

Chemical Analysis Report

NW-DIST-2022-03-10-01

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

Event Description: **Holmes Run**
Request ID: **RQ-2022-02-14-58**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 29-MAR-2022 09:06

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light blue rectangular 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: Wrights Creek upstream of HWY 2

Collection Date/Time: 03/09/2022 11:00

Field ID: G3NW0236

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311734	EPA 200.7 Rev. 4.4	Calcium	17.1		mg/L	P410974	
		Iron	680		ug/L	P410974	
		Magnesium	1.43		mg/L	P410974	
		Potassium	0.93	I	mg/L	P410974	
		Sodium	2.0	I	mg/L	P410974	
		Strontium	15.0		ug/L	P410974	
		Tin	3.0	U	ug/L	P410974	
		Titanium	1.1	I	ug/L	P410974	
		Vanadium	2.0	U	ug/L	P410974	
		Zinc	5.0	U	ug/L	P410974	
	EPA 200.8 Rev. 5.4	Aluminum	82		ug/L	P410974	
		Antimony	0.050	U	ug/L	P410974	
		Arsenic	0.35		ug/L	P410974	
		Barium	14.3		ug/L	P410974	
		Beryllium	0.028	I	ug/L	P410974	
		Boron**	8.7		ug/L	P410974	
		Cadmium	0.020	U	ug/L	P410974	
		Chromium	0.61	I	ug/L	P410974	
		Cobalt	0.106		ug/L	P410974	
		Copper	0.40	U	ug/L	P410974	
		Lead	0.20	U	ug/L	P410974	
		Manganese	56.9		ug/L	P410974	
		Molybdenum	0.15	U	ug/L	P410974	
		Nickel	0.50	U	ug/L	P410974	
		Selenium	0.20	U	ug/L	P410974	MS
		Silver	0.010	U	ug/L	P410974	
		Thallium	0.10	U	ug/L	P410974	
	SM 2340B	Hardness	48.7		mg/L	P410974	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for barium and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Limestone Branch upstream of Lake Victor Rd Collection Date/Time: 03/09/2022 11:40

Field ID: G3NW0232

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311731	EPA 8321B	2,4-D	0.0020	I	ug/L	P410917	
		Acesulfame K	0.10	U	ug/L	P410969	
		2,4,5-T	0.0040	U	ug/L	P410917	
		AMPA	0.10	U	ug/L	P410969	
		Sucralose	0.060		ug/L	P410969	
		Acetaminophen	0.0080	U	ug/L	P410917	
		Acetamiprid	0.0020	U	ug/L	P410917	
		Endothall	0.25	U	ug/L	P410969	RPD
		Glufosinate	0.10	U	ug/L	P410969	
		Glyphosate	0.10	U	ug/L	P410969	
		Afidopyropen	0.0020	U	ug/L	P410917	
		Bentazon	8.0E-04	U	ug/L	P410917	
		Benzovindiflupyr	0.0020	U	ug/L	P410917	
		Carbamazepine	8.0E-04	U	ug/L	P410917	
		Clothianidin	0.0020	U	ug/L	P410917	
		Dinotefuran	0.0020	U	ug/L	P410917	
		Diuron	0.0020	U	ug/L	P410917	
		Fenuron	0.016	U	ug/L	P410917	
		Fluridone	0.0086		ug/L	P410917	
		Imazapyr	0.0040	U	ug/L	P410917	
		Hydrocodone	0.0020	U	ug/L	P410917	
		Ibuprofen	0.020	U	ug/L	P410917	
		Imidacloprid	0.0020	U	ug/L	P410917	MS
		Linuron	0.0040	U	ug/L	P410917	
		Mandestrobin	0.0020	U	ug/L	P410917	
		MCPP	0.0040	U	ug/L	P410917	
		Naproxen	0.0080	U	ug/L	P410917	
		Primidone	0.0040	U	ug/L	P410917	RPD
		Pyraclostrobin	0.0020	U	ug/L	P410917	
		Silvex	0.0040	U	ug/L	P410917	
		Thiamethoxam	0.0020	U	ug/L	P410917	MS
		Tolfenpyrad	0.0020	U	ug/L	P410917	
		Triclopyr	0.0040	U	ug/L	P410917	
2311737	EPA 200.7 Rev. 4.4	Calcium	5.88		mg/L	P410974	
		Iron	670		ug/L	P410974	
		Magnesium	0.90		mg/L	P410974	
		Potassium	0.56	I	mg/L	P410974	
		Sodium	1.8	I	mg/L	P410974	
		Strontium	8.0	I	ug/L	P410974	
		Tin	3.0	U	ug/L	P410974	
		Titanium	0.75	U	ug/L	P410974	
		Vanadium	2.0	U	ug/L	P410974	
		Zinc	5.0	U	ug/L	P410974	
	EPA 200.8 Rev. 5.4	Aluminum	52		ug/L	P410974	

Field ID: G3NW0232

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311737	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P410974	
		Arsenic	0.32		ug/L	P410974	
		Barium	5.37		ug/L	P410974	
		Beryllium	0.010	U	ug/L	P410974	
		Boron**	9.3		ug/L	P410974	
		Cadmium	0.020	U	ug/L	P410974	
		Chromium	0.40	U	ug/L	P410974	
		Cobalt	0.035	I	ug/L	P410974	
		Copper	0.40	U	ug/L	P410974	
		Lead	0.20	U	ug/L	P410974	
		Manganese	34.2		ug/L	P410974	
		Molybdenum	0.15	U	ug/L	P410974	
		Nickel	0.50	U	ug/L	P410974	
		Selenium	0.20	U	ug/L	P410974	MS
		Silver	0.010	U	ug/L	P410974	
	SM 2340B	Thallium	0.10	U	ug/L	P410974	
		Hardness	18.4		mg/L	P410974	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for barium and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Limestone Branch upstream of CR179A

Collection Date/Time: 03/09/2022 11:50

Field ID: G3NW0229

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311735	EPA 200.7 Rev. 4.4	Calcium	5.69		mg/L	P410974	
		Iron	790		ug/L	P410974	
		Magnesium	1.11		mg/L	P410974	
		Potassium	0.68	I	mg/L	P410974	
		Sodium	2.1		mg/L	P410974	
		Strontium	8.3		ug/L	P410974	
		Tin	3.0	U	ug/L	P410974	
		Titanium	2.6	I	ug/L	P410974	
		Vanadium	2.0	U	ug/L	P410974	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P410974	
		Aluminum	440		ug/L	P410974	
		Antimony	0.050	U	ug/L	P410974	
		Arsenic	0.42		ug/L	P410974	
		Barium	10.4		ug/L	P410974	
		Beryllium	0.021	I	ug/L	P410974	
		Boron**	9.2		ug/L	P410974	
		Cadmium	0.020	U	ug/L	P410974	
		Chromium	0.61	I	ug/L	P410974	
		Cobalt	0.098		ug/L	P410974	
		Copper	0.69	I	ug/L	P410974	
		Lead	0.40	I	ug/L	P410974	
		Manganese	62.1		ug/L	P410974	
		Molybdenum	0.15	U	ug/L	P410974	
		Nickel	0.50	U	ug/L	P410974	
		Selenium	0.20	U	ug/L	P410974	MS
		Silver	0.010	U	ug/L	P410974	
		Thallium	0.10	U	ug/L	P410974	
	SM 2340B	Hardness	18.8		mg/L	P410974	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for barium and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Sikes Creek upstream of Harris Stevenson Rd Collection Date/Time: 03/09/2022 12:30

Field ID: G3NW0450

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311736	EPA 200.7 Rev. 4.4	Calcium	8.36		mg/L	P410974	
		Iron	570		ug/L	P410974	
		Magnesium	0.77		mg/L	P410974	
		Potassium	0.70	I	mg/L	P410974	
		Sodium	1.7	I	mg/L	P410974	
		Strontium	10.4		ug/L	P410974	
		Tin	3.0	U	ug/L	P410974	
		Titanium	1.5	I	ug/L	P410974	
		Vanadium	2.0	U	ug/L	P410974	
		Zinc	5.0	U	ug/L	P410974	
	EPA 200.8 Rev. 5.4	Aluminum	318		ug/L	P410974	
		Antimony	0.050	U	ug/L	P410974	
		Arsenic	0.29		ug/L	P410974	
		Barium	14.3		ug/L	P410974	
		Beryllium	0.033	I	ug/L	P410974	
		Boron**	9.3		ug/L	P410974	
		Cadmium	0.020	U	ug/L	P410974	
		Chromium	0.40	U	ug/L	P410974	
		Cobalt	0.383		ug/L	P410974	
		Copper	0.42	I	ug/L	P410974	
		Lead	0.83		ug/L	P410974	
		Manganese	64.0		ug/L	P410974	
		Molybdenum	0.15	U	ug/L	P410974	
		Nickel	0.50	U	ug/L	P410974	
		Selenium	0.20	U	ug/L	P410974	MS
		Silver	0.010	U	ug/L	P410974	
		Thallium	0.10	U	ug/L	P410974	
	SM 2340B	Hardness	24.0		mg/L	P410974	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for barium and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample. The lead result was confirmed in the undigested sample on 03/14/2022.

Sample Location: Sikes Creek upstream of Bonifay Gritney Rd

Collection Date/Time: 03/09/2022 12:50

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311720	DEP SOP: NU-094-1	Color (true)**	48		PCU	P410963	
	EPA 180.1 Rev. 2.0	Turbidity	18		NTU	P410964	
	EPA 300.0 Rev. 2.1	Chloride	3.5		mg Cl/L	P411237	
		Sulfate	0.83		mg SO4/L	P411239	
	SM 2320 B-2011	Total Alkalinity	23		mg CaCO3/L	P411166	
	SM 2540 C-2011	TDS	53		mg/L	P411395	
	SM 2540 D-2011	TSS	16		mg/L	P411375	
2311721	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P411168	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.023		mg N/L	P410995	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.76		mg N/L	P411399	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039		mg N/L	P411045	
	EPA 365.1 Rev. 2.0	Total-P	0.049		mg P/L	P411144	
2311722	SM 5310 B-2011	Organic Carbon	8.3		mg C/L	P411154	
2311722	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P410956	
2311733	EPA 200.7 Rev. 4.4	Calcium	10.1		mg/L	P410974	
		Iron	500		ug/L	P410974	
		Magnesium	0.87		mg/L	P410974	
		Potassium	0.71	I	mg/L	P410974	
		Sodium	1.8	I	mg/L	P410974	
		Strontium	12.9		ug/L	P410974	
		Tin	3.0	U	ug/L	P410974	
	EPA 200.8 Rev. 5.4	Titanium	1.2	I	ug/L	P410974	
		Vanadium	2.0	U	ug/L	P410974	
		Zinc	5.0	U	ug/L	P410974	
		Aluminum	245		ug/L	P410974	
		Antimony	0.050	U	ug/L	P410974	
		Arsenic	0.31		ug/L	P410974	
		Barium	15.4		ug/L	P410974	
		Beryllium	0.028	I	ug/L	P410974	
		Boron**	9.4		ug/L	P410974	
		Cadmium	0.020	U	ug/L	P410974	
		Chromium	0.40	U	ug/L	P410974	
		Cobalt	0.397		ug/L	P410974	
		Copper	0.40	U	ug/L	P410974	
		Lead	0.70		ug/L	P410974	
		Manganese	69.5		ug/L	P410974	
		Molybdenum	0.15	U	ug/L	P410974	
		Nickel	0.50	U	ug/L	P410974	
		Selenium	0.20	U	ug/L	P410974	MS
		Silver	0.010	U	ug/L	P410974	
		Thallium	0.10	U	ug/L	P410974	
	SM 2340B	Hardness	28.8		mg/L	P410974	
2311843	EPA 8270E	Aldrin	0.70	U	ng/L	P410935	

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311843	EPA 8270E	Alpha-BHC	0.11	U	ng/L	P410935	
		Alpha-Chlordane	0.21	U	ng/L	P410935	
		PCB-1016	2.1	U	ng/L	P410935	
		Beta-BHC	0.11	U	ng/L	P410935	
		PCB-1221	2.1	U	ng/L	P410935	
		Beta-Cyfluthrin**	1.3	U	ng/L	P410935	
		PCB-1232	2.1	U	ng/L	P410935	
		Bifenthrin**	0.54	U	ng/L	P410935	
		PCB-1242	2.1	U	ng/L	P410935	
		Carbophenothion	0.97	U	ng/L	P410935	
		PCB-1248	2.1	U	ng/L	P410935	
		Chlorothalonil	1.3	I	ng/L	P410935	
		PCB-1254	2.1	U	ng/L	P410935	
		Cis-Nonachlor**	0.21	U	ng/L	P410935	
		PCB-1260	2.1	U	ng/L	P410935	
		Cypermethrin	1.6	U	ng/L	P410935	
		Dacthal**	0.16	U	ng/L	P410935	
		DDD-p,p'	0.27	U	ng/L	P410935	
		DDE-p,p'	0.21	U	ng/L	P410935	
		DDT-p,p'	0.27	U	ng/L	P410935	
		Delta-BHC	0.43	U	ng/L	P410935	
		Deltamethrin**	1.3	U	ng/L	P410935	
		Dichlobenil**	0.27	U	ng/L	P410935	
		Dicofol	1.3	U	ng/L	P410935	
		Dieldrin	0.43	U	ng/L	P410935	
		Endosulfan I	0.43	U	ng/L	P410935	
		Endosulfan II	0.43	U	ng/L	P410935	
		Endosulfan Sulfate	0.32	U	ng/L	P410935	
		Endrin	0.43	U	ng/L	P410935	
		Endrin Aldehyde	0.80	U	ng/L	P410935	
		Endrin Ketone	0.43	UJ	ng/L	P410935	LCS
		Esfenvalerate**	0.80	U	ng/L	P410935	
		Ethalfuralin**	0.16	U	ng/L	P410935	
		Fenpropathrin**	0.27	U	ng/L	P410935	
		Gamma-BHC	0.13	U	ng/L	P410935	
		Gamma-Chlordane	0.21	U	ng/L	P410935	
		Heptachlor	0.21	U	ng/L	P410935	
		Heptachlor Epoxide	0.27	U	ng/L	P410935	
		Hexachlorobenzene	1.1	U	ng/L	P410935	
		Kepone**	5.4	U	ng/L	P410935	
		Lambda-Cyhalothrin**	0.80	U	ng/L	P410935	
		Methoprene**	0.80	U	ng/L	P410935	
		Methoxychlor	0.32	U	ng/L	P410935	
		MGK-264**	0.21	U	ng/L	P410935	
		Mirex	0.75	U	ng/L	P410935	

Field ID: G3NW0159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311843	EPA 8270E	Oxychlordane**	0.32	U	ng/L	P410935	
		Permethrin	1.7	U	ng/L	P410935	
		Phenothrin**	0.97	U	ng/L	P410935	
		Piperonyl Butoxide**	0.16	U	ng/L	P410935	
		Prallethrin**	2.1	U	ng/L	P410935	
		Tau-Fluvalinate**	0.27	U	ng/L	P410935	
		Tetramethrin**	0.80	U	ng/L	P410935	
		Trans-Nonachlor**	0.21	U	ng/L	P410935	
		Triclosan Methyl**	0.16	U	ng/L	P410935	
		Trifluralin	0.21	U	ng/L	P410935	
	EPA 8276	Chlordane	2.7	U	ng/L	P410935	
		Toxaphene	16	U	ng/L	P410935	

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 200.8 Rev. 5.4: Batch matrix spike recoveries for barium and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample. The lead result was confirmed in the undigested sample on 03/14/2022.

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

Sample Location: Wrights Creek upstream of CR 179

Collection Date/Time: 03/09/2022 13:30

Field ID: G3NW0228

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311732	EPA 8321B	2,4-D	0.0020	U	ug/L	411114	
		Acesulfame K	0.10	U	ug/L	P410969	
		2,4,5-T	0.0040	U	ug/L	411114	
		AMPA	0.10	U	ug/L	P410969	
		Sucralose	0.030	I	ug/L	P410969	
		Acetaminophen	0.0080	U	ug/L	411114	
		Acetamiprid	0.0020	U	ug/L	411114	
		Endothall	0.25	U	ug/L	P410969	RPD
		Glufosinate	0.10	U	ug/L	P410969	
		Glyphosate	0.10	U	ug/L	P410969	
		Afidopyropen	0.0020	U	ug/L	411114	
		Bentazon	8.0E-04	U	ug/L	411114	
		Benzovindiflupyr	0.0020	U	ug/L	411114	
		Carbamazepine	8.0E-04	U	ug/L	411114	
		Clothianidin	0.0020	U	ug/L	411114	
		Dinotefuran	0.0020	U	ug/L	411114	
		Diuron	0.0020	U	ug/L	411114	
		Fenuron	0.016	U	ug/L	411114	
		Fluridone	8.0E-04	U	ug/L	411114	
		Imazapyr	0.0040	U	ug/L	411114	
		Hydrocodone	0.0020	U	ug/L	411114	
		Ibuprofen	0.020	U	ug/L	411114	
		Imidacloprid	0.0020	U	ug/L	411114	
		Linuron	0.0040	UJ	ug/L	411114	RPD
		Mandestrobin	0.0020	U	ug/L	411114	
		MCPP	0.0040	U	ug/L	411114	
		Naproxen	0.0080	U	ug/L	411114	
		Primidone	0.0040	U	ug/L	411114	
		Pyraclostrobin	0.0020	U	ug/L	411114	
		Silvex	0.0040	U	ug/L	411114	
		Thiamethoxam	0.0020	U	ug/L	411114	
		Tolfenpyrad	0.0020	U	ug/L	411114	
		Triclopyr	0.0040	U	ug/L	411114	
2311738	EPA 200.7 Rev. 4.4	Calcium	34.9		mg/L	P410974	
		Iron	370		ug/L	P410974	
		Magnesium	1.39		mg/L	P410974	
		Potassium	0.59	I	mg/L	P410974	
		Sodium	2.0	I	mg/L	P410974	
		Strontium	24.0		ug/L	P410974	
		Tin	3.0	U	ug/L	P410974	
		Titanium	1.8	I	ug/L	P410974	
		Vanadium	2.0	U	ug/L	P410974	
		Zinc	5.0	U	ug/L	P410974	
	EPA 200.8 Rev. 5.4	Aluminum	138		ug/L	P410974	

Field ID: G3NW0228

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2311738	EPA 200.8 Rev. 5.4	Antimony	0.087	I	ug/L	P410974	
		Arsenic	0.32		ug/L	P410974	
		Barium	11.3		ug/L	P410974	
		Beryllium	0.024	I	ug/L	P410974	
		Boron**	8.6		ug/L	P410974	
		Cadmium	0.020	U	ug/L	P410974	
		Chromium	0.55	I	ug/L	P410974	
		Cobalt	0.142		ug/L	P410974	
		Copper	0.40	U	ug/L	P410974	
		Lead	0.28	I	ug/L	P410974	
		Manganese	55.5		ug/L	P410974	
		Molybdenum	0.15	U	ug/L	P410974	
		Nickel	0.50	U	ug/L	P410974	
		Selenium	0.20	U	ug/L	P410974	MS
		Silver	0.010	U	ug/L	P410974	
	SM 2340B	Thallium	0.10	U	ug/L	P410974	
		Hardness	93.0		mg/L	P410974	

Ref. Method and Comment:

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for barium and manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P410963

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410964

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410974

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410974

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	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
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	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: P411237

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411239

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410995

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411399

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411045

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411144

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410956

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

Reference Method: EPA 8270E
Batch ID: P410935

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	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P410935

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	0.25	U	ng/L
Dichlobenil	0.25	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: P410935

Component	Result	Code	Units
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoprene	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
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	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: P410935

Component	Result	Code	Units
Chlordane	2.5	U	ng/L
Chlordane	2.5	U	ng/L
Toxaphene	15	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276
Batch ID: P410935

Component	Result	Code	Units
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B
Batch ID: 411114

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	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P410917

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	0.027	I	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P410917

Component	Result	Code	Units
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
MCPPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	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: P410969

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P411166

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

Reference Method: SM 2540 C-2011
Batch ID: P411395

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P411375

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P411168

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: P411154

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P410963

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410964

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.9		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	106		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	102		P	85 - 115
Sodium	101		P	85 - 115
Strontium	102		P	85 - 115
Tin	104		P	85 - 115
Titanium	100		P	85 - 115
Vanadium	93.9		P	85 - 115
Zinc	105		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410974

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.9		P	85 - 115
Antimony	98.2		P	85 - 115
Arsenic	101		P	85 - 115
Barium	103		P	85 - 115
Beryllium	96.2		P	85 - 115
Boron	101		P	85 - 115
Cadmium	97.4		P	85 - 115
Chromium	96.9		P	85 - 115
Cobalt	105		P	85 - 115
Copper	98.4		P	85 - 115
Lead	102		P	85 - 115
Manganese	97.3		P	85 - 115
Molybdenum	98.1		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.0		P	85 - 115
Silver	105		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411237

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411239

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410995

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411399

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411045

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411144

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410956

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

Reference Method: EPA 8270E
Batch ID: P410935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	67.9		P	10 - 93.0
Alpha-BHC	95.9		P	75 - 106
Alpha-Chlordane	85.6		P	50 - 109
Beta-BHC	111		P	65 - 135
Beta-Cyfluthrin	91.4		P	23 - 167
Bifenthrin	79.6		P	11 - 123
Carbophenothion	68.8		P	18 - 96.0
Chlorothalonil	165		P	26 - 182
Cis-Nonachlor	77.0		P	40 - 111
Cypermethrin	98.7		P	25 - 155
Dacthal	98.5		P	73 - 112
DDD-p,p'	97.1		P	47 - 108
DDE-p,p'	81.4		P	48 - 107
DDT-p,p'	87.2		P	49 - 111
Delta-BHC	95.8		P	68 - 143
Deltamethrin	91.7		P	16 - 176

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P410935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dichlobenil	85.9		P	32 - 113
Dicofol	97.2		P	50 - 108
Dieldrin	84.9		P	56 - 110
Endosulfan I	86.7		P	60 - 105
Endosulfan II	88.7		P	50 - 120
Endosulfan Sulfate	84.6		P	55 - 121
Endrin	82.6		P	31 - 119
Endrin Aldehyde	71.2		P	36 - 116
Endrin Ketone	143		F	56 - 130
Esfenvalerate	98.6		P	10 - 179
Ethalfuralin	84.7		P	49 - 99.0
Fenpropathrin	99.9		P	35 - 119
Gamma-BHC	96.3		P	72 - 115
Gamma-Chlordane	91.4		P	45 - 107
Heptachlor	74.0		P	41 - 100
Heptachlor Epoxide	86.1		P	58 - 106
Hexachlorobenzene	67.2		P	39 - 100
Kepone	138		P	10 - 191
Lambda-Cyhalothrin	100		P	10 - 186
Methoprene	80.4		P	10 - 129
Methoxychlor	105		P	61 - 111
MGK-264	93.1		P	20 - 123
Mirex	72.0		P	10 - 182
Oxychlordane	84.0		P	39 - 110
PCB-1016	61.4		P	49 - 111
PCB-1260	84.9		P	42 - 116
Permethrin	91.0		P	26 - 152
Phenothrin	78.5		P	10 - 109
Piperonyl Butoxide	135		P	27 - 142
Prallethrin	69.1		P	14 - 109
Tau-Fluvalinate	80.5		P	16 - 134
Tetramethrin	114		P	10 - 125
Trans-Nonachlor	78.4		P	45 - 107
Triclosan Methyl	85.0		P	60 - 110
Trifluralin	83.3		P	49 - 98.0

Reference Method: EPA 8276

Batch ID: P410935

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	77.0		P	61 - 118
Toxaphene	69.0		P	51 - 122

Reference Method: EPA 8321B

Batch ID: 411114

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	83.4		P	40 - 150
2,4,5-T	50.8		P	40 - 150
Acetaminophen	96.9		P	30 - 150
Acetamiprid	80.4		P	40 - 150
Afidopyropen	54.2		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: 411114

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	92.7		P	30 - 150
Benzovindiflupyr	114		P	40 - 150
Carbamazepine	122		P	40 - 150
Clothianidin	112		P	40 - 150
Dinotefuran	106		P	40 - 150
Diuron	93.3		P	40 - 150
Fenuron	132		P	40 - 150
Fluridone	91.9		P	40 - 150
Hydrocodone	111		P	40 - 150
Ibuprofen	46.0		P	40 - 150
Imazapyr	106		P	40 - 150
Imidacloprid	119		P	40 - 150
Linuron	90.7		P	40 - 150
Mandestrobin	92.9		P	40 - 150
MCPP	92.7		P	40 - 150
Naproxen	52.4		P	40 - 150
Primidone	144		P	40 - 150
Pyraclostrobin	86.6		P	40 - 150
Silvex	47.7		P	40 - 150
Thiamethoxam	108		P	40 - 150
Tolfenpyrad	40.9		P	30 - 150
Triclopyr	55.7		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P410917

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	89.3		P	40 - 150
2,4,5-T	58.0		P	40 - 150
Acetaminophen	73.4		P	30 - 150
Acetamiprid	77.3		P	40 - 150
Afidopyropen	54.8		P	40 - 150
Bentazon	86.8		P	30 - 150
Benzovindiflupyr	102		P	40 - 150
Carbamazepine	106		P	40 - 150
Clothianidin	118		P	40 - 150
Dinotefuran	96.7		P	40 - 150
Diuron	98.5		P	40 - 150
Fenuron	117		P	40 - 150
Fluridone	83.4		P	40 - 150
Hydrocodone	100		P	40 - 150
Ibuprofen	56.3		P	40 - 150
Imazapyr	91.5		P	40 - 150
Imidacloprid	89.6		P	40 - 150
Linuron	122		P	40 - 150
Mandestrobin	92.3		P	40 - 150
MCPP	81.4		P	40 - 150
Naproxen	61.5		P	40 - 150
Primidone	59.1		P	40 - 150
Pyraclostrobin	82.8		P	40 - 150
Silvex	62.1		P	40 - 150
Thiamethoxam	107		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P410917

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	52.2		P	30 - 150
Triclopyr	52.8		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P410969

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.3		P	40 - 150
AMPA	96.4		P	40 - 150
Endothall	86.8		P	40 - 150
Glufosinate	81.4		P	40 - 150
Glyphosate	89.2		P	40 - 150
Sucralose	86.4		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P411166

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.1		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P411168

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P411154

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.9		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P410974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311711	Calcium	94.9		P	80 - 120
2311711	Iron	110	108	P/P	80 - 120
2311711	Magnesium	94.9		P	80 - 120
2311711	Potassium	104	104	P/P	80 - 120
2311711	Sodium	93.0		P	80 - 120
2311711	Strontium	94.2	83.5	P/P	80 - 120
2311711	Tin	109	108	P/P	80 - 120
2311711	Titanium	104	101	P/P	80 - 120
2311711	Vanadium	98.9	96.3	P/P	80 - 120
2311711	Zinc	107	104	P/P	80 - 120
2311738	Calcium	101		P	80 - 120
2311738	Iron	103		P	80 - 120
2311738	Magnesium	103		P	80 - 120
2311738	Potassium	98.3		P	80 - 120
2311738	Sodium	95.1		P	80 - 120
2311738	Strontium	98.2		P	80 - 120
2311738	Tin	98.7		P	80 - 120
2311738	Titanium	94.9		P	80 - 120
2311738	Vanadium	92.6		P	80 - 120
2311738	Zinc	102		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P410974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311711	Aluminum	101	99.7	P/P	80 - 120
2311711	Antimony	103	104	P/P	80 - 120
2311711	Arsenic	104	104	P/P	80 - 120
2311711	Beryllium	96.9	98.9	P/P	80 - 120
2311711	Boron	103	103	P/P	80 - 120
2311711	Cadmium	99.5	101	P/P	80 - 120
2311711	Chromium	100	99.4	P/P	80 - 120
2311711	Cobalt	106	106	P/P	80 - 120
2311711	Copper	98.5	99.2	P/P	80 - 120
2311711	Lead	103	103	P/P	80 - 120
2311711	Manganese	100	100	P/P	80 - 120
2311711	Molybdenum	101	103	P/P	80 - 120
2311711	Nickel	99.6	99.5	P/P	80 - 120
2311711	Selenium	39.1	40.9	F/F	80 - 120
2311711	Silver	105	106	P/P	80 - 120
2311711	Thallium	102	103	P/P	80 - 120
2311738	Aluminum	101		P	80 - 120
2311738	Antimony	102		P	80 - 120
2311738	Arsenic	102		P	80 - 120
2311738	Barium	105		P	80 - 120
2311738	Beryllium	95.2		P	80 - 120
2311738	Boron	103		P	80 - 120
2311738	Cadmium	102		P	80 - 120
2311738	Chromium	99.3		P	80 - 120
2311738	Cobalt	107		P	80 - 120
2311738	Copper	100		P	80 - 120
2311738	Lead	104		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P410974

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311738	Molybdenum	101		P	80 - 120
2311738	Nickel	101		P	80 - 120
2311738	Selenium	97.1		P	80 - 120
2311738	Silver	108		P	80 - 120
2311738	Thallium	105		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P411237

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311708	Chloride	102		P	90 - 110
2311906	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P411239

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311906	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P410995

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311748	Ammonia-N	99.2	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P411399

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311607	Kjeldahl Nitrogen	100	92.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P411045

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311338	NO2NO3-N	98.0	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P411144

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311686	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P410956

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311846	O-Phosphate-P	99.3	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P410935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311894	Aldrin	57.6	57.1	P/P	10 - 89.0
2311894	Alpha-BHC	88.2	88.6	P/P	71 - 105
2311894	Alpha-Chlordane	79.0	80.7	P/P	43 - 107
2311894	Beta-BHC	111	114	P/P	57 - 152
2311894	Beta-Cyfluthrin	75.8	76.7	P/P	29 - 186
2311894	Bifenthrin	66.1	74.6	P/P	19 - 119
2311894	Carbophenothion	63.4	66.4	P/P	19 - 107
2311894	Chlorothalonil	135	143	P/P	10 - 245
2311894	Cis-Nonachlor	68.8	70.8	P/P	36 - 110
2311894	Cypermethrin	80.9	82.4	P/P	24 - 169
2311894	Dacthal	90.5	94.1	P/P	62 - 115
2311894	DDD-p,p'	85.5	86.9	P/P	36 - 109
2311894	DDE-p,p'	73.0	74.8	P/P	30 - 114
2311894	DDT-p,p'	74.2	78.4	P/P	42 - 108
2311894	Delta-BHC	92.1	95.0	P/P	60 - 164
2311894	Deltamethrin	78.3	64.3	P/P	10 - 210
2311894	Dichlobenil	79.1	67.0	P/P	23 - 108
2311894	Dicofol	84.6	88.1	P/P	44 - 109
2311894	Dieldrin	78.1	81.1	P/P	37 - 119
2311894	Endosulfan I	73.2	76.2	P/P	52 - 105
2311894	Endosulfan II	74.9	77.3	P/P	35 - 127
2311894	Endosulfan Sulfate	78.3	77.5	P/P	39 - 130
2311894	Endrin	72.4	76.8	P/P	30 - 116
2311894	Endrin Aldehyde	69.1	68.0	P/P	20 - 110
2311894	Endrin Ketone	104	122	P/P	48 - 134
2311894	Esfenvalerate	82.2	82.9	P/P	10 - 199
2311894	Ethalfuralin	69.4	73.8	P/P	48 - 95.0
2311894	Fenpropathrin	84.5	91.1	P/P	37 - 121
2311894	Gamma-BHC	85.9	89.6	P/P	61 - 126
2311894	Gamma-Chlordane	87.1	90.5	P/P	39 - 105
2311894	Heptachlor	62.1	62.8	P/P	38 - 96.0
2311894	Heptachlor Epoxide	74.5	75.8	P/P	42 - 114
2311894	Hexachlorobenzene	59.9	58.1	P/P	39 - 93.0
2311894	Kepone	121	83.2	P/P	10 - 215
2311894	Lambda-Cyhalothrin	86.1	83.2	P/P	10 - 204
2311894	Methoprene	63.7	76.5	P/P	17 - 108
2311894	Methoxychlor	92.0	102	P/P	56 - 115
2311894	MGK-264	85.9	89.8	P/P	35 - 120
2311894	Mirex	63.7	67.5	P/P	10 - 178
2311894	Oxychlordane	72.4	76.9	P/P	47 - 91.0
2311894	Permethrin	76.3	81.6	P/P	27 - 170
2311894	Phenothrin	69.9	75.6	P/P	10 - 133
2311894	Piperonyl Butoxide	123	129	P/P	23 - 150
2311894	Prallethrin	67.6	69.1	P/P	21 - 113
2311894	Tau-Fluvalinate	70.6	70.9	P/P	16 - 158
2311894	Tetramethrin	126	129	P/P	22 - 132
2311894	Trans-Nonachlor	75.3	79.2	P/P	43 - 102
2311894	Triclosan Methyl	74.1	76.5	P/P	49 - 109
2311894	Trifluralin	71.0	75.6	P/P	48 - 93.0
2311910	PCB-1016	69.2	76.5	P/P	46 - 110
2311910	PCB-1260	91.0	97.1	P/P	42 - 111

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P410935

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311910	Chlordane	106	88.8	P/P	55 - 128
2311910	Toxaphene	81.9	83.9	P/P	57 - 211

Reference Method: EPA 8321B

Batch ID: 411114

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311732	2,4-D	65.3	85.0	P/P	40 - 150
2311732	2,4,5-T	47.7	51.2	P/P	40 - 150
2311732	Acetaminophen	108	101	P/P	30 - 150
2311732	Acetamiprid	82.6	83.5	P/P	40 - 150
2311732	Afidopyropen	61.9	74.2	P/P	40 - 150
2311732	Bentazon	91.3	83.3	P/P	30 - 150
2311732	Benzovindiflupyr	108	85.8	P/P	40 - 150
2311732	Carbamazepine	121	92.5	P/P	40 - 150
2311732	Clothianidin	99.3	97.7	P/P	40 - 150
2311732	Dinotefuran	123	119	P/P	40 - 150
2311732	Diuron	71.0	86.7	P/P	40 - 150
2311732	Fenuron	119	84.3	P/P	40 - 150
2311732	Fluridone	89.8	87.9	P/P	40 - 150
2311732	Hydrocodone	98.5	98.9	P/P	40 - 150
2311732	Ibuprofen	45.1	45.8	P/P	40 - 150
2311732	Imazapyr	96.1	120	P/P	40 - 150
2311732	Imidacloprid	147	142	P/P	40 - 150
2311732	Linuron	66.2	118	P/P	40 - 150
2311732	Mandestrobin	100	94.4	P/P	40 - 150
2311732	MCPP	83.1	100	P/P	40 - 150
2311732	Naproxen	61.0	55.7	P/P	40 - 150
2311732	Primidone	135	128	P/P	40 - 150
2311732	Pyraclostrobin	85.2	93.9	P/P	40 - 150
2311732	Silvex	46.9	54.0	P/P	40 - 150
2311732	Thiamethoxam	135	137	P/P	40 - 150
2311732	Tolfenpyrad	36.8	48.3	P/P	30 - 150
2311732	Triclopyr	52.9	55.7	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P410917

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311123	2,4-D	84.8	92.7	P/P	40 - 150
2311123	2,4,5-T	56.7	47.0	P/P	40 - 150
2311123	Acetaminophen	99.1	92.3	P/P	30 - 150
2311123	Acetamiprid	102	83.9	P/P	40 - 150
2311123	Afidopyropen	75.7	69.8	P/P	40 - 150
2311123	Bentazon	68.1	71.2	P/P	30 - 150
2311123	Benzovindiflupyr	107	88.7	P/P	40 - 150
2311123	Carbamazepine	91.1	106	P/P	40 - 150
2311123	Clothianidin	141	121	P/P	40 - 150
2311123	Dinotefuran	136	142	P/P	40 - 150
2311123	Diuron	51.5	53.2	P/P	40 - 150
2311123	Fenuron	118	111	P/P	40 - 150
2311123	Fluridone	88.5	81.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P410917

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311123	Hydrocodone	119	112	P/P	40 - 150
2311123	Ibuprofen	65.6	52.7	P/P	40 - 150
2311123	Imazapyr	106	102	P/P	40 - 150
2311123	Imidacloprid	143	159	P/F	40 - 150
2311123	Linuron	91.5	92.2	P/P	40 - 150
2311123	Mandestrobin	103	95.3	P/P	40 - 150
2311123	MCCP	92.9	85.1	P/P	40 - 150
2311123	Naproxen	67.5	60.2	P/P	40 - 150
2311123	Primidone	80.6	126	P/P	40 - 150
2311123	Pyraclostrobin	107	97.2	P/P	40 - 150
2311123	Silvex	71.0	61.8	P/P	40 - 150
2311123	Thiamethoxam	182	168	F/F	40 - 150
2311123	Tolfenpyrad	52.0	52.4	P/P	30 - 150
2311123	Triclopyr	60.6	58.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P410969

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311692	Acesulfame K	103	100	P/P	40 - 150
2311692	AMPA	89.9	90.2	P/P	40 - 150
2311692	Endothall	73.4	105	P/P	40 - 150
2311692	Glufosinate	77.8	80.8	P/P	40 - 150
2311692	Glyphosate	79.9	81.9	P/P	40 - 150
2311692	Sucralose	83.0	88.0	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P411168

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311963	Fluoride	101	101	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P411154

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2311971	Organic Carbon	89.8	91.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P410963

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311847	Color (true)	0.558	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P410964

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311754	Turbidity	1.44	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P410974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311711	Calcium	0.868	Spike	P	0 - 20
2311711	Iron	1.59	Spike	P	0 - 20
2311711	Magnesium	1.72	Spike	P	0 - 20
2311711	Potassium	0.434	Spike	P	0 - 20
2311711	Sodium	1.16	Spike	P	0 - 20
2311711	Strontium	0.983	Spike	P	0 - 20
2311711	Tin	0.718	Spike	P	0 - 20
2311711	Titanium	2.51	Spike	P	0 - 20
2311711	Vanadium	2.71	Spike	P	0 - 20
2311711	Zinc	2.52	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P410974

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311711	Aluminum	0.949	Spike	P	0 - 20
2311711	Antimony	0.410	Spike	P	0 - 20
2311711	Arsenic	0.0778	Spike	P	0 - 20
2311711	Barium	0.538	Spike	P	0 - 20
2311711	Beryllium	2.02	Spike	P	0 - 20
2311711	Boron	0.0283	Spike	P	0 - 20
2311711	Cadmium	1.77	Spike	P	0 - 20
2311711	Chromium	0.707	Spike	P	0 - 20
2311711	Cobalt	0.0403	Spike	P	0 - 20
2311711	Copper	0.666	Spike	P	0 - 20
2311711	Lead	0.113	Spike	P	0 - 20
2311711	Manganese	0.0702	Spike	P	0 - 20
2311711	Molybdenum	1.42	Spike	P	0 - 20
2311711	Nickel	0.0668	Spike	P	0 - 20
2311711	Selenium	4.59	Spike	P	0 - 20
2311711	Silver	0.144	Spike	P	0 - 20
2311711	Thallium	1.19	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411237

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311708	Chloride	0.145	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P411239

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311708	Sulfate	0.503	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P410995

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311748	Ammonia-N	4.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P411399

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311607	Kjeldahl Nitrogen	5.53	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P411045

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311338	NO2NO3-N	0.512	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P411144

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311686	Total-P	0.714	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P410956

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311846	O-Phosphate-P	0.842	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P410935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311894	Aldrin	0.872	Spike	P	0 - 37
2311894	Alpha-BHC	0.461	Spike	P	0 - 16

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P410935

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311894	Alpha-Chlordane	2.19	Spike	P	0 - 28
2311894	Beta-BHC	2.97	Spike	P	0 - 32
2311894	Beta-Cyfluthrin	1.11	Spike	P	0 - 41
2311894	Bifenthrin	12.0	Spike	P	0 - 36
2311894	Carbophenothion	4.64	Spike	P	0 - 81
2311894	Chlorothalonil	5.19	Spike	P	0 - 54
2311894	Cis-Nonachlor	2.90	Spike	P	0 - 33
2311894	Cypermethrin	1.82	Spike	P	0 - 38
2311894	Dacthal	3.94	Spike	P	0 - 23
2311894	DDD-p,p'	1.65	Spike	P	0 - 35
2311894	DDE-p,p'	2.41	Spike	P	0 - 27
2311894	DDT-p,p'	5.56	Spike	P	0 - 31
2311894	Delta-BHC	3.06	Spike	P	0 - 30
2311894	Deltamethrin	19.6	Spike	P	0 - 76
2311894	Dichlobenil	16.5	Spike	P	0 - 33
2311894	Dicofol	4.00	Spike	P	0 - 24
2311894	Dieldrin	3.85	Spike	P	0 - 35
2311894	Endosulfan I	3.94	Spike	P	0 - 25
2311894	Endosulfan II	3.10	Spike	P	0 - 31
2311894	Endosulfan Sulfate	0.972	Spike	P	0 - 38
2311894	Endrin	5.94	Spike	P	0 - 53
2311894	Endrin Aldehyde	1.62	Spike	P	0 - 81
2311894	Endrin Ketone	15.3	Spike	P	0 - 33
2311894	Esfenvalerate	0.780	Spike	P	0 - 46
2311894	Ethalfuralin	6.11	Spike	P	0 - 22
2311894	Fenpropathrin	7.51	Spike	P	0 - 29
2311894	Gamma-BHC	4.17	Spike	P	0 - 17
2311894	Gamma-Chlordane	3.87	Spike	P	0 - 28
2311894	Heptachlor	1.18	Spike	P	0 - 28
2311894	Heptachlor Epoxide	1.57	Spike	P	0 - 23
2311894	Hexachlorobenzene	3.05	Spike	P	0 - 22
2311894	Kepone	36.7	Spike	P	0 - 61
2311894	Lambda-Cyhalothrin	3.49	Spike	P	0 - 52
2311894	Methoprene	18.2	Spike	P	0 - 38
2311894	Methoxychlor	9.79	Spike	P	0 - 29
2311894	MGK-264	4.33	Spike	P	0 - 41
2311894	Mirex	5.86	Spike	P	0 - 39
2311894	Oxychlordane	6.12	Spike	P	0 - 33
2311894	Permethrin	6.68	Spike	P	0 - 39
2311894	Phenothrin	7.89	Spike	P	0 - 52
2311894	Piperonyl Butoxide	5.24	Spike	P	0 - 91
2311894	Prallethrin	2.29	Spike	P	0 - 34
2311894	Tau-Fluvalinate	0.422	Spike	P	0 - 41
2311894	Tetramethrin	2.28	Spike	P	0 - 43
2311894	Trans-Nonachlor	5.01	Spike	P	0 - 31
2311894	Triclosan Methyl	3.16	Spike	P	0 - 24
2311894	Trifluralin	6.33	Spike	P	0 - 23
2311910	PCB-1016	10.1	Spike	P	0 - 22
2311910	PCB-1260	6.50	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P410935

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311910	Chlordane	18.0	Spike	P	0 - 25
2311910	Toxaphene	2.35	Spike	P	0 - 24

Reference Method: EPA 8321B

Batch ID: 411114

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311732	2,4-D	26.2	Spike	P	0 - 30
2311732	2,4,5-T	6.99	Spike	P	0 - 30
2311732	Acetaminophen	6.63	Spike	P	0 - 30
2311732	Acetamiprid	1.07	Spike	P	0 - 30
2311732	Afidopyropen	18.0	Spike	P	0 - 30
2311732	Bentazon	9.17	Spike	P	0 - 30
2311732	Benzovindiflupyr	22.6	Spike	P	0 - 30
2311732	Carbamazepine	26.9	Spike	P	0 - 30
2311732	Clothianidin	1.59	Spike	P	0 - 30
2311732	Dinotefuran	2.99	Spike	P	0 - 30
2311732	Diuron	19.9	Spike	P	0 - 30
2311732	Fenuron	27.6	Spike	P	0 - 30
2311732	Fluridone	2.17	Spike	P	0 - 30
2311732	Hydrocodone	0.343	Spike	P	0 - 30
2311732	Ibuprofen	1.52	Spike	P	0 - 30
2311732	Imazapyr	22.1	Spike	P	0 - 30
2311732	Imidacloprid	3.20	Spike	P	0 - 30
2311732	Linuron	56.2	Spike	F	0 - 30
2311732	Mandestrobin	6.02	Spike	P	0 - 30
2311732	MCP	18.6	Spike	P	0 - 30
2311732	Naproxen	9.05	Spike	P	0 - 30
2311732	Primidone	5.23	Spike	P	0 - 30
2311732	Pyraclostrobin	9.77	Spike	P	0 - 30
2311732	Silvex	14.0	Spike	P	0 - 30
2311732	Thiamethoxam	1.34	Spike	P	0 - 30
2311732	Tolfenpyrad	26.9	Spike	P	0 - 30
2311732	Triclopyr	5.14	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P410917

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311123	2,4-D	8.85	Spike	P	0 - 30
2311123	2,4,5-T	18.7	Spike	P	0 - 30
2311123	Acetaminophen	7.09	Spike	P	0 - 30
2311123	Acetamiprid	19.3	Spike	P	0 - 30
2311123	Afidopyropen	8.11	Spike	P	0 - 30
2311123	Bentazon	4.53	Spike	P	0 - 30
2311123	Benzovindiflupyr	18.3	Spike	P	0 - 30
2311123	Carbamazepine	15.1	Spike	P	0 - 30
2311123	Clothianidin	15.0	Spike	P	0 - 30
2311123	Dinotefuran	4.70	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P410917

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311123	Diuron	3.29	Spike	P	0 - 30
2311123	Fenuron	6.92	Spike	P	0 - 30
2311123	Fluridone	7.25	Spike	P	0 - 30
2311123	Hydrocodone	5.93	Spike	P	0 - 30
2311123	Ibuprofen	21.8	Spike	P	0 - 30
2311123	Imazapyr	3.79	Spike	P	0 - 30
2311123	Imidacloprid	10.3	Spike	P	0 - 30
2311123	Linuron	0.678	Spike	P	0 - 30
2311123	Mandestrobin	8.04	Spike	P	0 - 30
2311123	MCPPP	8.77	Spike	P	0 - 30
2311123	Naproxen	11.4	Spike	P	0 - 30
2311123	Primidone	43.9	Spike	F	0 - 30
2311123	Pyraclostrobin	9.83	Spike	P	0 - 30
2311123	Silvex	13.9	Spike	P	0 - 30
2311123	Thiamethoxam	8.21	Spike	P	0 - 30
2311123	Tolfenpyrad	0.814	Spike	P	0 - 30
2311123	Triclopyr	4.07	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P410969

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311692	Acesulfame K	2.94	Spike	P	0 - 30
2311692	AMPA	0.353	Spike	P	0 - 30
2311692	Endothall	35.8	Spike	F	0 - 30
2311692	Glufosinate	3.67	Spike	P	0 - 30
2311692	Glyphosate	2.56	Spike	P	0 - 30
2311692	Sucralose	5.67	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P411166

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311963	Total Alkalinity	0.661	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P411395

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311422	TDS	6.51	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P411168

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311963	Fluoride	0.0	Spike	P	0 - 2.1

Quality Assurance Report

Precision

Reference Method: SM 5310 B-2011
Batch ID: P411154

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2311971	Organic Carbon	0.802	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2311731

Field Sample ID: G3NW0232

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	71.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	105	P	30 - 160
EPA 8321B	Diuron-d6	86.5	P	30 - 160
EPA 8321B	Endothall-d6	90.6	P	30 - 160
EPA 8321B	Endothall-d6	90.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	76.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.5	P	30 - 160
EPA 8321B	Primidone-d5	108	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160
EPA 8321B	Sucralose-d6	100	P	30 - 160

Lab Sample ID: 2311732

Field Sample ID: G3NW0228

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	98.0	P	30 - 160
EPA 8321B	Diuron-d6	57.7	P	30 - 160
EPA 8321B	Endothall-d6	80.6	P	30 - 160
EPA 8321B	Endothall-d6	80.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.2	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	67.2	P	30 - 160
EPA 8321B	Primidone-d5	132	P	30 - 160
EPA 8321B	Sucralose-d6	75.1	P	30 - 160
EPA 8321B	Sucralose-d6	75.1	P	30 - 160

Lab Sample ID: 2311843

Field Sample ID: G3NW0159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	84.6	P	38 - 115
EPA 8270E	Decachlorobiphenyl	82.9	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	59.2	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	77.8	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	83.7	P	30 - 97.0
EPA 8276	PCNB	81.2	P	45 - 119

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A110866

Included Lab Sample IDs: 2311722

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

Reference Method: DEP SOP: NU-094-1

Run ID: A110867

Included Lab Sample IDs: 2311720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	100	P/P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A110868

Included Lab Sample IDs: 2311720

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110884

Included Lab Sample IDs: 2311721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	97.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110903

Included Lab Sample IDs: 2311731, 2311732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	87.6	93.5	P/P	60 - 160
Glufosinate	78.2	83.8	P/P	60 - 160
Glyphosate	84.9	87.4	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110906

Included Lab Sample IDs: 2311733, 2311734, 2311735, 2311736, 2311737, 2311738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.6	95.8	P/P	90 - 110
Antimony	94.9	93.7	P/P	90 - 110
Arsenic	98.6	96.1	P/P	90 - 110
Barium	98.7	96.5	P/P	90 - 110
Beryllium	92.5	91.6	P/P	90 - 110
Boron	97.9	97.5	P/P	90 - 110
Cadmium	97.1	96.5	P/P	90 - 110
Chromium	95.4	92.8	P/P	90 - 110
Cobalt	104	100	P/P	90 - 110
Copper	98.5	95.0	P/P	90 - 110
Lead	98.6	98.2	P/P	90 - 110
Manganese	95.9	94.1	P/P	90 - 110
Molybdenum	96.1	94.2	P/P	90 - 110
Nickel	98.4	95.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A110906

Included Lab Sample IDs: 2311733, 2311734, 2311735, 2311736, 2311737, 2311738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	97.4	95.6	P/P	90 - 110
Silver	102	101	P/P	90 - 110
Thallium	99.8	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A110916

Included Lab Sample IDs: 2311721

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110937

Included Lab Sample IDs: 2311733, 2311734, 2311735, 2311736, 2311737, 2311738

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	104	105	P/P	90 - 110
Calcium	105	104	P/P	90 - 110
Iron	105	105	P/P	90 - 110
Iron	106	105	P/P	90 - 110
Magnesium	105	105	P/P	90 - 110
Magnesium	106	105	P/P	90 - 110
Potassium	103	102	P/P	90 - 110
Potassium	104	103	P/P	90 - 110
Sodium	101	101	P/P	90 - 110
Sodium	101	100	P/P	90 - 110
Strontium	97.6	97.4	P/P	90 - 110
Strontium	97.6	97.6	P/P	90 - 110
Tin	100	99.1	P/P	90 - 110
Tin	99.3	100	P/P	90 - 110
Titanium	96.7	96.8	P/P	90 - 110
Titanium	96.7	96.7	P/P	90 - 110
Vanadium	96.2	96.2	P/P	90 - 110
Vanadium	96.2	96.6	P/P	90 - 110
Zinc	102	106	P/P	90 - 110
Zinc	106	104	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110939

Included Lab Sample IDs: 2311731, 2311732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.8	88.8	P/P	60 - 160
Endothall	103	111	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A110940

Included Lab Sample IDs: 2311731

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	108	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A110940
Included Lab Sample IDs: 2311731

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4,5-T	93.7	100	P/P	50 - 150
Acetaminophen	103	108	P/P	60 - 160
Acetamiprid	115	103	P/P	50 - 150
Afidopyropen	91.0	112	P/P	50 - 150
Bentazon	106	81.2	P/P	50 - 160
Benzovindiflupyr	117	102	P/P	50 - 150
Carbamazepine	90.1	104	P/P	60 - 150
Clothianidin	110	112	P/P	60 - 150
Dinotefuran	110	111	P/P	50 - 150
Diuron	90.2	94.7	P/P	60 - 160
Fenuron	94.3	93.3	P/P	60 - 150
Fluridone	112	108	P/P	60 - 160
Hydrocodone	110	102	P/P	60 - 150
Ibuprofen	81.2	69.1	P/P	50 - 160
Imazapyr	100	98.0	P/P	50 - 150
Imidacloprid	103	81.3	P/P	60 - 150
Linuron	73.3	134	P/P	60 - 150
Mandestrobin	113	104	P/P	50 - 150
MCPP	93.3	93.3	P/P	50 - 150
Naproxen	79.8	102	P/P	50 - 160
Primidone	99.0	84.3	P/P	60 - 150
Pyraclostrobin	105	101	P/P	60 - 150
Silvex	108	120	P/P	50 - 150
Thiamethoxam	109	117	P/P	50 - 150
Tolfenpyrad	98.4	132	P/P	60 - 150
Triclopyr	85.0	87.9	P/P	50 - 150

Reference Method: SM 5310 B-2011
Run ID: A110958
Included Lab Sample IDs: 2311721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	95.2	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A110961
Included Lab Sample IDs: 2311720

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.6	96.9	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
Run ID: A110961
Included Lab Sample IDs: 2311720

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A110962

Included Lab Sample IDs: 2311731, 2311732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	89.1	101	P/P	60 - 160

Reference Method: EPA 8276

Run ID: A110982

Included Lab Sample IDs: 2311843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.0		P	80 - 120
Toxaphene	95.8		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A110994

Included Lab Sample IDs: 2311720

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

Reference Method: EPA 8321B

Run ID: A111025

Included Lab Sample IDs: 2311732

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	101	95.3	P/P	50 - 150
2,4,5-T	94.8	107	P/P	50 - 150
Acetaminophen	114	106	P/P	60 - 160
Acetamiprid	97.2	107	P/P	50 - 150
Afidopyropen	92.8	106	P/P	50 - 150
Bentazon	116	112	P/P	50 - 160
Benzovindiflupyr	106	110	P/P	50 - 150
Carbamazepine	110	105	P/P	60 - 150
Clothianidin	76.2	112	P/P	60 - 150
Dinotefuran	106	98.1	P/P	50 - 150
Diuron	78.9	80.5	P/P	60 - 160
Fenuron	96.0	99.1	P/P	60 - 150
Fluridone	92.3	109	P/P	60 - 160
Hydrocodone	106	114	P/P	60 - 150
Ibuprofen	113	86.0	P/P	50 - 160
Imazapyr	107	110	P/P	50 - 150
Imidacloprid	109	119	P/P	60 - 150
Linuron	135	86.5	P/P	60 - 150
Mandestrobin	97.9	100	P/P	50 - 150
MCPP	102	104	P/P	50 - 150
Naproxen	130	80.1	P/P	50 - 160
Primidone	80.8	81.1	P/P	60 - 150
Pyraclostrobin	113	118	P/P	60 - 150
Silvex	107	107	P/P	50 - 150
Thiamethoxam	111	115	P/P	50 - 150
Tolfenpyrad	99.7	70.4	P/P	60 - 150
Triclopyr	113	90.8	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A111058
Included Lab Sample IDs: 2311843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	95.4		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	99.6		P	80 - 120
Beta-BHC	95.0		P	80 - 120
Beta-Cyfluthrin	98.8		P	80 - 120
Bifenthrin	102		P	80 - 120
Carbophenothion	98.7		P	80 - 120
Chlorothalonil	92.8		P	80 - 120
Cis-Nonachlor	102		P	80 - 120
Cypermethrin	88.0		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	100		P	80 - 120
DDE-p,p'	99.3		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	92.1		P	80 - 120
Deltamethrin	95.1		P	80 - 120
Dichlobenil	91.8		P	80 - 120
Dicofol	99.7		P	80 - 120
Dieldrin	99.5		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	100		P	80 - 120
Endosulfan Sulfate	95.4		P	80 - 120
Endrin	100		P	80 - 120
Endrin Aldehyde	93.6		P	80 - 120
Endrin Ketone	110		P	80 - 120
Esfenvalerate	97.1		P	80 - 120
Ethalfuralin	95.9		P	80 - 120
Fenpropathrin	102		P	80 - 120
Gamma-BHC	98.4		P	80 - 120
Gamma-Chlordane	98.5		P	80 - 120
Heptachlor	99.4		P	80 - 120
Heptachlor Epoxide	97.4		P	80 - 120
Hexachlorobenzene	98.4		P	80 - 120
Kepone	95.6		P	80 - 120
Lambda-Cyhalothrin	100		P	80 - 120
Methoprene	103		P	80 - 120
Methoxychlor	98.0		P	80 - 120
MGK-264	99.7		P	80 - 120
Mirex	104		P	80 - 120
Oxychlordane	97.9		P	80 - 120
Permethrin	99.0		P	80 - 120
Phenothrin	100		P	80 - 120
Piperonyl Butoxide	93.1		P	80 - 120
Prallethrin	97.0		P	80 - 120
Tau-Fluvalinate	97.6		P	80 - 120
Tetramethrin	103		P	80 - 120
Trans-Nonachlor	99.8		P	80 - 120
Triclosan Methyl	98.8		P	80 - 120
Trifluralin	99.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A111066

Included Lab Sample IDs: 2311721

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

Reference Method: EPA 8270E

Run ID: A111112

Included Lab Sample IDs: 2311843

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	99.8		P	80 - 120
PCB-1260	100		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A111154

Included Lab Sample IDs: 2311721

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	105	98.9	P/P	90 - 110

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	99.3					0.558	
EPA 180.1 Rev. 2.0	Turbidity	96.9					1.44	
EPA 200.7 Rev. 4.4	Calcium	106	94.9	101				0.868
	Iron	106	110	108	103			1.59
	Magnesium	105	94.9	103				1.72
	Potassium	102	104	104	98.3			0.434
	Sodium	101	93.0	95.1				1.16
	Strontium	102	94.2	83.5	98.2			0.983
	Tin	104	109	108	98.7			0.718
	Titanium	100	104	101	94.9			2.51
	Vanadium	93.9	98.9	96.3	92.6			2.71
	Zinc	105	107	104	102			2.52
EPA 200.8 Rev. 5.4	Aluminum	98.9	101	99.7	101			0.949
	Antimony	98.2	103	104	102			0.410
	Arsenic	101	104	104	102			0.0778
	Barium	103	105					0.538
	Beryllium	96.2	96.9	98.9	95.2			2.02
	Boron	101	103	103	103			0.0283
	Cadmium	97.4	99.5	101	102			1.77
	Chromium	96.9	100	99.4	99.3			0.707
	Cobalt	105	106	106	107			0.0403
	Copper	98.4	98.5	99.2	100			0.666
	Lead	102	103	103	104			0.113
	Manganese	97.3	100	100				0.0702
	Molybdenum	98.1	101	103	101			1.42
	Nickel	100	99.6	99.5	101			0.0668
	Selenium	99.0	39.1	40.9	97.1			4.59
	Silver	105	105	106	108			0.144
	Thallium	100	102	103	105			1.19
EPA 300.0 Rev. 2.1	Chloride	100	102	100			0.145	
	Sulfate	101	103				0.503	
EPA 350.1 Rev. 2.0	Ammonia-N	100	99.2	104				4.50
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.4	100	92.0				5.53
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	98.0	97.5				0.512
EPA 365.1 Rev. 2.0	Total-P	101	103	104				0.714
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.4	99.3	100				0.842
EPA 8270E	Aldrin	67.9	57.6	57.1				0.872
	Alpha-BHC	95.9	88.2	88.6				0.461
	Alpha-Chlordane	85.6	79.0	80.7				2.19
	Beta-BHC	111	111	114				2.97
	Beta-Cyfluthrin	91.4	75.8	76.7				1.11
	Bifenthrin	79.6	66.1	74.6				12.0
	Carbophenothion	68.8	63.4	66.4				4.64
	Chlorothalonil	165	135	143				5.19
	Cis-Nonachlor	77.0	68.8	70.8				2.90
	Cypermethrin	98.7	80.9	82.4				1.82
	Dacthal	98.5	90.5	94.1				3.94
	DDD-p,p'	97.1	85.5	86.9				1.65
	DDE-p,p'	81.4	73.0	74.8				2.41
	DDT-p,p'	87.2	74.2	78.4				5.56
	Delta-BHC	95.8	92.1	95.0				3.06
	Deltamethrin	91.7	78.3	64.3				19.6
	Dichlobenil	85.9	79.1	67.0				16.5
	Dicofol	97.2	84.6	88.1				4.00

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Dieldrin	84.9	78.1	81.1		3.85
	Endosulfan I	86.7	73.2	76.2		3.94
	Endosulfan II	88.7	74.9	77.3		3.10
	Endosulfan Sulfate	84.6	78.3	77.5		0.972
	Endrin	82.6	72.4	76.8		5.94
	Endrin Aldehyde	71.2	69.1	68.0		1.62
	Endrin Ketone	143	104	122		15.3
	Esfenvalerate	98.6	82.2	82.9		0.780
	Ethalfuralin	84.7	69.4	73.8		6.11
	Fenpropathrin	99.9	84.5	91.1		7.51
	Gamma-BHC	96.3	85.9	89.6		4.17
	Gamma-Chlordane	91.4	87.1	90.5		3.87
	Heptachlor	74.0	62.1	62.8		1.18
	Heptachlor Epoxide	86.1	74.5	75.8		1.57
	Hexachlorobenzene	67.2	59.9	58.1		3.05
	Kepone	138	121	83.2		36.7
	Lambda-Cyhalothrin	100	86.1	83.2		3.49
	Methoprene	80.4	63.7	76.5		18.2
	Methoxychlor	105	92.0	102		9.79
	MGK-264	93.1	85.9	89.8		4.33
	Mirex	72.0	63.7	67.5		5.86
	Oxychlordane	84.0	72.4	76.9		6.12
	PCB-1016	61.4	69.2	76.5		10.1
	PCB-1260	84.9	91.0	97.1		6.50
	Permethrin	91.0	76.3	81.6		6.68
	Phenothrin	78.5	69.9	75.6		7.89
	Piperonyl Butoxide	135	123	129		5.24
	Prallethrin	69.1	67.6	69.1		2.29
	Tau-Fluvalinate	80.5	70.6	70.9		0.422
	Tetramethrin	114	126	129		2.28
	Trans-Nonachlor	78.4	75.3	79.2		5.01
	Triclosan Methyl	85.0	74.1	76.5		3.16
	Trifluralin	83.3	71.0	75.6		6.33
EPA 8276	Chlordane	77.0	106	88.8		18.0
	Toxaphene	69.0	81.9	83.9		2.35
EPA 8321B	2,4-D	83.4	65.3	85.0		26.2
	2,4-D	89.3	84.8	92.7		8.85
	2,4,5-T	50.8	47.7	51.2		6.99
	2,4,5-T	58.0	56.7	47.0		18.7
	Acesulfame K	92.3	103	100		2.94
	Acetaminophen	96.9	108	101		6.63
	Acetaminophen	73.4	99.1	92.3		7.09
	Acetamiprid	80.4	82.6	83.5		1.07
	Acetamiprid	77.3	102	83.9		19.3
	Afidopyropen	54.2	61.9	74.2		18.0
	Afidopyropen	54.8	75.7	69.8		8.11
	AMPA	96.4	89.9	90.2		0.353
	Bentazon	92.7	91.3	83.3		9.17
	Bentazon	86.8	68.1	71.2		4.53
	Benzovindiflupyr	114	108	85.8		22.6
	Benzovindiflupyr	102	107	88.7		18.3
	Carbamazepine	122	121	92.5		26.9
	Carbamazepine	106	91.1	106		15.1
	Clothianidin	112	99.3	97.7		1.59

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	Clothianidin	118	141	121			15.0
	Dinotefuran	106	123	119			2.99
	Dinotefuran	96.7	136	142			4.70
	Diuron	93.3	71.0	86.7			19.9
	Diuron	98.5	51.5	53.2			3.29
	Endothall	86.8	73.4	105			35.8
	Fenuron	132	119	84.3			27.6
	Fenuron	117	118	111			6.92
	Fluridone	91.9	89.8	87.9			2.17
	Fluridone	83.4	88.5	81.8			7.25
	Glufosinate	81.4	77.8	80.8			3.67
	Glyphosate	89.2	79.9	81.9			2.56
	Hydrocodone	111	98.5	98.9			0.343
	Hydrocodone	100	119	112			5.93
	Ibuprofen	46.0	45.1	45.8			1.52
	Ibuprofen	56.3	65.6	52.7			21.8
	Imazapyr	106	96.1	120			22.1
	Imazapyr	91.5	106	102			3.79
	Imidacloprid	119	147	142			3.20
	Imidacloprid	89.6	143	159			10.3
	Linuron	90.7	66.2	118			56.2
	Linuron	122	91.5	92.2			0.678
	Mandestrobin	92.9	100	94.4			6.02
	Mandestrobin	92.3	103	95.3			8.04
	MCPP	92.7	83.1	100			18.6
	MCPP	81.4	92.9	85.1			8.77
	Naproxen	52.4	61.0	55.7			9.05
	Naproxen	61.5	67.5	60.2			11.4
	Primidone	144	135	128			5.23
	Primidone	59.1	80.6	126			43.9
	Pyraclostrobin	86.6	85.2	93.9			9.77
	Pyraclostrobin	82.8	107	97.2			9.83
	Silvex	47.7	46.9	54.0			14.0
	Silvex	62.1	71.0	61.8			13.9
	Sucralose	86.4	83.0	88.0			5.67
	Thiamethoxam	108	135	137			1.34
	Thiamethoxam	107	182	168			8.21
	Tolfenpyrad	40.9	36.8	48.3			26.9
	Tolfenpyrad	52.2	52.0	52.4			0.814
	Triclopyr	55.7	52.9	55.7			5.14
	Triclopyr	52.8	60.6	58.2			4.07
SM 2320 B-2011	Total Alkalinity	95.1				0.661	
SM 2540 C-2011	TDS					6.51	
SM 4500 F-C-2011	Fluoride	99.6	101	101			0.0
SM 5310 B-2011	Organic Carbon	94.9	89.8	91.1			0.802

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2311720
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2311720
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2311733, 2311734, 2311735, 2311736, 2311737, 2311738

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2311733, 2311734, 2311735, 2311736, 2311737, 2311738
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2311720
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2311720
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2311721
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2311721
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2311721
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2311721
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2311722
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2311843
EPA 8270E	PCBs in water matrices by GC/MS/MS	2311843
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2311843
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2311731, 2311732
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2311731, 2311732
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2311720
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2311733, 2311734, 2311735, 2311736, 2311737, 2311738
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2311720
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2311720
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2311720
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2311721

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	03/10/2022			03/10/2022 15:53	Anna M. Plaviak	2311720
EPA 180.1 Rev. 2.0	03/10/2022			03/10/2022 14:38	Khloe J Berg	2311720
EPA 200.7 Rev. 4.4	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/14/2022 16:46	Josef B Mick	2311733
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/14/2022 16:54	Josef B Mick	2311734
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/14/2022 17:02	Josef B Mick	2311735
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/14/2022 17:41	Josef B Mick	2311736
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/14/2022 17:49	Josef B Mick	2311737
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/14/2022 17:57	Josef B Mick	2311738
EPA 200.8 Rev. 5.4	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/12/2022 01:29	Emily M Philpot	2311733
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/12/2022 01:38	Emily M Philpot	2311734
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/12/2022 01:47	Emily M Philpot	2311735
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/12/2022 01:56	Emily M Philpot	2311736
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/12/2022 02:05	Emily M Philpot	2311737
	03/10/2022	03/11/2022 10:40	Megan Whitefoot	03/12/2022 02:32	Emily M Philpot	2311738
EPA 300.0 Rev. 2.1	03/10/2022			03/17/2022 02:42	Anna M. Plaviak	2311720
EPA 350.1 Rev. 2.0	03/10/2022			03/11/2022 10:18	Judith K. Clark	2311721
EPA 351.2 Rev. 2.0	03/10/2022	03/23/2022 10:26	Samantha L Bates	03/25/2022 12:36	Alexandra J Mattheus	2311721
EPA 353.2 Rev. 2.0	03/10/2022			03/14/2022 10:59	Beverly Y. Sanders	2311721
EPA 365.1 Rev. 2.0	03/10/2022	03/17/2022 15:15	Simonne.V. Calhoun	03/21/2022 14:51	James L Waggeberby	2311721
EPA 365.1 Rev. 2.0 dissolved	03/10/2022			03/10/2022 14:06	James L Waggeberby	2311722
EPA 8270E	03/10/2022	03/14/2022 08:00	Fe-Val Siddell	03/18/2022 23:13	Vandana T. Nagar	2311843
	03/10/2022	03/14/2022 08:00	Fe-Val Siddell	03/22/2022 04:10	Julie Wi	2311843
EPA 8276	03/10/2022	03/14/2022 08:00	Fe-Val Siddell	03/16/2022 18:30	Arthur Maknenko	2311843
EPA 8321B	03/10/2022	03/11/2022 08:00	Manjita Shrestha	03/11/2022 10:20	Manjita Shrestha	2311731
	03/10/2022	03/11/2022 08:00	Manjita Shrestha	03/11/2022 10:31	Manjita Shrestha	2311732
	03/10/2022	03/11/2022 08:00	Manjita Shrestha	03/12/2022 03:46	Manjita Shrestha	2311731
	03/10/2022	03/11/2022 08:00	Manjita Shrestha	03/12/2022 04:01	Manjita Shrestha	2311732
	03/10/2022	03/11/2022 08:00	Manjita Shrestha	03/15/2022 22:37	Manjita Shrestha	2311731
	03/10/2022	03/11/2022 08:00	Manjita Shrestha	03/15/2022 22:52	Manjita Shrestha	2311732
	03/10/2022	03/11/2022 09:30	June Rhew	03/12/2022 19:30	Juyoung Kim	2311731
	03/10/2022	03/16/2022 08:00	June Rhew	03/17/2022 20:31	Juyoung Kim	2311732
SM 2320 B-2011	03/10/2022			03/16/2022 00:21	Dale L. Simmons	2311720
SM 2340B	03/10/2022			03/14/2022 16:46	Josef B Mick	2311733
	03/10/2022			03/14/2022 16:54	Josef B Mick	2311734
	03/10/2022			03/14/2022 17:02	Josef B Mick	2311735
	03/10/2022			03/14/2022 17:41	Josef B Mick	2311736
	03/10/2022			03/14/2022 17:49	Josef B Mick	2311737
	03/10/2022			03/14/2022 17:57	Josef B Mick	2311738
SM 2540 C-2011	03/10/2022			03/14/2022 14:02	Yijie Li	2311720
SM 2540 D-2011	03/10/2022			03/14/2022 15:03	Yijie Li	2311720

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 4500 F-C-2011	03/10/2022			03/16/2022 00:21	Dale L. Simmons	2311720
SM 5310 B-2011	03/10/2022			03/15/2022 18:47	Khloe J Berg	2311721