

Chemical Analysis Report

NW-DIST-2021-07-14-01

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

Event Description: **Pensacola Run**
Request ID: **RQ-2021-07-12-22**
Customer: **NW-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 11-AUG-2021 09:29



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: Carpenter Creek upstream of 9th Avenue

Collection Date/Time: 07/12/2021 09:15

Field ID: G4NW0415

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261820	EPA 180.1 Rev. 2.0	Turbidity	2.6	Q	NTU	P400983	
	EPA 300.0 Rev. 2.1	Chloride	6.8		mg Cl/L	P401189	
		Sulfate	4.5		mg SO4/L	P401192	
		Color (true)	24	Q	PCU	P400941	
	SM 2120 B-2011	Total Alkalinity	25		mg CaCO3/L	P401128	
	SM 2540 C-2011	TDS	62		mg/L	P401421	
	SM 2540 D-2011	TSS	2	I	mg/L	P401227	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401131	
2261821	EPA 350.1 Rev. 2.0	Ammonia-N	0.018		mg N/L	P401327	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	IVJ	mg N/L	P402127	CCV
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.75		mg N/L	P401058	
	EPA 365.1 Rev. 2.0	Total-P	0.009		mg P/L	P401220	
	SM 5310 B-2011	Organic Carbon	3.0		mg C/L	P401310	
2261822	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P400953	
2261844	EPA 8276	Chlordane	6.4	U	ng/L	P401115	
		Toxaphene	39	U	ng/L	P401115	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired prior to receipt.

SM 2120 B-2011: The sample expired prior to receipt.

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: Analyte was detected above the MDL in both the method blank and sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired prior to receipt.

Sample Location: Bayou Marcus Creek upstream of Mobile Hwy Bridge **Collection Date/Time: 07/12/2021 09:50**

Field ID: G5NW0156

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261817	EPA 180.1 Rev. 2.0	Turbidity	6.8	Q	NTU	P400983	
	EPA 300.0 Rev. 2.1	Chloride	6.9		mg Cl/L	P401189	
		Sulfate	3.6		mg SO4/L	P401192	
	SM 2120 B-2011	Color (true)	52	Q	PCU	P400941	
	SM 2320 B-2011	Total Alkalinity	28		mg CaCO3/L	P401128	
	SM 2540 C-2011	TDS	61		mg/L	P401421	
	SM 2540 D-2011	TSS	4	I	mg/L	P401227	
	SM 4500 F-C-2011	Fluoride	0.035	I	mg F/L	P401131	
2261818	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P401327	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	VJ	mg N/L	P402127	CCV
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.15		mg N/L	P401058	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P401220	
	SM 5310 B-2011	Organic Carbon	5.0		mg C/L	P401310	
2261819	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P400953	
2261843	EPA 8276	Chlordane	5.8	U	ng/L	P401115	
		Toxaphene	35	U	ng/L	P401115	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt.

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: Analyte was detected above the MDL in both the method blank and sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

Sample Location: Jones Creek upstream of N Navy Blvd

Collection Date/Time: 07/12/2021 10:10

Field ID: G4NW0429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261864	EPA 8321B	2,4-D	0.0020	U	ug/L	P400846	
		Acesulfame K	0.11	I	ug/L	P400842	
		2,4,5-T	0.0040	U	ug/L	P400846	
		AMPA	0.10	U	ug/L	P400842	
		Acetaminophen	0.017	I	ug/L	P400846	
		Acetamiprid	0.0020	U	ug/L	P400846	
		Endothall	0.25	U	ug/L	P400842	
		Glufosinate	0.10	U	ug/L	P400842	
		Glyphosate	0.10	U	ug/L	P400842	
		Afidopyropen	0.0020	U	ug/L	P400846	
		Bentazon	0.0015	I	ug/L	P400846	
		Sucralose	0.30		ug/L	P400842	
		Benzovindiflupyr	0.0020	U	ug/L	P400846	
		Carbamazepine	8.0E-04	U	ug/L	P400846	
		Clothianidin	0.0020	U	ug/L	P400846	
		Dinotefuran	0.0020	U	ug/L	P400846	
		Diuron	0.0020	U	ug/L	P400846	
		Fenuron	0.016	U	ug/L	P400846	
		Fluridone	8.0E-04	U	ug/L	P400846	
		Imazapyr	0.0099	I	ug/L	P400846	MS, RPD
		Hydrocodone	0.0020	U	ug/L	P400846	
		Ibuprofen	0.020	U	ug/L	P400846	
		Imidacloprid	0.024		ug/L	P400846	
		Linuron	0.0040	U	ug/L	P400846	
		Mandestrobin	0.0020	U	ug/L	P400846	
		MCPP	0.0020	U	ug/L	P400846	
		Naproxen	0.0080	U	ug/L	P400846	
		Primidone	0.0040	U	ug/L	P400846	
		Pyraclostrobin	0.0020	U	ug/L	P400846	
		Thiamethoxam	0.0020	U	ug/L	P400846	MS
		Tolfenpyrad	0.0020	U	ug/L	P400846	
		Triclopyr	0.0040	U	ug/L	P400846	

Sample Location: Rest Area Run below Beaver Pond Creek

Collection Date/Time: 07/12/2021 11:20

Field ID: G5NW0068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261814	EPA 180.1 Rev. 2.0	Turbidity	16	A	NTU	P400983	
	EPA 300.0 Rev. 2.1	Chloride	9.0		mg Cl/L	P401189	
		Sulfate	2.6		mg SO4/L	P401192	
	SM 2120 B-2011	Color (true)	140	AJ	PCU	P400941	
	SM 2320 B-2011	Total Alkalinity	26		mg CaCO3/L	P401128	
	SM 2540 C-2011	TDS	85		mg/L	P401420	
	SM 2540 D-2011	TSS	6	I	mg/L	P401226	
	SM 4500 F-C-2011	Fluoride	0.035	I	mg F/L	P401131	
2261815	EPA 350.1 Rev. 2.0	Ammonia-N	0.20		mg N/L	P401327	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.92		mg N/L	P401716	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P401058	
	EPA 365.1 Rev. 2.0	Total-P	0.028		mg P/L	P401220	
	SM 5310 B-2011	Organic Carbon	13		mg C/L	P401310	
2261816	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	IQ	mg P/L	P400953	
2261866	EPA 200.7 Rev. 4.4	Barium	20.0		ug/L	P401018	
		Calcium	8.81		mg/L	P401018	
		Iron	1.27E+03		ug/L	P401018	
		Magnesium	1.85		mg/L	P401018	
		Manganese	20.3		ug/L	P401018	
		Potassium	3.0		mg/L	P401018	
		Sodium	7.2		mg/L	P401018	
	EPA 200.8 Rev. 5.4	Zinc	5.1	I	ug/L	P401018	
		Aluminum	624		ug/L	P401411	
		Antimony	0.14	I	ug/L	P401411	
		Arsenic	0.95		ug/L	P401411	
		Beryllium	0.026	I	ug/L	P401411	
		Boron**	47.2		ug/L	P401411	
		Cadmium	0.020	U	ug/L	P401411	
		Chromium	1.1	I	ug/L	P401411	
		Copper	1.13		ug/L	P401411	
		Lead	0.70		ug/L	P401411	
		Nickel	2.6		ug/L	P401411	
		Selenium	0.20	U	ug/L	P401411	
		Silver	0.010	U	ug/L	P401634	
		Thallium	0.10	U	ug/L	P401411	
	SM 2340B	Hardness	29.6		mg/L	P401018	

Ref. Method and Comment:

SM 2120 B-2011: The result may be biased high because of matrix interference.

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 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

EPA 200.8 Rev. 5.4: The lead result was confirmed on 07/23/2021.

Sample Location: Muscogee Creek 300m downstream of Beulah Road **Collection Date/Time: 07/12/2021 12:05**

Field ID: G5NW0162

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261867	EPA 200.7 Rev. 4.4	Barium	14.1		ug/L	P401018	
		Calcium	1.29		mg/L	P401018	
		Iron	910		ug/L	P401018	
		Magnesium	0.52		mg/L	P401018	
		Manganese	14.8		ug/L	P401018	
		Potassium	0.54	I	mg/L	P401018	
		Sodium	4.2		mg/L	P401018	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P401018	
		Aluminum	885		ug/L	P401411	
		Antimony	0.071	I	ug/L	P401411	
		Arsenic	0.40		ug/L	P401411	
		Beryllium	0.093		ug/L	P401411	
		Boron**	16.0		ug/L	P401411	
		Cadmium	0.020	U	ug/L	P401411	
		Chromium	1.1	I	ug/L	P401411	
		Copper	0.79	I	ug/L	P401411	
		Lead	0.70		ug/L	P401411	
		Nickel	1.2	I	ug/L	P401411	
		Selenium	0.20	U	ug/L	P401411	
		Silver	0.010	U	ug/L	P401634	
		Thallium	0.10	U	ug/L	P401411	
	SM 2340B	Hardness	5.4		mg/L	P401018	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 07/26/2021.

Sample Location: Ten Mile Creek upstream of Pine Forest Road Collection Date/Time: 07/12/2021 12:35

Field ID: G5NW0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261868	EPA 200.7 Rev. 4.4	Barium	11.5		ug/L	P401018	
		Calcium	5.95		mg/L	P401018	
		Iron	1.37E+03		ug/L	P401018	
		Magnesium	1.10		mg/L	P401018	
		Manganese	20.3		ug/L	P401018	
		Potassium	0.71	I	mg/L	P401018	
		Sodium	4.3		mg/L	P401018	
	EPA 200.8 Rev. 5.4	Zinc	5.5	I	ug/L	P401018	
		Aluminum	281		ug/L	P401411	
		Antimony	0.083	I	ug/L	P401411	
		Arsenic	0.83		ug/L	P401411	
		Beryllium	0.014	I	ug/L	P401411	
		Boron**	21.1		ug/L	P401411	
		Cadmium	0.020	U	ug/L	P401411	
		Chromium	0.54	I	ug/L	P401411	
		Copper	0.74	I	ug/L	P401411	
		Lead	0.49		ug/L	P401411	
		Nickel	0.98	I	ug/L	P401411	
		Selenium	0.20	U	ug/L	P401411	
		Silver	0.010	U	ug/L	P401634	
		Thallium	0.10	U	ug/L	P401411	
	SM 2340B	Hardness	19.4		mg/L	P401018	

Sample Location: Ten Mile Creek above Powerlines

Collection Date/Time: 07/12/2021 12:45

Field ID: G5NW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261869	EPA 200.7 Rev. 4.4	Barium	12.5		ug/L	P401018	
		Calcium	6.31		mg/L	P401018	
		Iron	1.30E+03		ug/L	P401018	
		Magnesium	1.13		mg/L	P401018	
		Manganese	19.8		ug/L	P401018	
		Potassium	0.76	I	mg/L	P401018	
		Sodium	4.5		mg/L	P401018	
	EPA 200.8 Rev. 5.4	Zinc	5.2	I	ug/L	P401018	
		Aluminum	355		ug/L	P401411	
		Antimony	0.13	I	ug/L	P401411	
		Arsenic	0.85		ug/L	P401411	
		Beryllium	0.024	I	ug/L	P401411	
		Boron**	21.0		ug/L	P401411	
		Cadmium	0.020	U	ug/L	P401411	
		Chromium	0.70	I	ug/L	P401411	
		Copper	1.0		ug/L	P401411	
		Lead	0.54		ug/L	P401411	
		Nickel	1.4	I	ug/L	P401411	
		Selenium	0.20	U	ug/L	P401411	
		Silver	0.010	U	ug/L	P401634	
		Thallium	0.10	U	ug/L	P401411	
	SM 2340B	Hardness	20.4		mg/L	P401018	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: The lead result was confirmed on 08/04/2021.

Sample Location: FB

Collection Date/Time: 07/12/2021 10:20

Field ID: FB_07122021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261823	EPA 180.1 Rev. 2.0	Turbidity	0.10	UQ	NTU	P400983	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P401189	
		Sulfate	0.20	U	mg SO4/L	P401192	
	SM 2120 B-2011	Color (true)	2.5	UQ	PCU	P400941	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P401128	
	SM 2540 C-2011	TDS	15	U	mg/L	P401420	
	SM 2540 D-2011	TSS	2	U	mg/L	P401226	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P401131	
2261824	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P401327	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	UJ	mg N/L	P402127	CCV
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P401058	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P401220	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P401310	
2261825	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	UQ	mg P/L	P400953	
2261845	EPA 8270E	Aldrin	0.76	UJ	ng/L	P401115	SUR
		Alpha-BHC	0.12	UJ	ng/L	P401115	SUR
		Alpha-Chlordane	0.23	UJ	ng/L	P401115	SUR
		Beta-BHC	0.12	UJ	ng/L	P401115	SUR
		Beta-Cyfluthrin**	1.5	UJ	ng/L	P401115	SUR
		Bifenthrin**	0.59	UJ	ng/L	P401115	SUR
		Carbophenothion	0.41	UJ	ng/L	P401115	RPD, SUR
		Chlorothalonil	0.59	UJ	ng/L	P401115	SUR
		Cis-Nonachlor**	0.23	UJ	ng/L	P401115	SUR
		Cypermethrin	1.8	UJ	ng/L	P401115	SUR
		Dacthal**	0.18	UJ	ng/L	P401115	SUR
		DDD-p,p'	0.29	UJ	ng/L	P401115	SUR
		DDE-p,p'	0.23	UJ	ng/L	P401115	SUR
		DDT-p,p'	0.29	UJ	ng/L	P401115	RPD, SUR
		Delta-BHC	0.47	UJ	ng/L	P401115	SUR
		Deltamethrin**	1.5	UJ	ng/L	P401115	SUR
		Dichlobenil**	0.12	UJ	ng/L	P401115	SUR
		Dicofol	1.5	UJ	ng/L	P401115	SUR
		Dieldrin	0.47	UJ	ng/L	P401115	SUR
		Endosulfan I	0.47	UJ	ng/L	P401115	SUR
		Endosulfan II	0.47	UJ	ng/L	P401115	SUR
		Endosulfan Sulfate	0.35	UJ	ng/L	P401115	RPD, SUR
		Endrin	0.47	UJ	ng/L	P401115	SUR
		Endrin Aldehyde	0.88	UJ	ng/L	P401115	SUR
		Endrin Ketone	0.47	UJ	ng/L	P401115	SUR
		Esfenvalerate**	0.88	UJ	ng/L	P401115	SUR
		Ethalfuralin**	0.18	UJ	ng/L	P401115	SUR
		Fenpropathrin**	0.29	UJ	ng/L	P401115	SUR
		Gamma-BHC	0.15	UJ	ng/L	P401115	SUR

Field ID: FB_07122021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261845	EPA 8270E	Gamma-Chlordane	0.23	UJ	ng/L	P401115	SUR
		Heptachlor	0.23	UJ	ng/L	P401115	SUR
		Heptachlor Epoxide	0.29	UJ	ng/L	P401115	SUR
		Hexachlorobenzene	1.2	UJ	ng/L	P401115	SUR
		Kepone**	5.9	UJ	ng/L	P401115	SUR
		Lambda-Cyhalothrin**	0.88	UJ	ng/L	P401115	SUR
		Methoxychlor	0.35	UJ	ng/L	P401115	SUR
		MGK-264**	0.23	UJ	ng/L	P401115	SUR
		Mirex	0.35	UJ	ng/L	P401115	SUR
		Permethrin	1.9	UJ	ng/L	P401115	SUR
		Phenothrin**	1.1	UJ	ng/L	P401115	SUR
		Piperonyl Butoxide**	0.18	UJ	ng/L	P401115	CCV, RPD, SUR
		Prallethrin**	2.3	UJ	ng/L	P401115	SUR
		Tau-Fluvalinate**	0.29	UJ	ng/L	P401115	SUR
		Tetramethrin**	0.88	UJ	ng/L	P401115	SUR
		Trans-Nonachlor**	0.23	UJ	ng/L	P401115	SUR
		Triclosan Methyl**	0.18	UJ	ng/L	P401115	SUR
		Trifluralin	0.23	UJ	ng/L	P401115	SUR
	EPA 8276	Chlordane	5.9	U	ng/L	P401115	
		Toxaphene	35	U	ng/L	P401115	
2261865	EPA 8321B	2,4-D	0.0020	U	ug/L	P401065	
		Acesulfame K	0.10	U	ug/L	P400842	
		2,4,5-T	0.0040	U	ug/L	P401065	
		AMPA	0.10	U	ug/L	P400842	
		Acetaminophen	0.0080	U	ug/L	P401065	
		Acetamiprid	0.0020	U	ug/L	P401065	
		Endothall	0.25	U	ug/L	P400842	
		Glufosinate	0.10	U	ug/L	P400842	
		Glyphosate	0.10	U	ug/L	P400842	
		Afidopyropen	0.0020	U	ug/L	P401065	
		Bentazon	8.0E-04	U	ug/L	P401065	
		Sucralose	0.010	U	ug/L	P400842	
		Benzovindiflupyr	0.0020	U	ug/L	P401065	
		Carbamazepine	8.0E-04	U	ug/L	P401065	
		Clothianidin	0.0020	U	ug/L	P401065	
		Dinotefuran	0.0020	U	ug/L	P401065	
		Diuron	0.0020	U	ug/L	P401065	
		Fenuron	0.016	U	ug/L	P401065	
		Fluridone	8.0E-04	U	ug/L	P401065	
		Imazapyr	0.0040	U	ug/L	P401065	
		Hydrocodone	0.0020	U	ug/L	P401065	
		Ibuprofen	0.020	U	ug/L	P401065	
		Imidacloprid	0.0020	U	ug/L	P401065	
		Linuron	0.0040	U	ug/L	P401065	

Field ID: FB_07122021

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2261865	EPA 8321B	Mandestrobin	0.0020	U	ug/L	P401065	
		MCP	0.0020	U	ug/L	P401065	
		Naproxen	0.0080	U	ug/L	P401065	
		Primidone	0.0040	U	ug/L	P401065	
		Pyraclostrobin	0.0020	U	ug/L	P401065	
		Thiamethoxam	0.0020	U	ug/L	P401065	
		Tolfenpyrad	0.0020	U	ug/L	P401065	
		Triclopyr	0.0040	U	ug/L	P401065	
2261870	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P401018	
		Calcium	0.075	U	mg/L	P401018	
		Iron	30	U	ug/L	P401018	
		Magnesium	0.040	U	mg/L	P401018	
		Manganese	1.0	U	ug/L	P401018	
		Potassium	0.30	U	mg/L	P401018	
		Sodium	0.50	U	mg/L	P401018	
		Zinc	5.0	U	ug/L	P401018	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P401411	
		Antimony	0.050	U	ug/L	P401411	
		Arsenic	0.050	U	ug/L	P401411	
		Beryllium	0.010	U	ug/L	P401411	
		Boron**	2.0	U	ug/L	P401411	
		Cadmium	0.020	U	ug/L	P401411	
		Chromium	0.40	U	ug/L	P401411	
		Copper	0.40	U	ug/L	P401411	
		Lead	0.20	U	ug/L	P401411	
		Nickel	0.50	U	ug/L	P401411	
		Selenium	0.20	U	ug/L	P401411	
		Silver	0.010	U	ug/L	P401634	
		Thallium	0.10	U	ug/L	P401411	
		Hardness	0.35	U	mg/L	P401018	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B-2011: The sample expired upon receipt.

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

EPA 365.1 Rev. 2.0 dissolved: O-Phosphate-P: The sample expired upon receipt.

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

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: P400983

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P401018

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: P401411

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
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P401634

Component	Result	Code	Units
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401189

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401192

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P401327

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P401716

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P402127

Component	Result	Code	Units
Kjeldahl Nitrogen	0.11	I	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P401058

Component	Result	Code	Units
NO ₂ NO ₃ -N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P401220

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P400953

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

Reference Method: EPA 8270E
 Batch ID: P401115

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	0.35	U	ng/L
Carbophenothion	0.35	U	ng/L
Chlorothalonil	0.50	U	ng/L
Chlorothalonil	0.50	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401115

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P401115

Component	Result	Code	Units
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	0.30	U	ng/L
Mirex	0.30	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: P401115

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: P400842

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: P400846

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P400846

Component	Result	Code	Units
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: EPA 8321B

Batch ID: P401065

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P401065

Component	Result	Code	Units
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: P400941

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P401128

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

Reference Method: SM 2540 C-2011
Batch ID: P401420

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P401421

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P401226

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P401227

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P401131

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P401310

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: P401018

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	102		P	85 - 115
Calcium	107		P	85 - 115
Iron	106		P	85 - 115
Magnesium	109		P	85 - 115
Manganese	102		P	85 - 115
Potassium	101		P	85 - 115
Sodium	106		P	85 - 115
Zinc	99.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401411

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	105		P	85 - 115
Antimony	108		P	85 - 115
Arsenic	102		P	85 - 115
Beryllium	106		P	85 - 115
Boron	105		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.0		P	85 - 115
Lead	102		P	85 - 115
Nickel	102		P	85 - 115
Selenium	102		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	113		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P401189

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P401192

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P401327

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P401716

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402127

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.1		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401058

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401220

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400953

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

Reference Method: EPA 8270E
Batch ID: P401115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	54.2	54.9	P/P	20 - 150
Alpha-BHC	99.7	97.0	P/P	50 - 150
Alpha-Chlordane	92.3	86.6	P/P	50 - 150
Beta-BHC	104	85.1	P/P	50 - 150
Beta-Cyfluthrin	95.9	97.5	P/P	50 - 150
Bifenthrin	60.3	62.7	P/P	40 - 150
Carbophenothion	80.2	87.5	P/P	20 - 150
Chlorothalonil	101	103	P/P	20 - 150
Cis-Nonachlor	87.1	96.2	P/P	50 - 150
Cypermethrin	92.2	97.2	P/P	50 - 150
Dacthal	101	98.7	P/P	50 - 150
DDD-p,p'	89.2	98.4	P/P	50 - 150
DDE-p,p'	82.4	84.4	P/P	50 - 150
DDT-p,p'	87.9	91.1	P/P	50 - 150
Delta-BHC	115	106	P/P	50 - 150
Deltamethrin	93.6	96.0	P/P	50 - 150
Dichlobenil	88.9	79.2	P/P	40 - 150
Dicofol	78.5	75.0	P/P	50 - 150
Dieldrin	90.5	90.2	P/P	50 - 150
Endosulfan I	86.7	90.3	P/P	50 - 150
Endosulfan II	95.0	110	P/P	50 - 150
Endosulfan Sulfate	101	101	P/P	50 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P401115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Endrin	89.3	102	P/P	50 - 150
Endrin Aldehyde	91.3	99.3	P/P	50 - 150
Endrin Ketone	89.7	82.6	P/P	50 - 150
Esfenvalerate	87.0	92.1	P/P	50 - 180
Ethalfuralin	74.1	74.6	P/P	50 - 150
Fenpropathrin	79.1	80.2	P/P	50 - 150
Gamma-BHC	97.8	93.5	P/P	50 - 150
Gamma-Chlordane	81.1	81.3	P/P	50 - 150
Heptachlor	71.9	70.9	P/P	50 - 150
Heptachlor Epoxide	84.1	84.3	P/P	50 - 150
Hexachlorobenzene	72.2	71.2	P/P	50 - 150
Kepone	87.9	92.9	P/P	30 - 180
Lambda-Cyhalothrin	79.2	78.6	P/P	50 - 200
Methoxychlor	79.2	67.8	P/P	50 - 150
MGK-264	90.3	85.1	P/P	30 - 150
Mirex	68.6	75.4	P/P	50 - 180
Permethrin	92.7	98.0	P/P	50 - 150
Phenothrin	59.1	60.5	P/P	20 - 150
Piperonyl Butoxide	119	75.1	P/P	50 - 150
Prallethrin	77.7	76.6	P/P	30 - 150
Tau-Fluvalinate	81.0	82.3	P/P	40 - 150
Tetramethrin	70.0	69.9	P/P	30 - 150
Trans-Nonachlor	79.7	83.8	P/P	50 - 150
Triclosan Methyl	90.3	90.5	P/P	50 - 150
Trifluralin	74.4	75.0	P/P	50 - 150

Reference Method: EPA 8276

Batch ID: P401115

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	84.6	86.9	P/P	56 - 117
Toxaphene	72.1	70.5	P/P	45 - 116

Reference Method: EPA 8321B

Batch ID: P400842

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	103		P	40 - 150
AMPA	97.5		P	40 - 150
Endothall	97.5		P	40 - 150
Glufosinate	97.7		P	40 - 150
Glyphosate	97.0		P	40 - 150
Sucralose	102		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P400846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	30 - 160
2,4,5-T	108		P	30 - 160
Acetaminophen	79.9		P	30 - 160
Acetamiprid	83.6		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P400846

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Afidopyropen	63.4		P	30 - 160
Bentazon	98.7		P	30 - 160
Benzovindiflupyr	89.1		P	30 - 160
Carbamazepine	99.5		P	30 - 160
Clothianidin	93.4		P	30 - 160
Dinotefuran	92.3		P	30 - 160
Diuron	88.5		P	30 - 160
Fenuron	99.4		P	30 - 160
Fluridone	94.9		P	30 - 160
Hydrocodone	95.5		P	30 - 160
Ibuprofen	91.9		P	30 - 160
Imazapyr	91.8		P	30 - 160
Imidacloprid	91.1		P	30 - 160
Linuron	80.9		P	30 - 160
Mandestrobin	91.5		P	30 - 160
MCP	110		P	30 - 160
Naproxen	81.0		P	30 - 160
Primidone	93.9		P	30 - 160
Pyraclostrobin	84.4		P	30 - 160
Thiamethoxam	98.9		P	30 - 160
Tolfenpyrad	42.3		P	30 - 160
Triclopyr	108		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P401065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	125		P	30 - 160
2,4,5-T	117		P	30 - 160
Acetaminophen	91.8		P	30 - 160
Acetamiprid	90.4		P	30 - 160
Afidopyropen	76.1		P	30 - 160
Bentazon	105		P	30 - 160
Benzovindiflupyr	93.8		P	30 - 160
Carbamazepine	98.6		P	30 - 160
Clothianidin	98.7		P	30 - 160
Dinotefuran	100		P	30 - 160
Diuron	88.3		P	30 - 160
Fenuron	102		P	30 - 160
Fluridone	95.7		P	30 - 160
Hydrocodone	99.7		P	30 - 160
Ibuprofen	93.1		P	30 - 160
Imazapyr	107		P	30 - 160
Imidacloprid	99.9		P	30 - 160
Linuron	82.8		P	30 - 160
Mandestrobin	99.8		P	30 - 160
MCP	119		P	30 - 160
Naproxen	80.9		P	30 - 160
Primidone	95.3		P	30 - 160
Pyraclostrobin	90.5		P	30 - 160
Thiamethoxam	102		P	30 - 160
Tolfenpyrad	52.5		P	30 - 160

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P401065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Triclopyr	119		P	30 - 160

Reference Method: SM 2120 B-2011
Batch ID: P400941

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.3		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P401128

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

Reference Method: SM 4500 F-C-2011
Batch ID: P401131

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.6		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P401310

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401018

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262059	Barium	106		P	80 - 120
2262059	Calcium	114		P	80 - 120
2262059	Iron	111		P	80 - 120
2262059	Magnesium	115		P	80 - 120
2262059	Manganese	105		P	80 - 120
2262059	Potassium	103		P	80 - 120
2262059	Sodium	108		P	80 - 120
2262059	Zinc	108		P	80 - 120
2262373	Barium	104	108	P/P	80 - 120
2262373	Calcium	109		P	80 - 120
2262373	Iron	108	112	P/P	80 - 120
2262373	Magnesium	107	114	P/P	80 - 120
2262373	Manganese	103	107	P/P	80 - 120
2262373	Potassium	98.9	104	P/P	80 - 120
2262373	Sodium	104		P	80 - 120
2262373	Zinc	107	111	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401411

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262058	Aluminum	106		P	80 - 120
2262058	Antimony	113		P	80 - 120
2262058	Arsenic	98.8		P	80 - 120
2262058	Beryllium	107		P	80 - 120
2262058	Boron	109		P	80 - 120
2262058	Cadmium	104		P	80 - 120
2262058	Chromium	102		P	80 - 120
2262058	Copper	95.6		P	80 - 120
2262058	Lead	103		P	80 - 120
2262058	Nickel	96.2		P	80 - 120
2262058	Selenium	101		P	80 - 120
2262058	Thallium	104		P	80 - 120
2262294	Aluminum	102	103	P/P	80 - 120
2262294	Antimony	107	108	P/P	80 - 120
2262294	Arsenic	100	99.4	P/P	80 - 120
2262294	Beryllium	104	106	P/P	80 - 120
2262294	Boron	104	107	P/P	80 - 120
2262294	Cadmium	102	103	P/P	80 - 120
2262294	Chromium	100	101	P/P	80 - 120
2262294	Copper	97.1	94.4	P/P	80 - 120
2262294	Lead	98.0	98.0	P/P	80 - 120
2262294	Nickel	93.0	91.5	P/P	80 - 120
2262294	Selenium	99.5	99.6	P/P	80 - 120
2262294	Thallium	105	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262058	Silver	111	107	P/P	80 - 120
2262400	Silver	111		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261551	Chloride	99.5		P	90 - 110
2261757	Chloride	99.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401192

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261551	Sulfate	101		P	90 - 110
2261757	Sulfate	98.9		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P401327

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261984	Ammonia-N	99.0	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402127

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261984	Kjeldahl Nitrogen	97.3	105	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261815	NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401220

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261560	Total-P	105	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400953

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261764	O-Phosphate-P	94.9	96.5	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P401115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262487	Aldrin	71.4	73.4	P/P	20 - 170
2262487	Alpha-BHC	94.7	93.9	P/P	50 - 170
2262487	Alpha-Chlordane	89.9	89.8	P/P	50 - 170
2262487	Beta-BHC	85.6	70.2	P/P	50 - 170
2262487	Beta-Cyfluthrin	124	125	P/P	50 - 170
2262487	Bifenthrin	85.2	85.8	P/P	40 - 170
2262487	Carbophenothion	95.2	59.0	P/P	20 - 170
2262487	Chlorothalonil	114	93.1	P/P	20 - 170

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P401115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262487	Cis-Nonachlor	93.7	96.3	P/P	50 - 170
2262487	Cypermethrin	115	122	P/P	50 - 170
2262487	Dacthal	86.6	85.0	P/P	50 - 170
2262487	DDD-p,p'	88.8	93.8	P/P	50 - 170
2262487	DDE-p,p'	83.9	85.4	P/P	50 - 170
2262487	DDT-p,p'	91.0	60.8	P/P	50 - 170
2262487	Delta-BHC	103	91.3	P/P	50 - 170
2262487	Deltamethrin	112	124	P/P	50 - 170
2262487	Dichlobenil	50.9	52.7	P/P	40 - 170
2262487	Dicofol	80.5	71.2	P/P	50 - 170
2262487	Dieldrin	85.1	92.7	P/P	50 - 170
2262487	Endosulfan I	86.3	88.2	P/P	50 - 170
2262487	Endosulfan II	91.9	95.8	P/P	50 - 170
2262487	Endosulfan Sulfate	83.2	51.9	P/P	50 - 170
2262487	Endrin	92.5	96.2	P/P	50 - 170
2262487	Endrin Aldehyde	70.2	69.2	P/P	50 - 170
2262487	Endrin Ketone	71.3	63.4	P/P	50 - 170
2262487	Esfenvalerate	121	114	P/P	50 - 180
2262487	Ethalfuralin	77.0	74.9	P/P	50 - 170
2262487	Fenpropathrin	91.2	90.8	P/P	50 - 170
2262487	Gamma-BHC	92.9	85.6	P/P	50 - 170
2262487	Gamma-Chlordane	84.5	85.8	P/P	50 - 170
2262487	Heptachlor	81.8	78.0	P/P	50 - 170
2262487	Heptachlor Epoxide	80.0	80.8	P/P	50 - 170
2262487	Hexachlorobenzene	87.1	84.0	P/P	50 - 170
2262487	Kepone	40.3	31.3	P/P	30 - 180
2262487	Lambda-Cyhalothrin	128	128	P/P	50 - 200
2262487	Methoxychlor	78.6	105	P/P	50 - 170
2262487	MGK-264	90.6	87.9	P/P	30 - 170
2262487	Mirex	84.4	85.7	P/P	50 - 180
2262487	Permethrin	113	120	P/P	50 - 170
2262487	Phenothrin	122	117	P/P	20 - 170
2262487	Piperonyl Butoxide	74.6	69.9	P/P	50 - 170
2262487	Prallethrin	90.2	87.8	P/P	30 - 170
2262487	Tau-Fluvalinate	109	105	P/P	40 - 170
2262487	Tetramethrin	88.3	83.5	P/P	30 - 170
2262487	Trans-Nonachlor	83.0	83.0	P/P	50 - 170
2262487	Triclosan Methyl	87.2	90.6	P/P	50 - 170
2262487	Trifluralin	80.1	76.2	P/P	50 - 170

Reference Method: EPA 8276
Batch ID: P401115

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262014	Chlordane	96.6	97.7	P/P	47 - 128
2262014	Toxaphene	75.6	79.0	P/P	11 - 163

Reference Method: EPA 8321B
Batch ID: P400842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261285	Acesulfame K	141	133	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
 Batch ID: P400842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261285	AMPA	96.8	91.8	P/P	40 - 150
2261285	Endothall	115	109	P/P	40 - 150
2261285	Glufosinate	111	110	P/P	40 - 150
2261285	Glyphosate	112	111	P/P	40 - 150
2261285	Sucralose	112	101	P/P	40 - 150

Reference Method: EPA 8321B
 Batch ID: P400846

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261122	2,4-D	110	126	P/P	30 - 160
2261122	2,4,5-T	111	117	P/P	30 - 160
2261122	Acetaminophen	101	112	P/P	30 - 160
2261122	Acetamiprid	86.9	105	P/P	30 - 160
2261122	Afidopyropen	73.5	82.5	P/P	30 - 160
2261122	Bentazon	93.1	95.4	P/P	30 - 160
2261122	Benzovindiflupyr	91.4	98.7	P/P	30 - 160
2261122	Carbamazepine	112	124	P/P	30 - 160
2261122	Clothianidin	102	116	P/P	30 - 160
2261122	Dinotefuran	116	131	P/P	30 - 160
2261122	Diuron	89.0	91.6	P/P	30 - 160
2261122	Fenuron	92.7	97.7	P/P	30 - 160
2261122	Fluridone	88.1	97.0	P/P	30 - 160
2261122	Hydrocodone	111	123	P/P	30 - 160
2261122	Ibuprofen	83.9	94.2	P/P	30 - 160
2261122	Imazapyr	100	161	P/F	30 - 160
2261122	Imidacloprid	122	151	P/P	30 - 160
2261122	Linuron	77.9	81.3	P/P	30 - 160
2261122	Mandestrobin	93.5	99.7	P/P	30 - 160
2261122	MCP	111	122	P/P	30 - 160
2261122	Naproxen	83.2	78.0	P/P	30 - 160
2261122	Primidone	110	117	P/P	30 - 160
2261122	Pyraclostrobin	91.0	96.4	P/P	30 - 160
2261122	Thiamethoxam	130	161	P/F	30 - 160
2261122	Tolfenpyrad	52.7	56.8	P/P	30 - 160
2261122	Triclopyr	106	117	P/P	30 - 160

Reference Method: EPA 8321B
 Batch ID: P401065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262208	2,4-D	111	118	P/P	30 - 160
2262208	2,4,5-T	99.6	102	P/P	30 - 160
2262208	Acetaminophen	102	107	P/P	30 - 160
2262208	Acetamiprid	84.0	92.5	P/P	30 - 160
2262208	Afidopyropen	61.9	70.1	P/P	30 - 160
2262208	Benzovindiflupyr	84.6	85.5	P/P	30 - 160
2262208	Carbamazepine	89.1	83.0	P/P	30 - 160
2262208	Clothianidin	107	112	P/P	30 - 160
2262208	Dinotefuran	124	128	P/P	30 - 160
2262208	Diuron	72.3	70.6	P/P	30 - 160
2262208	Fenuron	97.2	94.3	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P401065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2262208	Fluridone	79.7	80.1	P/P	30 - 160
2262208	Hydrocodone	113	112	P/P	30 - 160
2262208	Ibuprofen	71.6	74.8	P/P	30 - 160
2262208	Imidacloprid	145	151	P/P	30 - 160
2262208	Linuron	68.0	68.0	P/P	30 - 160
2262208	Mandestrobin	88.2	87.7	P/P	30 - 160
2262208	MCP	99.5	104	P/P	30 - 160
2262208	Naproxen	71.1	75.8	P/P	30 - 160
2262208	Primidone	104	103	P/P	30 - 160
2262208	Pyraclostrobin	85.3	87.4	P/P	30 - 160
2262208	Thiamethoxam	141	147	P/P	30 - 160
2262208	Tolfenpyrad	52.0	52.0	P/P	30 - 160
2262208	Triclopyr	100	103	P/P	30 - 160

Reference Method: SM 4500 F-C-2011

Batch ID: P401131

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261960	Fluoride	99.1	99.7	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P401310

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2261759	Organic Carbon	95.4	95.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P400983

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261814	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P401018

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262373	Barium	3.67	Spike	P	0 - 20
2262373	Calcium	3.46	Spike	P	0 - 20
2262373	Iron	3.43	Spike	P	0 - 20
2262373	Magnesium	3.82	Spike	P	0 - 20
2262373	Manganese	3.43	Spike	P	0 - 20
2262373	Potassium	2.71	Spike	P	0 - 20
2262373	Sodium	2.39	Spike	P	0 - 20
2262373	Zinc	3.49	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401411

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262294	Aluminum	1.13	Spike	P	0 - 20
2262294	Antimony	0.763	Spike	P	0 - 20
2262294	Arsenic	1.00	Spike	P	0 - 20
2262294	Beryllium	1.60	Spike	P	0 - 20
2262294	Boron	2.01	Spike	P	0 - 20
2262294	Cadmium	1.16	Spike	P	0 - 20
2262294	Chromium	0.783	Spike	P	0 - 20
2262294	Copper	2.68	Spike	P	0 - 20
2262294	Lead	0.00119	Spike	P	0 - 20
2262294	Nickel	1.45	Spike	P	0 - 20
2262294	Selenium	0.119	Spike	P	0 - 20
2262294	Thallium	0.280	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P401634

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262058	Silver	4.16	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P401189

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261757	Chloride	0.669	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P401192

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261757	Sulfate	0.764	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P401327

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261984	Ammonia-N	1.00	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P401716

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2263116	Kjeldahl Nitrogen	1.41	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P402127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261984	Kjeldahl Nitrogen	6.20	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P401058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261815	NO2NO3-N	0.597	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P401220

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261560	Total-P	0.163	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P400953

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261764	O-Phosphate-P	1.27	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P401115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262487	Aldrin	2.78	Spike	P	0 - 30
2262487	Alpha-BHC	0.805	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P401115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262487	Alpha-Chlordane	0.0383	Spike	P	0 - 30
2262487	Beta-BHC	19.7	Spike	P	0 - 30
2262487	Beta-Cyfluthrin	0.424	Spike	P	0 - 30
2262487	Bifenthrin	0.733	Spike	P	0 - 30
2262487	Carbophenothion	47.0	Spike	F	0 - 30
2262487	Chlorothalonil	20.0	Spike	P	0 - 50
2262487	Cis-Nonachlor	2.70	Spike	P	0 - 30
2262487	Cypermethrin	6.00	Spike	P	0 - 30
2262487	Dacthal	1.79	Spike	P	0 - 30
2262487	DDD-p,p'	5.57	Spike	P	0 - 30
2262487	DDE-p,p'	1.72	Spike	P	0 - 30
2262487	DDT-p,p'	39.7	Spike	F	0 - 30
2262487	Delta-BHC	11.6	Spike	P	0 - 30
2262487	Deltamethrin	10.3	Spike	P	0 - 30
2262487	Dichlobenil	3.50	Spike	P	0 - 30
2262487	Dicofol	12.2	Spike	P	0 - 30
2262487	Dieldrin	8.57	Spike	P	0 - 30
2262487	Endosulfan I	2.23	Spike	P	0 - 30
2262487	Endosulfan II	4.21	Spike	P	0 - 30
2262487	Endosulfan Sulfate	46.4	Spike	F	0 - 30
2262487	Endrin	3.92	Spike	P	0 - 30
2262487	Endrin Aldehyde	1.45	Spike	P	0 - 30
2262487	Endrin Ketone	11.7	Spike	P	0 - 30
2262487	Esfenvalerate	6.09	Spike	P	0 - 30
2262487	Ethalfuralin	2.74	Spike	P	0 - 30
2262487	Fenpropathrin	0.443	Spike	P	0 - 30
2262487	Gamma-BHC	8.17	Spike	P	0 - 30
2262487	Gamma-Chlordane	1.49	Spike	P	0 - 30
2262487	Heptachlor	4.72	Spike	P	0 - 30
2262487	Heptachlor Epoxide	1.01	Spike	P	0 - 30
2262487	Hexachlorobenzene	3.68	Spike	P	0 - 30
2262487	Kepone	25.0	Spike	P	0 - 30
2262487	Lambda-Cyhalothrin	0.250	Spike	P	0 - 30
2262487	Methoxychlor	28.7	Spike	P	0 - 30
2262487	MGK-264	2.93	Spike	P	0 - 30
2262487	Mirex	1.50	Spike	P	0 - 30
2262487	Permethrin	5.89	Spike	P	0 - 30
2262487	Phenothrin	3.86	Spike	P	0 - 30
2262487	Piperonyl Butoxide	6.52	Spike	P	0 - 30
2262487	Prallethrin	2.69	Spike	P	0 - 30
2262487	Tau-Fluvalinate	4.22	Spike	P	0 - 30
2262487	Tetramethrin	5.57	Spike	P	0 - 30
2262487	Trans-Nonachlor	0.0546	Spike	P	0 - 30
2262487	Triclosan Methyl	3.75	Spike	P	0 - 30
2262487	Trifluralin	4.99	Spike	P	0 - 30
LFB	Aldrin	1.18	LCS	P	0 - 30
LFB	Alpha-BHC	2.80	LCS	P	0 - 30
LFB	Alpha-Chlordane	6.30	LCS	P	0 - 30
LFB	Beta-BHC	20.2	LCS	P	0 - 30
LFB	Beta-Cyfluthrin	1.66	LCS	P	0 - 30
LFB	Bifenthrin	3.98	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P401115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Carbophenothion	8.80	LCS	P	0 - 30
LFB	Chlorothalonil	1.89	LCS	P	0 - 50
LFB	Cis-Nonachlor	9.85	LCS	P	0 - 30
LFB	Cypermethrin	5.29	LCS	P	0 - 30
LFB	Dacthal	2.16	LCS	P	0 - 30
LFB	DDD-p,p'	9.81	LCS	P	0 - 30
LFB	DDE-p,p'	2.41	LCS	P	0 - 30
LFB	DDT-p,p'	3.53	LCS	P	0 - 30
LFB	Delta-BHC	7.52	LCS	P	0 - 30
LFB	Deltamethrin	2.56	LCS	P	0 - 30
LFB	Dichlobenil	11.6	LCS	P	0 - 30
LFB	Dicofol	4.54	LCS	P	0 - 30
LFB	Dieldrin	0.375	LCS	P	0 - 30
LFB	Endosulfan I	4.10	LCS	P	0 - 30
LFB	Endosulfan II	15.1	LCS	P	0 - 30
LFB	Endosulfan Sulfate	0.135	LCS	P	0 - 30
LFB	Endrin	13.8	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.43	LCS	P	0 - 30
LFB	Endrin Ketone	8.31	LCS	P	0 - 30
LFB	Esfenvalerate	5.73	LCS	P	0 - 30
LFB	Ethalfuralin	0.591	LCS	P	0 - 30
LFB	Fenpropathrin	1.42	LCS	P	0 - 30
LFB	Gamma-BHC	4.54	LCS	P	0 - 30
LFB	Gamma-Chlordane	0.262	LCS	P	0 - 30
LFB	Heptachlor	1.44	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.302	LCS	P	0 - 30
LFB	Hexachlorobenzene	1.44	LCS	P	0 - 30
LFB	Kepone	5.61	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	0.794	LCS	P	0 - 30
LFB	Methoxychlor	15.6	LCS	P	0 - 30
LFB	MGK-264	5.91	LCS	P	0 - 30
LFB	Mirex	9.53	LCS	P	0 - 30
LFB	Permethrin	5.52	LCS	P	0 - 30
LFB	Phenothrin	2.44	LCS	P	0 - 30
LFB	Piperonyl Butoxide	45.3	LCS	F	0 - 30
LFB	Prallethrin	1.41	LCS	P	0 - 30
LFB	Tau-Fluvalinate	1.60	LCS	P	0 - 30
LFB	Tetramethrin	0.116	LCS	P	0 - 30
LFB	Trans-Nonachlor	5.01	LCS	P	0 - 30
LFB	Triclosan Methyl	0.242	LCS	P	0 - 30
LFB	Trifluralin	0.808	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P401115

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262014	Chlordane	1.12	Spike	P	0 - 30
2262014	Toxaphene	4.36	Spike	P	0 - 30
LFB	Chlordane	2.74	LCS	P	0 - 30
LFB	Toxaphene	2.18	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P400842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261285	Acesulfame K	6.15	Spike	P	0 - 30
2261285	AMPA	5.29	Spike	P	0 - 30
2261285	Endothall	5.83	Spike	P	0 - 30
2261285	Glufosinate	0.705	Spike	P	0 - 30
2261285	Glyphosate	1.11	Spike	P	0 - 30
2261285	Sucralose	9.51	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P400846

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261122	2,4-D	13.3	Spike	P	0 - 30
2261122	2,4,5-T	5.92	Spike	P	0 - 30
2261122	Acetaminophen	10.5	Spike	P	0 - 30
2261122	Acetamiprid	18.7	Spike	P	0 - 30
2261122	Afidopyropen	11.6	Spike	P	0 - 30
2261122	Bentazon	1.20	Spike	P	0 - 30
2261122	Benzovindiflupyr	7.64	Spike	P	0 - 30
2261122	Carbamazepine	6.80	Spike	P	0 - 30
2261122	Clothianidin	13.5	Spike	P	0 - 30
2261122	Dinotefuran	12.2	Spike	P	0 - 30
2261122	Diuron	2.66	Spike	P	0 - 30
2261122	Fenuron	5.26	Spike	P	0 - 30
2261122	Fluridone	8.29	Spike	P	0 - 30
2261122	Hydrocodone	10.1	Spike	P	0 - 30
2261122	Ibuprofen	11.7	Spike	P	0 - 30
2261122	Imazapyr	32.2	Spike	F	0 - 30
2261122	Imidacloprid	19.8	Spike	P	0 - 30
2261122	Linuron	4.29	Spike	P	0 - 30
2261122	Mandestrobin	6.46	Spike	P	0 - 30
2261122	MCPP	9.46	Spike	P	0 - 30
2261122	Naproxen	6.36	Spike	P	0 - 30
2261122	Primidone	5.62	Spike	P	0 - 30
2261122	Pyraclostrobin	5.77	Spike	P	0 - 30
2261122	Thiamethoxam	21.4	Spike	P	0 - 30
2261122	Tolfenpyrad	7.38	Spike	P	0 - 30
2261122	Triclopyr	10.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P401065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262208	2,4-D	4.85	Spike	P	0 - 30
2262208	2,4,5-T	2.58	Spike	P	0 - 30
2262208	Acetaminophen	4.50	Spike	P	0 - 30
2262208	Acetamiprid	9.67	Spike	P	0 - 30
2262208	Afidopyropen	12.5	Spike	P	0 - 30
2262208	Bentazon	12.0	Spike	P	0 - 30
2262208	Benzovindiflupyr	1.03	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P401065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262208	Carbamazepine	7.12	Spike	P	0 - 30
2262208	Clothianidin	4.16	Spike	P	0 - 30
2262208	Dinotefuran	3.03	Spike	P	0 - 30
2262208	Diuron	2.18	Spike	P	0 - 30
2262208	Fenuron	3.02	Spike	P	0 - 30
2262208	Fluridone	0.465	Spike	P	0 - 30
2262208	Hydrocodone	1.20	Spike	P	0 - 30
2262208	Ibuprofen	4.39	Spike	P	0 - 30
2262208	Imazapyr	12.7	Spike	P	0 - 30
2262208	Imidacloprid	3.93	Spike	P	0 - 30
2262208	Linuron	0.0942	Spike	P	0 - 30
2262208	Mandestrobin	0.527	Spike	P	0 - 30
2262208	MCPP	4.68	Spike	P	0 - 30
2262208	Naproxen	6.38	Spike	P	0 - 30
2262208	Primidone	1.08	Spike	P	0 - 30
2262208	Pyraclostrobin	2.47	Spike	P	0 - 30
2262208	Thiamethoxam	3.93	Spike	P	0 - 30
2262208	Tolfenpyrad	0.112	Spike	P	0 - 30
2262208	Triclopyr	3.12	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P400941

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261814	Color (true)	0.482	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P401128

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261960	Total Alkalinity	1.37	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P401420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262071	TDS	3.64	Sample	P	0 - 10

Reference Method: SM 2540 C-2011
Batch ID: P401421

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2262036	TDS	6.57	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P401131

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261960	Fluoride	0.506	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P401310

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2261759	Organic Carbon	0.376	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2261843
Field Sample ID: G5NW0156

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	62.3	P	29 - 92.0
EPA 8276	PCNB	101	P	43 - 134

Lab Sample ID: 2261844
Field Sample ID: G4NW0415

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8276	Decachlorobiphenyl	59.0	P	29 - 92.0
EPA 8276	PCNB	93.2	P	43 - 134

Lab Sample ID: 2261845
Field Sample ID: FB_07122021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	123	F	35 - 120
EPA 8270E	Tetrachloro-m-xylene	71.0	P	30 - 110
EPA 8276	Decachlorobiphenyl	61.3	P	29 - 92.0
EPA 8276	PCNB	100	P	43 - 134

Lab Sample ID: 2261864
Field Sample ID: G4NW0429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	120	P	30 - 160
EPA 8321B	Acetaminophen-d4	111	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.5	P	30 - 160
EPA 8321B	Diuron-d6	76.9	P	30 - 160
EPA 8321B	Endothall-d6	120	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	70.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.3	P	30 - 160
EPA 8321B	Primidone-d5	107	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2261865
Field Sample ID: FB_07122021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	106	P	30 - 160
EPA 8321B	Diuron-d6	102	P	30 - 160
EPA 8321B	Endothall-d6	96.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	101	P	30 - 160
EPA 8321B	Ibuprofen-d3	95.2	P	30 - 160
EPA 8321B	Primidone-d5	99.5	P	30 - 160
EPA 8321B	Sucralose-d6	98.1	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B-2011

Run ID: A106609

Included Lab Sample IDs: 2261814, 2261817, 2261820, 2261823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.9	100	P/P	90 - 115

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A106614

Included Lab Sample IDs: 2261816, 2261819, 2261822, 2261825

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	100	97.9	P/P	90 - 110
O-Phosphate-P	97.9	99.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A106624

Included Lab Sample IDs: 2261814, 2261817, 2261820, 2261823

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A106656

Included Lab Sample IDs: 2261815, 2261818, 2261821, 2261824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A106658

Included Lab Sample IDs: 2261864, 2261865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	107	106	P/P	60 - 160
Glufosinate	111	106	P/P	60 - 160
Glyphosate	107	109	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A106673

Included Lab Sample IDs: 2261864, 2261865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	113	96.8	P/P	60 - 160
Endothall	97.0	89.0	P/P	60 - 160
Sucralose	96.0	93.1	P/P	60 - 160

Reference Method: SM 2320 B-2011

Run ID: A106677

Included Lab Sample IDs: 2261814, 2261817, 2261820, 2261823

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.5	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-2011

Run ID: A106677

Included Lab Sample IDs: 2261814, 2261817, 2261820, 2261823

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

Reference Method: EPA 8321B

Run ID: A106699

Included Lab Sample IDs: 2261864, 2261865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	102	P/P	50 - 150
2,4-D	103	103	P/P	50 - 150
2,4,5-T	105	101	P/P	50 - 150
2,4,5-T	106	105	P/P	50 - 150
Acetaminophen	103	105	P/P	60 - 160
Acetaminophen	104	103	P/P	60 - 160
Acetamiprid	103	104	P/P	50 - 150
Acetamiprid	104	104	P/P	50 - 150
Afidopyropen	106	109	P/P	50 - 150
Afidopyropen	109	106	P/P	50 - 150
Bentazon	116	118	P/P	50 - 160
Bentazon	118	117	P/P	50 - 160
Benzovindiflupyr	108	110	P/P	50 - 160
Benzovindiflupyr	110	110	P/P	50 - 160
Carbamazepine	105	106	P/P	60 - 150
Carbamazepine	106	105	P/P	60 - 150
Clothianidin	105	104	P/P	60 - 150
Clothianidin	107	105	P/P	60 - 150
Dinotefuran	107	108	P/P	50 - 150
Dinotefuran	108	106	P/P	50 - 150
Diuron	113	115	P/P	60 - 160
Diuron	115	115	P/P	60 - 160
Fenuron	110	106	P/P	60 - 150
Fenuron	110	110	P/P	60 - 150
Fluridone	106	110	P/P	60 - 160
Fluridone	110	111	P/P	60 - 160
Hydrocodone	106	108	P/P	60 - 150
Hydrocodone	108	111	P/P	60 - 150
Ibuprofen	103	113	P/P	50 - 160
Ibuprofen	113	99.9	P/P	50 - 160
Imazapyr	105	106	P/P	50 - 160
Imazapyr	106	101	P/P	50 - 160
Imidacloprid	101	99.6	P/P	60 - 150
Imidacloprid	99.6	101	P/P	60 - 150
Linuron	103	106	P/P	60 - 150
Linuron	106	105	P/P	60 - 150
Mandestrobin	107	109	P/P	50 - 150
Mandestrobin	109	111	P/P	50 - 150
MCPP	104	104	P/P	50 - 150
MCPP	104	105	P/P	50 - 150
Naproxen	101	97.0	P/P	50 - 160
Naproxen	97.0	96.7	P/P	50 - 160
Primidone	99.4	99.7	P/P	60 - 150
Primidone	99.7	101	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A106699

Included Lab Sample IDs: 2261864, 2261865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Pyraclostrobin	110	113	P/P	60 - 150
Pyraclostrobin	113	114	P/P	60 - 150
Thiamethoxam	106	108	P/P	50 - 150
Thiamethoxam	108	106	P/P	50 - 150
Tolfenpyrad	103	105	P/P	60 - 150
Tolfenpyrad	105	105	P/P	60 - 150
Triclopyr	102	104	P/P	50 - 150
Triclopyr	104	102	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A106703

Included Lab Sample IDs: 2261814, 2261817, 2261820, 2261823

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

Reference Method: EPA 8276

Run ID: A106722

Included Lab Sample IDs: 2261843, 2261844, 2261845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	101		P	80 - 120
Toxaphene	104		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A106735

Included Lab Sample IDs: 2261815, 2261818, 2261821, 2261824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.5	101	P/P	90 - 110
Total-P	99.0	98.5	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A106738

Included Lab Sample IDs: 2261845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.7		P	80 - 120
Alpha-BHC	97.0		P	80 - 120
Alpha-Chlordane	110		P	80 - 120
Beta-BHC	94.4		P	80 - 120
Beta-Cyfluthrin	99.5		P	80 - 120
Bifenthrin	97.7		P	80 - 120
Carbophenothion	110		P	80 - 120
Chlorothalonil	85.2		P	80 - 120
Cis-Nonachlor	112		P	80 - 120
Cypermethrin	105		P	80 - 120
Dacthal	94.6		P	80 - 120
DDD-p,p'	116		P	80 - 120
DDE-p,p'	96.7		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A106738
Included Lab Sample IDs: 2261845

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
DDT-p,p'	98.2		P	80 - 120
Delta-BHC	96.3		P	80 - 120
Deltamethrin	92.1		P	80 - 120
Dichlobenil	97.1		P	80 - 120
Dicofol	94.8		P	80 - 120
Dieldrin	100		P	80 - 120
Endosulfan I	95.4		P	80 - 120
Endosulfan II	105		P	80 - 120
Endosulfan Sulfate	106		P	80 - 120
Endrin	110		P	80 - 120
Endrin Aldehyde	107		P	80 - 120
Endrin Ketone	93.4		P	80 - 120
Esfenvalerate	99.7		P	80 - 120
Ethalfuralin	93.4		P	80 - 120
Fenpropathrin	101		P	80 - 120
Gamma-BHC	96.9		P	80 - 120
Gamma-Chlordane	98.2		P	80 - 120
Heptachlor	99.1		P	80 - 120
Heptachlor Epoxide	94.4		P	80 - 120
Hexachlorobenzene	98.3		P	80 - 120
Kepone	89.9		P	80 - 120
Lambda-Cyhalothrin	102		P	80 - 120
Methoxychlor	89.7		P	80 - 120
MGK-264	97.9		P	80 - 120
Mirex	106		P	80 - 120
Permethrin	109		P	80 - 120
Phenothrin	98.3		P	80 - 120
Piperonyl Butoxide	121*		F	80 - 120
Prallethrin	96.6		P	80 - 120
Tau-Fluvalinate	101		P	80 - 120
Tetramethrin	95.2		P	80 - 120
Trans-Nonachlor	96.7		P	80 - 120
Triclosan Methyl	98.6		P	80 - 120
Trifluralin	94.9		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A106744
Included Lab Sample IDs: 2261815, 2261818, 2261821, 2261824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	97.5	P/P	90 - 110
Organic Carbon	97.5	96.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A106749
Included Lab Sample IDs: 2261815, 2261818, 2261821, 2261824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.3	98.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106806

Included Lab Sample IDs: 2261866, 2261867, 2261868, 2261869, 2261870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	102	103	P/P	90 - 110
Aluminum	103	102	P/P	90 - 110
Antimony	106	108	P/P	90 - 110
Arsenic	99.4	98.7	P/P	90 - 110
Arsenic	99.9	99.4	P/P	90 - 110
Beryllium	100	100	P/P	90 - 110
Beryllium	98.7	100	P/P	90 - 110
Boron	100	101	P/P	90 - 110
Boron	100	100	P/P	90 - 110
Cadmium	101	101	P/P	90 - 110
Cadmium	101	104	P/P	90 - 110
Chromium	101	102	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Copper	96.8	94.8	P/P	90 - 110
Copper	99.1	96.8	P/P	90 - 110
Lead	99.2	99.9	P/P	90 - 110
Lead	99.4	99.2	P/P	90 - 110
Nickel	100	97.7	P/P	90 - 110
Nickel	97.7	94.8	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Thallium	97.7	97.7	P/P	90 - 110
Thallium	97.7	98.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106829

Included Lab Sample IDs: 2261866, 2261867, 2261868, 2261869

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	107	108	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A106839

Included Lab Sample IDs: 2261866, 2261867, 2261868, 2261869, 2261870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	103	P/P	90 - 110
Barium	99.9	100	P/P	95 - 105
Calcium	101	103	P/P	90 - 110
Calcium	101	101	P/P	95 - 105
Iron	98.9	101	P/P	90 - 110
Iron	99.4	98.9	P/P	95 - 105
Magnesium	98.8	101	P/P	90 - 110
Magnesium	99.2	98.8	P/P	95 - 105
Manganese	101	103	P/P	90 - 110
Manganese	101	101	P/P	95 - 105
Potassium	101	98.6	P/P	90 - 110
Potassium	99.1	101	P/P	95 - 105
Sodium	100	101	P/P	95 - 105
Sodium	101	99.8	P/P	90 - 110
Zinc	100	101	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A106839

Included Lab Sample IDs: 2261866, 2261867, 2261868, 2261869, 2261870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	101	106	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A106941

Included Lab Sample IDs: 2261866, 2261867, 2261868, 2261869, 2261870

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	97.9	98.8	P/P	90 - 110
Silver	98.8	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107023

Included Lab Sample IDs: 2261815

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.0	90.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107113

Included Lab Sample IDs: 2261818, 2261821, 2261824

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	90.3	89.3*	P/F	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							0.0	
EPA 200.7 Rev. 4.4	Barium	102		106	104	108			3.67
	Calcium	107		114	109				3.46
	Iron	106		111	108	112			3.43
	Magnesium	109		115	107	114			3.82
	Manganese	102		105	103	107			3.43
	Potassium	101		103	98.9	104			2.71
	Sodium	106		108	104				2.39
	Zinc	99.6		108	107	111			3.49
EPA 200.8 Rev. 5.4	Aluminum	105		102	103	106			1.13
	Antimony	108		107	108	113			0.763
	Arsenic	102		98.8	100	99.4			1.00
	Beryllium	106		104	106	107			1.60
	Boron	105		104	107	109			2.01
	Cadmium	101		102	103	104			1.16
	Chromium	101		100	101	102			0.783
	Copper	99.0		97.1	94.4	95.6			2.68
	Lead	102		98.0	98.0	103			0.0011
	Nickel	102		93.0	91.5	96.2			1.45
	Selenium	102		99.5	99.6	101			0.119
	Silver	113		111	107	111			4.16
	Thallium	103		105	105	104			0.280
EPA 300.0 Rev. 2.1	Chloride	102		99.9	99.5			0.669	
	Sulfate	103		98.9	101			0.764	
EPA 350.1 Rev. 2.0	Ammonia-N	100		99.0	101				1.00
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101							1.41
	Kjeldahl Nitrogen	98.1		97.3	105				6.20
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		99.5	100				0.597
EPA 365.1 Rev. 2.0	Total-P	105		105	105				0.163
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.4		94.9	96.5				1.27
EPA 8270E	Aldrin	54.2	54.9	71.4	73.4		1.18		2.78
	Alpha-BHC	99.7	97.0	94.7	93.9		2.80		0.805
	Alpha-Chlordane	92.3	86.6	89.9	89.8		6.30		0.0383
	Beta-BHC	104	85.1	85.6	70.2		20.2		19.7
	Beta-Cyfluthrin	95.9	97.5	124	125		1.66		0.424
	Bifenthrin	60.3	62.7	85.2	85.8		3.98		0.733
	Carbophenothion	80.2	87.5	95.2	59.0		8.80		47.0
	Chlorothalonil	101	103	114	93.1		1.89		20.0
	Cis-Nonachlor	87.1	96.2	93.7	96.3		9.85		2.70
	Cypermethrin	92.2	97.2	115	122		5.29		6.00
	Dacthal	101	98.7	86.6	85.0		2.16		1.79
	DDD-p,p'	89.2	98.4	88.8	93.8		9.81		5.57
	DDE-p,p'	82.4	84.4	83.9	85.4		2.41		1.72
	DDT-p,p'	87.9	91.1	91.0	60.8		3.53		39.7
	Delta-BHC	115	106	103	91.3		7.52		11.6
	Deltamethrin	93.6	96.0	112	124		2.56		10.3
	Dichlobenil	88.9	79.2	50.9	52.7		11.6		3.50
	Dicofol	78.5	75.0	80.5	71.2		4.54		12.2
	Dieldrin	90.5	90.2	85.1	92.7		0.375		8.57
	Endosulfan I	86.7	90.3	86.3	88.2		4.10		2.23
	Endosulfan II	95.0	110	91.9	95.8		15.1		4.21
	Endosulfan Sulfate	101	101	83.2	51.9		0.135		46.4
	Endrin	89.3	102	92.5	96.2		13.8		3.92
	Endrin Aldehyde	91.3	99.3	70.2	69.2		8.43		1.45

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
						SMP	
EPA 8270E	Endrin Ketone	89.7	82.6	71.3	63.4	8.31	11.7
	Esfenvalerate	87.0	92.1	121	114	5.73	6.09
	Ethalfuralin	74.1	74.6	77.0	74.9	0.591	2.74
	Fenpropathrin	79.1	80.2	91.2	90.8	1.42	0.443
	Gamma-BHC	97.8	93.5	92.9	85.6	4.54	8.17
	Gamma-Chlordane	81.1	81.3	84.5	85.8	0.262	1.49
	Heptachlor	71.9	70.9	81.8	78.0	1.44	4.72
	Heptachlor Epoxide	84.1	84.3	80.0	80.8	0.302	1.01
	Hexachlorobenzene	72.2	71.2	87.1	84.0	1.44	3.68
	Kepone	87.9	92.9	40.3	31.3	5.61	25.0
	Lambda-Cyhalothrin	79.2	78.6	128	128	0.794	0.250
	Methoxychlor	79.2	67.8	78.6	105	15.6	28.7
	MGK-264	90.3	85.1	90.6	87.9	5.91	2.93
	Mirex	68.6	75.4	84.4	85.7	9.53	1.50
	Permethrin	92.7	98.0	113	120	5.52	5.89
	Phenothrin	59.1	60.5	122	117	2.44	3.86
	Piperonyl Butoxide	119	75.1	74.6	69.9	45.3	6.52
	Prallethrin	77.7	76.6	90.2	87.8	1.41	2.69
	Tau-Fluvalinate	81.0	82.3	109	105	1.60	4.22
	Tetramethrin	70.0	69.9	88.3	83.5	0.116	5.57
	Trans-Nonachlor	79.7	83.8	83.0	83.0	5.01	0.0546
	Triclosan Methyl	90.3	90.5	87.2	90.6	0.242	3.75
	Trifluralin	74.4	75.0	80.1	76.2	0.808	4.99
EPA 8276	Chlordane	84.6	86.9	96.6	97.7	2.74	1.12
	Toxaphene	72.1	70.5	75.6	79.0	2.18	4.36
EPA 8321B	2,4-D	110		110	126		13.3
	2,4-D	125		111	118		4.85
	2,4,5-T	108		111	117		5.92
	2,4,5-T	117		99.6	102		2.58
	Acesulfame K	103		141	133		6.15
	Acetaminophen	79.9		101	112		10.5
	Acetaminophen	91.8		102	107		4.50
	Acetamiprid	83.6		86.9	105		18.7
	Acetamiprid	90.4		84.0	92.5		9.67
	Afidopyropen	63.4		73.5	82.5		11.6
	Afidopyropen	76.1		61.9	70.1		12.5
	AMPA	97.5		96.8	91.8		5.29
	Bentazon	98.7		93.1	95.4		1.20
	Bentazon	105					12.0
	Benzovindiflupyr	89.1		91.4	98.7		7.64
	Benzovindiflupyr	93.8		84.6	85.5		1.03
	Carbamazepine	99.5		112	124		6.80
	Carbamazepine	98.6		89.1	83.0		7.12
	Clothianidin	93.4		102	116		13.5
	Clothianidin	98.7		107	112		4.16
	Dinotefuran	92.3		116	131		12.2
	Dinotefuran	100		124	128		3.03
	Diuron	88.5		89.0	91.6		2.66
	Diuron	88.3		72.3	70.6		2.18
	Endothall	97.5		115	109		5.83
	Fenuron	99.4		92.7	97.7		5.26
	Fenuron	102		97.2	94.3		3.02
	Fluridone	94.9		88.1	97.0		8.29
	Fluridone	95.7		79.7	80.1		0.465

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Glufosinate	97.7	111	110		0.705
	Glyphosate	97.0	112	111		1.11
	Hydrocodone	95.5	111	123		10.1
	Hydrocodone	99.7	113	112		1.20
	Ibuprofen	91.9	83.9	94.2		11.7
	Ibuprofen	93.1	71.6	74.8		4.39
	Imazapyr	91.8	100	161		32.2
	Imazapyr	107				12.7
	Imidacloprid	91.1	122	151		19.8
	Imidacloprid	99.9	145	151		3.93
	Linuron	80.9	77.9	81.3		4.29
	Linuron	82.8	68.0	68.0		0.0942
	Mandestrobin	91.5	93.5	99.7		6.46
	Mandestrobin	99.8	88.2	87.7		0.527
	MCPP	110	111	122		9.46
	MCPP	119	99.5	104		4.68
	Naproxen	81.0	83.2	78.0		6.36
	Naproxen	80.9	71.1	75.8		6.38
	Primidone	93.9	110	117		5.62
	Primidone	95.3	104	103		1.08
	Pyraclostrobin	84.4	91.0	96.4		5.77
	Pyraclostrobin	90.5	85.3	87.4		2.47
	Sucralose	102	112	101		9.51
	Thiamethoxam	98.9	130	161		21.4
	Thiamethoxam	102	141	147		3.93
	Tolfenpyrad	42.3	52.7	56.8		7.38
	Tolfenpyrad	52.5	52.0	52.0		0.112
	Triclopyr	108	106	117		10.3
	Triclopyr	119	100	103		3.12
SM 2120 B-2011	Color (true)	99.3			0.482	
SM 2320 B-2011	Total Alkalinity	101			1.37	
SM 2540 C-2011	TDS				3.64	
	TDS				6.57	
SM 4500 F-C-2011	Fluoride	97.6	99.1	99.7		0.506
SM 5310 B-2011	Organic Carbon	96.4	95.4	95.8		0.376

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2261814, 2261817, 2261820, 2261823
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2261866, 2261867, 2261868, 2261869, 2261870
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2261866, 2261867, 2261868, 2261869, 2261870
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2261814, 2261817, 2261820, 2261823
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2261814, 2261817, 2261820, 2261823
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2261815, 2261818, 2261821, 2261824
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2261815, 2261818, 2261821, 2261824
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2261815, 2261818, 2261821, 2261824
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2261815, 2261818, 2261821, 2261824
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2261816, 2261819, 2261822, 2261825
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2261845

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2261843, 2261844, 2261845
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2261864, 2261865
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2261814, 2261817, 2261820, 2261823
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2261814, 2261817, 2261820, 2261823
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2261866, 2261867, 2261868, 2261869, 2261870
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2261814, 2261817, 2261820, 2261823
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2261814, 2261817, 2261820, 2261823
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2261814, 2261817, 2261820, 2261823
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2261815, 2261818, 2261821, 2261824

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	07/14/2021			07/14/2021 11:17	Sarah A Nixon	2261814
	07/14/2021			07/14/2021 16:49	Sarah A Nixon	2261817, 2261820, 2261823
EPA 200.7 Rev. 4.4	07/14/2021	07/15/2021 14:55	Elliott D. Healy	07/26/2021 12:35	Josef B Mick	2261870
	07/14/2021	07/15/2021 14:55	Elliott D. Healy	07/26/2021 14:10	Josef B Mick	2261866
	07/14/2021	07/15/2021 14:55	Elliott D. Healy	07/26/2021 14:19	Josef B Mick	2261867
	07/14/2021	07/15/2021 14:55	Elliott D. Healy	07/26/2021 14:27	Josef B Mick	2261868
	07/14/2021	07/15/2021 14:55	Elliott D. Healy	07/26/2021 14:35	Josef B Mick	2261869
EPA 200.8 Rev. 5.4	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/23/2021 17:04	Alexander Thompson	2261870
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/23/2021 19:27	Alexander Thompson	2261866
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/23/2021 19:37	Alexander Thompson	2261867
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/23/2021 19:46	Alexander Thompson	2261868
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/23/2021 19:56	Alexander Thompson	2261869
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/26/2021 14:34	Alexander Thompson	2261866
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/26/2021 14:40	Alexander Thompson	2261867
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/26/2021 14:47	Alexander Thompson	2261868
	07/14/2021	07/22/2021 15:25	Elliott D. Healy	07/26/2021 14:53	Alexander Thompson	2261869
	07/14/2021	07/28/2021 12:45	Elliott D. Healy	07/29/2021 17:11	McKinley C Carter	2261870
	07/14/2021	07/28/2021 12:45	Elliott D. Healy	07/29/2021 18:43	McKinley C Carter	2261866
	07/14/2021	07/28/2021 12:45	Elliott D. Healy	07/29/2021 18:50	McKinley C Carter	2261867
	07/14/2021	07/28/2021 12:45	Elliott D. Healy	07/29/2021 18:56	McKinley C Carter	2261868
	07/14/2021	07/28/2021 12:45	Elliott D. Healy	07/29/2021 19:03	McKinley C Carter	2261869
	07/14/2021	08/02/2021 14:50	Elliott D. Healy	07/23/2021 19:56	Alexander Thompson	2261869
EPA 300.0 Rev. 2.1	07/14/2021			07/20/2021 05:19	Lipi Saha	2261814
	07/14/2021			07/20/2021 05:31	Lipi Saha	2261817
	07/14/2021			07/20/2021 05:43	Lipi Saha	2261820
	07/14/2021			07/20/2021 05:55	Lipi Saha	2261823
EPA 350.1 Rev. 2.0	07/14/2021			07/21/2021 15:05	Ping Hua	2261815
	07/14/2021			07/21/2021 15:07	Ping Hua	2261818
	07/14/2021			07/21/2021 15:08	Ping Hua	2261821
	07/14/2021			07/21/2021 15:15	Ping Hua	2261824
EPA 351.2 Rev. 2.0	07/14/2021	07/30/2021 10:15	Benjamin T. Nordmann	08/03/2021 10:17	Virginia P. Brown	2261815
	07/14/2021	08/06/2021 13:50	Benjamin T. Nordmann	08/06/2021 21:16	Touraj Touran	2261818
	07/14/2021	08/06/2021 13:50	Benjamin T. Nordmann	08/06/2021 21:17	Touraj Touran	2261821
	07/14/2021	08/06/2021 13:50	Benjamin T. Nordmann	08/06/2021 21:18	Touraj Touran	2261824
EPA 353.2 Rev. 2.0	07/14/2021			07/16/2021 08:51	Beverly Y. Sanders	2261815
	07/14/2021			07/16/2021 08:57	Beverly Y. Sanders	2261818
	07/14/2021			07/16/2021 08:58	Beverly Y. Sanders	2261821
	07/14/2021			07/16/2021 08:59	Beverly Y. Sanders	2261824
EPA 365.1 Rev. 2.0	07/14/2021	07/20/2021 13:32	Shengyu Ding	07/21/2021 11:37	Shengyu Ding	2261824
	07/14/2021	07/20/2021 13:32	Shengyu Ding	07/21/2021 11:47	Shengyu Ding	2261815

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	07/14/2021	07/20/2021 13:32	Shengyu Ding	07/21/2021 11:48	Shengyu Ding	2261818
	07/14/2021	07/20/2021 13:32	Shengyu Ding	07/21/2021 11:49	Shengyu Ding	2261821
EPA 365.1 Rev. 2.0 dissolved	07/14/2021			07/14/2021 14:52	Ping Hua	2261816
	07/14/2021			07/14/2021 14:53	Ping Hua	2261819
	07/14/2021			07/14/2021 14:58	Ping Hua	2261822
	07/14/2021			07/14/2021 15:01	Ping Hua	2261825
EPA 8270E	07/14/2021	07/18/2021 11:00	Rasheda Ghaffari	07/20/2021 21:48	Arthur Maknenko	2261845
EPA 8276	07/14/2021	07/18/2021 11:00	Rasheda Ghaffari	07/21/2021 03:42	Julie Wi	2261843
	07/14/2021	07/18/2021 11:00	Rasheda Ghaffari	07/21/2021 04:37	Julie Wi	2261844
EPA 8321B	07/14/2021	07/18/2021 11:00	Rasheda Ghaffari	07/21/2021 05:33	Julie Wi	2261845
	07/14/2021	07/15/2021 08:00	Hoor Shaik	07/20/2021 00:13	Juyoung Kim	2261864
	07/14/2021	07/15/2021 10:00	Pramila Ghimire	07/15/2021 15:34	Juyoung Kim	2261864
	07/14/2021	07/15/2021 10:00	Pramila Ghimire	07/15/2021 15:45	Juyoung Kim	2261865
	07/14/2021	07/15/2021 10:00	Pramila Ghimire	07/16/2021 22:04	Pramila Ghimire	2261864
	07/14/2021	07/15/2021 10:00	Pramila Ghimire	07/16/2021 22:17	Pramila Ghimire	2261865
	07/14/2021	07/19/2021 09:00	Hoor Shaik	07/20/2021 03:41	Juyoung Kim	2261865
SM 2120 B-2011	07/14/2021			07/14/2021 11:13	Sarah A Nixon	2261814
	07/14/2021			07/14/2021 11:14	Sarah A Nixon	2261817, 2261820
	07/14/2021			07/14/2021 11:15	Sarah A Nixon	2261823
SM 2320 B-2011	07/14/2021			07/16/2021 01:59	Dale L. Simmons	2261814
	07/14/2021			07/16/2021 02:13	Dale L. Simmons	2261817
	07/14/2021			07/16/2021 02:26	Dale L. Simmons	2261820
	07/14/2021			07/16/2021 02:35	Dale L. Simmons	2261823
SM 2340B	07/14/2021			07/26/2021 12:35	Josef B Mick	2261870
	07/14/2021			07/26/2021 14:10	Josef B Mick	2261866
	07/14/2021			07/26/2021 14:19	Josef B Mick	2261867
	07/14/2021			07/26/2021 14:27	Josef B Mick	2261868
	07/14/2021			07/26/2021 14:35	Josef B Mick	2261869
SM 2540 C-2011	07/14/2021			07/16/2021 14:42	Yijie Li	2261814, 2261817, 2261820, 2261823
SM 2540 D-2011	07/14/2021			07/16/2021 14:42	Yijie Li	2261814, 2261817, 2261820, 2261823
SM 4500 F-C-2011	07/14/2021			07/16/2021 01:59	Dale L. Simmons	2261814
	07/14/2021			07/16/2021 02:13	Dale L. Simmons	2261817
	07/14/2021			07/16/2021 02:26	Dale L. Simmons	2261820
	07/14/2021			07/16/2021 02:35	Dale L. Simmons	2261823
SM 5310 B-2011	07/14/2021			07/21/2021 05:50	Touraj Touran	2261815
	07/14/2021			07/21/2021 06:03	Touraj Touran	2261818
	07/14/2021			07/21/2021 06:18	Touraj Touran	2261821
	07/14/2021			07/21/2021 06:57	Touraj Touran	2261824