sample IDs: 2271891, 2271894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.4	99.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107555

Included Lab Sample IDs: 2271891, 2271894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	99.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107562

Included Lab Sample IDs: 2271891, 2271894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.4	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107581

Included Lab Sample IDs: 2271906, 2271907

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	103	P/P	90 - 110
Aluminum	100	101	P/P	90 - 110
Antimony	102	102	P/P	90 - 110
Antimony	99.1	102	P/P	90 - 110
Arsenic	101	98.0	P/P	90 - 110
Arsenic	99.6	100	P/P	90 - 110
Beryllium	102	104	P/P	90 - 110
Beryllium	105	103	P/P	90 - 110
Boron	98.2	102	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Cadmium	98.6	102	P/P	90 - 110
Chromium	96.6	97.4	P/P	90 - 110
Chromium	99.9	99.7	P/P	90 - 110
Copper	98.5	98.5	P/P	90 - 110
Copper	98.8	96.4	P/P	90 - 110
Lead	100	99.8	P/P	90 - 110
Lead	98.3	99.4	P/P	90 - 110
Nickel	98.4	98.6	P/P	90 - 110
Nickel	99.3	96.4	P/P	90 - 110
Selenium	100	99.8	P/P	90 - 110
Selenium	98.0	97.8	P/P	90 - 110
Silver	96.2	98.5	P/P	90 - 110
Silver	99.3	99.6	P/P	90 - 110
Thallium	103	105	P/P	90 - 110
Thallium	105	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107592

Included Lab Sample IDs: 2271893

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107604

Included Lab Sample IDs: 2271906, 2271907

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	94.7	94.5	P/P	90 - 110
Calcium	95.9	95.8	P/P	90 - 110
Iron	95.5	95.5	P/P	90 - 110
Magnesium	95.7	95.7	P/P	90 - 110
Manganese	99.8	99.9	P/P	90 - 110
Potassium	95.7	95.6	P/P	90 - 110
Sodium	96.6	96.7	P/P	90 - 110
Zinc	97.7	97.2	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A107636

Included Lab Sample IDs: 2271900

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.1		P	80 - 120
Toxaphene	97.8		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107640

Included Lab Sample IDs: 2271891, 2271894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.6	94.5	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107644

Included Lab Sample IDs: 2271891, 2271894

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.2	98.8	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107667

Included Lab Sample IDs: 2271905

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	104	112	P/P	50 - 160

Reference Method: EPA 8321B

Run ID: A107670

Included Lab Sample IDs: 2271905

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

Reference Method: EPA 8321B
Run ID: A107670
Included Lab Sample IDs: 2271905

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	116	P/P	50 - 150
2,4,5-T	114	93.3	P/P	50 - 150
Acetaminophen	106	110	P/P	60 - 160
Acetamiprid	111	111	P/P	50 - 150
Afidopyropen	106	109	P/P	50 - 150
Benzovindiflupyr	108	110	P/P	50 - 150
Carbamazepine	115	116	P/P	60 - 150
Clothianidin	109	118	P/P	60 - 150
Dinotefuran	103	101	P/P	50 - 150
Diuron	104	105	P/P	60 - 160
Fenuron	101	104	P/P	60 - 150
Fluridone	105	110	P/P	60 - 160
Hydrocodone	101	100	P/P	60 - 150
Ibuprofen	80.0	68.9	P/P	50 - 160
Imazapyr	93.2	89.9	P/P	50 - 150
Imidacloprid	113	110	P/P	60 - 150
Linuron	97.0	99.3	P/P	60 - 150
Mandestrobin	111	105	P/P	50 - 150
MCPP	97.2	110	P/P	50 - 150
Naproxen	93.6	120	P/P	50 - 160
Primidone	109	117	P/P	60 - 150
Pyraclostrobin	112	112	P/P	60 - 150
Thiamethoxam	101	111	P/P	50 - 150
Tolfenpyrad	112	107	P/P	60 - 150
Triclopyr	115	112	P/P	50 - 150

* 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							1.22	
EPA 200.7 Rev. 4.4	Barium	102		100	98.7	99.2			0.516
	Calcium	89.9		98.6	97.2				0.684
	Iron	106		107	106	105			0.379
	Magnesium	89.1		108	99.0				1.07
	Manganese	101		101	99.1	99.6			0.324
	Potassium	103		105	103	102			0.357
	Sodium	90.6		99.3	101				0.600
	Zinc	102		102	97.1	98.5			1.44
EPA 200.8 Rev. 5.4	Aluminum	100		100	102	102			1.70
	Antimony	101		106	108	104			1.85
	Arsenic	101		103	106	102			2.09
	Beryllium	107		93.4	106	104			10.7
	Boron	99.9		105	107	107			1.10
	Cadmium	99.7		103	107	104			3.34
	Chromium	98.2		103	106	101			1.96
	Copper	99.9		98.4	101	99.4			2.41
	Lead	100		104	105	105			1.68
	Nickel	101		100	102	101			0.996
	Selenium	100		101	103	100			1.74
	Silver	105		104	105	105			0.0537
	Thallium	103		109	112	112			2.83
EPA 300.0 Rev. 2.1	Chloride	101		101	99.7			0.720	
	Sulfate	101		99.6				0.781	
EPA 350.1 Rev. 2.0	Ammonia-N	98.4		94.6	95.0				0.339
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.0		104	108				2.15
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	97.5		97.0	97.0				0.0
EPA 365.1 Rev. 2.0	Total-P	106		105	104				1.02
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	101		97.0	99.4				2.44
EPA 8270E	Aldrin	53.3	56.3	60.2	60.3		5.42		0.0674
	Alpha-BHC	88.5	89.0	88.2	86.4		0.519		2.06
	Alpha-Chlordane	72.1	70.1	67.0	71.4		2.74		5.52
	Beta-BHC	117	111	98.4	102		5.36		3.25
	Beta-Cyfluthrin	90.8	91.3	106	112		0.624		5.90
	Bifenthrin	79.4	89.6	128	125		12.0		2.46
	Carbophenothion	61.7	60.2	63.0	70.7		2.48		11.5
	Chlorothalonil	39.2	46.7	39.8	42.5		17.4		6.55
	Cis-Nonachlor	79.5	77.4	75.8	74.4		2.71		1.83
	Cypermethrin	92.3	88.8	111	112		3.84		1.09
	Dacthal	87.1	87.8	76.6	99.6		0.792		26.2
	DDD-p,p'	85.7	81.4	84.9	90.5		5.19		6.38
	DDE-p,p'	71.8	74.9	71.4	74.9		4.32		4.78
	DDT-p,p'	73.4	68.5	73.6	73.4		6.98		0.271
	Delta-BHC	124	121	105	100		2.47		4.91
	Deltamethrin	95.2	97.8	115	121		2.68		4.67
	Dichlobenil	76.2	69.9	71.3	76.9		8.71		7.57
	Dicofol	79.9	68.8	62.5	63.6		15.0		1.75
	Dieldrin	60.0	61.9	78.1	86.4		3.13		4.33
	Endosulfan I	78.9	85.9	73.2	75.6		8.50		3.32
	Endosulfan II	84.4	84.6	74.4	76.9		0.277		3.42
	Endosulfan Sulfate	101	95.0	71.8	76.9		6.54		6.88
	Endrin	4.52	4.44	34.6	36.2		1.58		4.64
	Endrin Aldehyde	45.9	43.4	41.6	42.2		5.60		1.39
	Endrin Ketone	160	151	108	113		6.15		4.46

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Esfenvalerate	84.4	85.0	99.7	101	0.682	1.41
	Ethalfuralin	50.6	54.2	67.7	62.0	6.98	8.80
	Fenpropathrin	56.0	56.8	80.8	83.5	1.40	3.30
	Gamma-BHC	92.3	92.3	94.1	93.1	0.0474	1.09
	Gamma-Chlordane	72.3	73.4	72.4	74.1	1.48	1.65
	Heptachlor	64.4	66.2	68.2	68.1	2.61	0.133
	Heptachlor Epoxide	79.8	79.9	69.6	88.3	0.119	8.68
	Hexachlorobenzene	75.2	71.8	73.2	73.8	4.64	0.803
	Kepone	82.9	68.3	70.0	75.9	19.2	8.07
	Lambda-Cyhalothrin	97.1	98.3	136	131	1.25	3.72
	Methoxychlor	81.2	82.0	91.0	87.8	0.973	3.56
	MGK-264	81.9	82.0	77.7	85.6	0.170	9.70
	Mirex	64.6	62.4	69.5	69.7	3.46	0.274
	Permethrin	98.7	96.4	129	130	2.29	0.905
	Phenothrin	65.4	62.4	90.5	91.2	4.67	0.750
	Piperonyl Butoxide	0.534	0.375	0.0719	0.712		
	Prallethrin	27.3	27.1	50.5	50.6	0.821	0.236
	Tau-Fluvalinate	82.8	80.2	95.1	101	3.19	5.57
	Tetramethrin	4.37	15.7	81.5	82.8	113	1.57
	Trans-Nonachlor	69.3	72.5	65.2	70.7	4.50	7.01
	Triclosan Methyl	75.8	80.0	72.3	77.0	5.38	6.31
	Trifluralin	71.6	74.5	75.4	74.2	4.01	1.59
EPA 8276	Chlordane	103	99.8	82.6	78.9	3.32	4.47
	Toxaphene	73.5	71.4	60.6	76.9	2.88	23.7
EPA 8321B	2,4-D	92.8		105	96.8		7.65
	2,4,5-T	106		111	101		9.54
	Acesulfame K	78.6		56.7	57.9		2.14
	Acetaminophen	80.2		81.5	84.3		3.38
	Acetamiprid	96.1		91.7	84.6		8.00
	Afidopyropen	83.2		111	99.8		10.3
	AMPA	82.4		91.0	91.7		0.789
	Bentazon	119					11.5
	Benzovindiflupyr	94.7		92.0	95.7		3.81
	Carbamazepine	85.8		88.7	92.1		3.45
	Clothianidin	98.4		68.7	70.6		2.74
	Dinotefuran	84.8					7.69
	Diuron	79.0		89.8	87.8		2.22
	Endothall	68.1		101	103		2.32
	Fenuron	94.5		99.3	95.6		3.73
	Fluridone	100		94.8	100		5.58
	Glufosinate	105		107	106		0.745
	Glyphosate	107		108	110		2.50
	Hydrocodone	77.7		98.2	87.5		11.5
	Ibuprofen	54.6		70.5	65.9		6.74
	Imazapyr	85.0					11.0
	Imidacloprid	97.3		92.3	91.1		1.18
	Linuron	83.9		99.3	77.0		25.3
	Mandestrobin	95.1		104	101		3.39
	MCPP	91.7		118	110		6.59
	Naproxen	98.6		94.3	87.8		7.15
	Primidone	84.9		32.3	50.6		44.0
	Pyraclostrobin	87.5		91.3	87.3		4.52
	Sucralose	90.2		93.6	94.0		0.483
	Thiamethoxam	92.7		99.5	90.5		9.47

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Tolfenpyrad	51.5	52.1	52.1		0.0501
	Triclopyr	97.3	106	96.9		8.83
SM 2120 B-2011	Color (true)	101			0.989	
SM 2320 B-2011	Total Alkalinity	102			1.36	
SM 2540 C-2011	TDS				6.21	
SM 4500 F-C-2011	Fluoride	99.9	100	99.4		0.457
SM 5310 B-2011	Organic Carbon	95.8	103			0.165

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2271890, 2271893
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2271906, 2271907
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2271906, 2271907
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2271893
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2271893
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2271891, 2271894
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2271891, 2271894
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2271891, 2271894
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2271891, 2271894
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2271892, 2271895
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2271901, 2271902
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2271900
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2271905
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2271893
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2271890, 2271893
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2271907
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2271893
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2271890, 2271893
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2271890, 2271893
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2271891, 2271894

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	08/25/2021			08/25/2021 15:37	Sarah A Nixon	2271890, 2271893
EPA 200.7 Rev. 4.4	08/25/2021	08/26/2021 15:05	Elliott D. Healy	09/01/2021 22:59	Josef B Mick	2271906
	08/25/2021	08/26/2021 15:05	Elliott D. Healy	09/01/2021 23:07	Josef B Mick	2271907
EPA 200.8 Rev. 5.4	08/25/2021	08/26/2021 15:05	Elliott D. Healy	08/31/2021 16:24	Alexander Thompson	2271907
	08/25/2021	08/26/2021 15:05	Elliott D. Healy	08/31/2021 19:27	Alexander Thompson	2271906
EPA 300.0 Rev. 2.1	08/25/2021			08/31/2021 18:10	Lipi Saha	2271893
EPA 350.1 Rev. 2.0	08/25/2021			08/30/2021 13:35	Ping Hua	2271891
	08/25/2021			08/30/2021 13:36	Ping Hua	2271894
EPA 351.2 Rev. 2.0	08/25/2021	09/02/2021 16:07	Benjamin T. Nordmann	09/03/2021 10:32	Alexandra J Mattheus	2271891
	08/25/2021	09/02/2021 16:07	Benjamin T. Nordmann	09/03/2021 10:34	Alexandra J Mattheus	2271894
EPA 353.2 Rev. 2.0	08/25/2021			08/30/2021 11:30	Beverly Y. Sanders	2271894
	08/25/2021			08/30/2021 11:33	Beverly Y. Sanders	2271891
EPA 365.1 Rev. 2.0	08/25/2021	08/30/2021 14:00	Simonne.V. Calhoun	08/31/2021 11:11	Shengyu Ding	2271891
	08/25/2021	08/30/2021 14:00	Simonne.V. Calhoun	08/31/2021 11:12	Shengyu Ding	2271894
EPA 365.1 Rev. 2.0 dissolved	08/25/2021			08/25/2021 14:45	James L Waggeberby	2271892
	08/25/2021			08/25/2021 14:46	James L Waggeberby	2271895
EPA 8270E	08/25/2021	08/26/2021 08:00	Rasheda Ghaffari	08/28/2021 03:41	Arthur Maknenko	2271901
	08/25/2021	08/26/2021 08:00	Rasheda Ghaffari	08/28/2021 07:06	Arthur Maknenko	2271902
EPA 8276	08/25/2021	08/26/2021 08:00	Rasheda Ghaffari	09/01/2021 12:27	Julie Wi	2271900
EPA 8321B	08/25/2021	08/27/2021 09:00	Juyoung Kim	08/27/2021 12:54	Juyoung Kim	2271905
	08/25/2021	08/27/2021 09:00	Juyoung Kim	08/28/2021 02:25	Juyoung Kim	2271905
	08/25/2021	08/27/2021 14:00	Hoor Shaik	08/28/2021 05:50	Juyoung Kim	2271905
	08/25/2021	08/27/2021 14:00	Hoor Shaik	09/07/2021 18:46	Juyoung Kim	2271905
SM 2120 B-2011	08/25/2021			08/25/2021 16:48	Sarah A Nixon	2271893
SM 2320 B-2011	08/25/2021			08/26/2021 22:16	Dale L. Simmons	2271893
	08/25/2021			08/27/2021 00:31	Dale L. Simmons	2271890
SM 2340B	08/25/2021			09/01/2021 23:07	Josef B Mick	2271907
SM 2540 C-2011	08/25/2021			08/30/2021 15:46	Yijie Li	2271893
SM 2540 D-2011	08/25/2021			08/30/2021 14:36	Yijie Li	2271890, 2271893
SM 4500 F-C-2011	08/25/2021			08/26/2021 22:03	Dale L. Simmons	2271893
	08/25/2021			08/27/2021 00:31	Dale L. Simmons	2271890
SM 5310 B-2011	08/25/2021			09/03/2021 10:39	Touraj Touran	2271891
	08/25/2021			09/03/2021 10:52	Touraj Touran	2271894