

Chemical Analysis Report

NW-DIST-2022-01-14-01

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

Event Description: **Milton North Run**
Request ID: **RQ-2022-01-10-30**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 07-FEB-2022 12:10

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

NON-CONFORMANCE REPORT INCLUDED

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: Pace Mill Creek Upstream of Hwy 90

Collection Date/Time: 01/12/2022 09:53

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299990	EPA 8321B	2,4-D	0.0020	U	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	0.10	U	ug/L	P408582	MS
		Sucralose	1.0		ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	0.10	U	ug/L	P408582	
		Glyphosate	0.10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	8.0E-04	U	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	0.0022	I	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	8.0E-04	U	ug/L	P408581	
		Imazapyr	0.0040	U	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.013		ug/L	P408581	MS
		Linuron	0.0040	UJ	ug/L	P408581	CCV
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0044	I	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	
2299994	EPA 200.7 Rev. 4.4	Calcium	3.20		mg/L	P408711	
		Iron	650		ug/L	P408711	
		Magnesium	1.34		mg/L	P408711	
		Potassium	0.73	I	mg/L	P408711	
		Sodium	4.6		mg/L	P408711	
		Strontium	16.4		ug/L	P408711	
		Tin	3.0	U	ug/L	P408711	
		Titanium	0.75	U	ug/L	P408711	
		Vanadium	2.0	U	ug/L	P408711	
		Zinc	5.0	U	ug/L	P408711	
	EPA 200.8 Rev. 5.4	Aluminum	37		ug/L	P408711	

Field ID: G4NW0481

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299994	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P408711	
		Arsenic	0.21		ug/L	P408711	
		Barium	20.7		ug/L	P408711	
		Beryllium	0.010	U	ug/L	P408711	
		Boron**	17.6		ug/L	P408711	
		Cadmium	0.020	U	ug/L	P408711	
		Chromium	0.40	U	ug/L	P408711	
		Cobalt	0.093		ug/L	P408711	
		Copper	0.40	U	ug/L	P408711	
		Lead	0.20	U	ug/L	P408711	
		Manganese	14.6		ug/L	P408711	
		Molybdenum	0.15	U	ug/L	P408711	
		Nickel	0.50	U	ug/L	P408711	
		Selenium	0.20	U	ug/L	P408711	
		Silver	0.010	U	ug/L	P408711	
		Thallium	0.10	U	ug/L	P408711	
	SM 2340B	Hardness	13.5		mg/L	P408711	

Ref. Method and Comment:

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

Sample Location: FB

Collection Date/Time: 01/12/2022 09:50

Field ID: FB_01122022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299977	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P409187	
		Sulfate	0.20	U	mg SO4/L	P409193	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P408794	
	SM 2540 C-2011	TDS	15	U	mg/L	P408977	
	SM 2540 D-2011	TSS	2	U	mg/L	P408950	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P408797	
2299978	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P409150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P408854	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P408732	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P408654	
	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P408838	
2299988	EPA 8270E	Aldrin	0.66	U	ng/L	P408548	
		Alpha-BHC	0.10	U	ng/L	P408548	
		Alpha-Chlordane	0.20	U	ng/L	P408548	
		Beta-BHC	0.10	U	ng/L	P408548	
		Beta-Cyfluthrin**	1.3	U	ng/L	P408548	
		Bifenthrin**	0.51	U	ng/L	P408548	
		Carbophenothion	0.92	U	ng/L	P408548	
		Chlorothalonil	1.3	U	ng/L	P408548	
		Cis-Nonachlor**	0.20	U	ng/L	P408548	
		Cypermethrin	1.5	U	ng/L	P408548	
		Dacthal**	0.15	U	ng/L	P408548	
		DDD-p,p'	0.25	U	ng/L	P408548	
		DDE-p,p'	0.20	U	ng/L	P408548	
		DDT-p,p'	0.25	U	ng/L	P408548	
		Delta-BHC	0.41	U	ng/L	P408548	
		Deltamethrin**	1.3	U	ng/L	P408548	
		Dichlobenil**	0.25	U	ng/L	P408548	
		Dicofol	1.3	U	ng/L	P408548	
		Diieldrin	0.41	U	ng/L	P408548	
		Endosulfan I	0.41	U	ng/L	P408548	
		Endosulfan II	0.41	U	ng/L	P408548	
		Endosulfan Sulfate	0.31	U	ng/L	P408548	
		Endrin	0.41	U	ng/L	P408548	
		Endrin Aldehyde	0.76	U	ng/L	P408548	
		Endrin Ketone	0.41	U	ng/L	P408548	
		Esfenvalerate**	0.76	U	ng/L	P408548	
		Ethalfuralin**	0.15	U	ng/L	P408548	
		Fenpropathrin**	0.25	U	ng/L	P408548	
		Gamma-BHC	0.13	U	ng/L	P408548	
		Gamma-Chlordane	0.20	U	ng/L	P408548	
		Heptachlor	0.20	U	ng/L	P408548	
		Heptachlor Epoxide	0.25	U	ng/L	P408548	
		Hexachlorobenzene	1.0	U	ng/L	P408548	

Field ID: FB_01122022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299988	EPA 8270E	Kepone**	5.1	UJ	ng/L	P408548	CCV
		Lambda-Cyhalothrin**	0.76	U	ng/L	P408548	
		Methoprene**	0.76	U	ng/L	P408548	
		Methoxychlor	0.31	U	ng/L	P408548	
		MGK-264**	0.20	U	ng/L	P408548	
		Mirex	0.71	U	ng/L	P408548	
		Oxychlordane**	0.31	U	ng/L	P408548	
		Permethrin	1.6	U	ng/L	P408548	
		Phenothrin**	0.92	U	ng/L	P408548	
		Piperonyl Butoxide**	0.15	UJ	ng/L	P408548	CCV
		Prallethrin**	2.0	U	ng/L	P408548	
		Tau-Fluvalinate**	0.25	U	ng/L	P408548	
		Tetramethrin**	0.76	U	ng/L	P408548	
		Trans-Nonachlor**	0.20	U	ng/L	P408548	
		Triclosan Methyl**	0.15	U	ng/L	P408548	
		Trifluralin	0.20	U	ng/L	P408548	
		Chlordane	2.5	U	ng/L	P408548	
		Toxaphene	15	U	ng/L	P408548	
	EPA 8276						
2299993	EPA 8321B	2,4-D	0.0020	U	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	0.10	U	ug/L	P408582	MS
		Sucralose	0.010	U	ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	0.10	U	ug/L	P408582	
		Glyphosate	0.10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	8.0E-04	U	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.0E-04	U	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	8.0E-04	U	ug/L	P408581	
		Imazapyr	0.0040	U	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.0020	U	ug/L	P408581	MS
		Linuron	0.0040	UJ	ug/L	P408581	CCV
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPD	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	

Field ID: FB_01122022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299993	EPA 8321B	Primidone	0.0040	U	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	
2299997	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P408711	
		Iron	30	U	ug/L	P408711	
		Magnesium	0.040	U	mg/L	P408711	
		Potassium	0.30	U	mg/L	P408711	
		Sodium	0.50	U	mg/L	P408711	
		Strontium	2.0	U	ug/L	P408711	
		Tin	3.0	U	ug/L	P408711	
	EPA 200.8 Rev. 5.4	Titanium	0.75	U	ug/L	P408711	
		Vanadium	2.0	U	ug/L	P408711	
		Zinc	5.0	U	ug/L	P408711	
		Aluminum	5.0	U	ug/L	P408711	
		Antimony	0.050	U	ug/L	P408711	
		Arsenic	0.050	U	ug/L	P408711	
		Barium	0.20	U	ug/L	P408711	
		Beryllium	0.010	U	ug/L	P408711	
		Boron**	2.0	U	ug/L	P408711	
		Cadmium	0.020	U	ug/L	P408711	
		Chromium	0.40	U	ug/L	P408711	
		Cobalt	0.020	U	ug/L	P408711	
		Copper	0.40	U	ug/L	P408711	
		Lead	0.20	U	ug/L	P408711	
		Manganese	0.10	U	ug/L	P408711	
		Molybdenum	0.15	U	ug/L	P408711	
		Nickel	0.50	U	ug/L	P408711	
		Selenium	0.20	U	ug/L	P408711	
		Silver	0.010	U	ug/L	P408711	
		Thallium	0.10	U	ug/L	P408711	

Ref. Method and Comment:

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

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

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

Sample Location: Jacobs Creek Upstream of Bagwell Rd.

Collection Date/Time: 01/12/2022 10:29

Field ID: G4NW0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299991	EPA 8321B	2,4-D	0.0020	U	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	0.10	U	ug/L	P408582	MS
		Sucralose	0.58		ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	0.10	U	ug/L	P408582	
		Glyphosate	0.10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	8.0E-04	U	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.8E-04	I	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	8.0E-04	U	ug/L	P408581	
		Imazapyr	0.0040	U	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.013		ug/L	P408581	MS
		Linuron	0.0040	UJ	ug/L	P408581	CCV
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0093	I	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	
2299995	EPA 200.7 Rev. 4.4	Calcium	1.54		mg/L	P408711	
		Iron	320		ug/L	P408711	
		Magnesium	1.27		mg/L	P408711	
		Potassium	0.97	I	mg/L	P408711	
		Sodium	3.6		mg/L	P408711	
		Strontium	11.0		ug/L	P408711	
		Tin	3.0	U	ug/L	P408711	
		Titanium	0.75	U	ug/L	P408711	
		Vanadium	2.0	U	ug/L	P408711	
		Zinc	5.0	U	ug/L	P408711	
	EPA 200.8 Rev. 5.4	Aluminum	31		ug/L	P408711	

Field ID: G4NW0003

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299995	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P408711	
		Arsenic	0.16	I	ug/L	P408711	
		Barium	22.7		ug/L	P408711	
		Beryllium	0.012	I	ug/L	P408711	
		Boron**	14.3		ug/L	P408711	
		Cadmium	0.020	U	ug/L	P408711	
		Chromium	0.40	U	ug/L	P408711	
		Cobalt	0.128		ug/L	P408711	
		Copper	0.40	U	ug/L	P408711	
		Lead	0.20	U	ug/L	P408711	
		Manganese	15.4		ug/L	P408711	
		Molybdenum	0.15	U	ug/L	P408711	
		Nickel	0.50	U	ug/L	P408711	
		Selenium	0.20	U	ug/L	P408711	
		Silver	0.010	U	ug/L	P408711	
		Thallium	0.10	U	ug/L	P408711	
	SM 2340B	Hardness	9.1		mg/L	P408711	

Ref. Method and Comment:

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

Sample Location: Pace Mill Creek end of Rodella St.

Collection Date/Time: 01/12/2022 10:55

Field ID: G4NW0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299992	EPA 8321B	2,4-D	0.0020	U	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	0.10	U	ug/L	P408582	MS
		Sucralose	0.46		ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	0.10	U	ug/L	P408582	
		Glyphosate	0.10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	8.0E-04	U	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.0E-04	U	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	8.0E-04	U	ug/L	P408581	
		Imazapyr	0.0040	U	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.0061	I	ug/L	P408581	MS
		Linuron	0.0040	UJ	ug/L	P408581	CCV
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0040	U	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	
2299996	EPA 200.7 Rev. 4.4	Calcium	2.76		mg/L	P408711	
		Iron	880		ug/L	P408711	
		Magnesium	1.15		mg/L	P408711	
		Potassium	0.49	I	mg/L	P408711	
		Sodium	4.9		mg/L	P408711	
		Strontium	11.3		ug/L	P408711	
		Tin	3.0	U	ug/L	P408711	
		Titanium	0.90	I	ug/L	P408711	
		Vanadium	2.0	U	ug/L	P408711	
		Zinc	5.0	U	ug/L	P408711	
	EPA 200.8 Rev. 5.4	Aluminum	67		ug/L	P408711	

Field ID: G4NW0146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299996	EPA 200.8 Rev. 5.4	Antimony	0.050	U	ug/L	P408711	
		Arsenic	0.27		ug/L	P408711	
		Barium	11.3		ug/L	P408711	
		Beryllium	0.010	U	ug/L	P408711	
		Boron**	13.0		ug/L	P408711	
		Cadmium	0.020	U	ug/L	P408711	
		Chromium	0.40	U	ug/L	P408711	
		Cobalt	0.074	I	ug/L	P408711	
		Copper	0.40	U	ug/L	P408711	
		Lead	0.20	U	ug/L	P408711	
		Manganese	17.3		ug/L	P408711	
		Molybdenum	0.15	U	ug/L	P408711	
		Nickel	0.50	U	ug/L	P408711	
		Selenium	0.20	U	ug/L	P408711	
		Silver	0.010	U	ug/L	P408711	
		Thallium	0.10	U	ug/L	P408711	
	SM 2340B	Hardness	11.6		mg/L	P408711	

Ref. Method and Comment:

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

Sample Location: Pond Creek Downstream of Hwy 90

Collection Date/Time: 01/12/2022 11:30

Field ID: G4NW0506

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299989	EPA 8321B	2,4-D	0.0020	U	ug/L	P408581	
		Acesulfame K	0.10	U	ug/L	P408582	
		2,4,5-T	0.0040	U	ug/L	P408581	
		AMPA	0.10	U	ug/L	P408582	MS
		Sucralose	0.32		ug/L	P408582	MS
		Acetaminophen	0.0080	U	ug/L	P408581	
		Acetamiprid	0.0020	U	ug/L	P408581	
		Endothall	0.25	U	ug/L	P408582	MS
		Glufosinate	0.10	U	ug/L	P408582	
		Glyphosate	0.10	U	ug/L	P408582	
		Afidopyropen	0.0020	U	ug/L	P408581	
		Bentazon	8.0E-04	U	ug/L	P408581	
		Benzovindiflupyr	0.0020	U	ug/L	P408581	
		Carbamazepine	8.1E-04	I	ug/L	P408581	
		Clothianidin	0.0020	U	ug/L	P408581	MS
		Dinotefuran	0.0020	U	ug/L	P408581	
		Diuron	0.0020	U	ug/L	P408581	
		Fenuron	0.016	U	ug/L	P408581	
		Fluridone	8.0E-04	U	ug/L	P408581	
		Imazapyr	0.0047	I	ug/L	P408581	
		Hydrocodone	0.0020	U	ug/L	P408581	
		Ibuprofen	0.020	U	ug/L	P408581	
		Imidacloprid	0.013		ug/L	P408581	MS
		Linuron	0.0040	UJ	ug/L	P408581	CCV
		Mandestrobin	0.0020	U	ug/L	P408581	
		MCPP	0.0040	U	ug/L	P408581	
		Naproxen	0.0080	U	ug/L	P408581	
		Primidone	0.0040	U	ug/L	P408581	RPD
		Pyraclostrobin	0.0020	U	ug/L	P408581	
		Silvex	0.0040	U	ug/L	P408581	
		Thiamethoxam	0.0020	U	ug/L	P408581	MS
		Tolfenpyrad	0.0020	U	ug/L	P408581	
		Triclopyr	0.0040	U	ug/L	P408581	

Ref. Method and Comment:

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

Sample Location: Collins Mill Creek Upstream of Conecuh Street Collection Date/Time: 01/12/2022 12:14

Field ID: G4NW0507

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2299975	EPA 300.0 Rev. 2.1	Chloride	5.7		mg Cl/L	P409187	
		Sulfate	1.6		mg SO4/L	P409193	
	SM 2320 B-2011	Total Alkalinity	8.2		mg CaCO3/L	P408794	
	SM 2540 C-2011	TDS	26		mg/L	P408977	
	SM 2540 D-2011	TSS	2	I	mg/L	P408950	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P408797	
2299976	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P409150	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.11	I	mg N/L	P408849	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.62		mg N/L	P408732	
	EPA 365.1 Rev. 2.0	Total-P	0.004	I	mg P/L	P408654	
	SM 5310 B-2011	Organic Carbon	0.88	I	mg C/L	P408838	

Ref. Method and Comment:

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

Non-Conformance Report

NCR ID: 9221

Event(s)

NW-DIST-2022-01-14-01

Job(s)

Sample(s)

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Samples arrived late

Observation: Samples arrived late, samples received within the acceptable temperature range.

Resolution: Samples logged in according to SMP protocol. Samples will be qualified as appropriate. Customer contacted, email correspondence attached to sample submittal forms. Biology and Chemistry supervisors were notified by email.

Authorized by/Date: Kyle Klug 1/14/2022

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P408711

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: P408711

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: P409187

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409193

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409150

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408854

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408732

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408654

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

Reference Method: EPA 8270E
Batch ID: P408548

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
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408548

Component	Result	Code	Units
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P408548

Component	Result	Code	Units
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: P408548

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

Reference Method: EPA 8321B

Batch ID: P408581

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
MCP	0.0040	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P408581

Component	Result	Code	Units
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: P408582

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: P408794

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

Reference Method: SM 2540 C-2011

Batch ID: P408977

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P408950

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011

Batch ID: P408797

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P408838

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: P408711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	107		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	104		P	85 - 115
Sodium	106		P	85 - 115
Strontium	105		P	85 - 115
Tin	107		P	85 - 115
Titanium	107		P	85 - 115
Vanadium	105		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.4		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	101		P	85 - 115
Barium	104		P	85 - 115
Beryllium	99.7		P	85 - 115
Boron	94.1		P	85 - 115
Cadmium	98.6		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	98.1		P	85 - 115
Copper	100		P	85 - 115
Lead	94.1		P	85 - 115
Manganese	99.2		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	101		P	85 - 115
Selenium	98.8		P	85 - 115
Silver	99.9		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409187

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

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409193

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P409150

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408854

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408732

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408654

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	109		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P408548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.5		P	10 - 93.0
Alpha-BHC	94.2		P	75 - 106
Alpha-Chlordane	82.2		P	50 - 109
Beta-BHC	109		P	65 - 135
Beta-Cyfluthrin	80.9		P	23 - 167
Bifenthrin	76.9		P	11 - 123
Carbophenothion	60.2		P	18 - 96.0
Chlorothalonil	111		P	26 - 182
Cis-Nonachlor	69.8		P	40 - 111
Cypermethrin	82.7		P	25 - 155
Dacthal	98.7		P	73 - 112
DDD-p,p'	74.7		P	47 - 108
DDE-p,p'	90.6		P	48 - 107
DDT-p,p'	89.8		P	49 - 111
Delta-BHC	109		P	68 - 143
Deltamethrin	68.7		P	16 - 176
Dichlobenil	87.4		P	32 - 113
Dicofol	75.6		P	50 - 108
Dieldrin	91.5		P	56 - 110
Endosulfan I	91.3		P	60 - 105
Endosulfan II	101		P	50 - 120
Endosulfan Sulfate	76.0		P	55 - 121
Endrin	77.5		P	35 - 117
Endrin Aldehyde	66.9		P	36 - 116
Endrin Ketone	87.5		P	56 - 130
Esfenvalerate	74.7		P	10 - 179
Ethalfuralin	78.2		P	49 - 99.0
Fenpropathrin	79.6		P	35 - 119

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P408548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Gamma-BHC	95.5		P	72 - 115
Gamma-Chlordane	83.7		P	45 - 107
Heptachlor	73.2		P	41 - 100
Heptachlor Epoxide	90.3		P	58 - 106
Hexachlorobenzene	85.0		P	39 - 100
Kepone	55.3		P	10 - 191
Lambda-Cyhalothrin	77.2		P	10 - 186
Methoprene	68.9		P	10 - 129
Methoxychlor	90.6		P	61 - 111
MGK-264	85.6		P	20 - 123
Mirex	64.2		P	10 - 182
Oxychlordane	74.3		P	39 - 110
Permethrin	88.6		P	26 - 152
Phenothrin	68.0		P	10 - 109
Piperonyl Butoxide	87.6		P	27 - 142
Prallethrin	69.9		P	14 - 109
Tau-Fluvalinate	61.7		P	16 - 134
Tetramethrin	79.0		P	10 - 125
Trans-Nonachlor	83.9		P	45 - 107
Triclosan Methyl	96.0		P	60 - 110
Trifluralin	79.9		P	49 - 98.0

Reference Method: EPA 8276

Batch ID: P408548

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	99.6		P	61 - 118
Toxaphene	106		P	51 - 122

Reference Method: EPA 8321B

Batch ID: P408581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	114		P	40 - 150
2,4,5-T	106		P	40 - 150
Acetaminophen	85.5		P	30 - 150
Acetamiprid	96.7		P	40 - 150
Afidopyropen	80.4		P	40 - 150
Bentazon	81.0		P	30 - 150
Benzovindiflupyr	117		P	40 - 150
Carbamazepine	112		P	40 - 150
Clothianidin	92.7		P	40 - 150
Dinotefuran	105		P	40 - 150
Diuron	82.3		P	40 - 150
Fenuron	100		P	40 - 150
Fluridone	73.4		P	40 - 150
Hydrocodone	86.4		P	40 - 150
Ibuprofen	145		P	40 - 150
Imazapyr	104		P	40 - 150
Imidacloprid	79.9		P	40 - 150
Linuron	91.7		P	40 - 150
Mandestrobin	114		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P408581

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
MCPPE	102		P	40 - 150
Naproxen	98.8		P	40 - 150
Primidone	91.6		P	40 - 150
Pyraclostrobin	89.6		P	40 - 150
Silvex	75.6		P	40 - 150
Thiamethoxam	99.5		P	40 - 150
Tolfenpyrad	51.7		P	30 - 150
Triclopyr	126		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P408582

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	137		P	40 - 150
Endothall	106		P	40 - 150
Glufosinate	139		P	40 - 150
Glyphosate	130		P	40 - 150
Sucralose	108		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P408794

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.6		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P408838

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299928	Calcium	101		P	80 - 120
2299928	Iron	110		P	80 - 120
2299928	Magnesium	104		P	80 - 120
2299928	Potassium	106		P	80 - 120
2299928	Sodium	104		P	80 - 120
2299928	Strontium	108		P	80 - 120
2299928	Tin	110		P	80 - 120
2299928	Titanium	111		P	80 - 120
2299928	Vanadium	110		P	80 - 120
2299928	Zinc	107		P	80 - 120
2299995	Calcium	108	105	P/P	80 - 120
2299995	Iron	108	107	P/P	80 - 120
2299995	Magnesium	108	106	P/P	80 - 120
2299995	Potassium	104	104	P/P	80 - 120
2299995	Sodium	104	103	P/P	80 - 120
2299995	Strontium	107	106	P/P	80 - 120
2299995	Tin	109	109	P/P	80 - 120
2299995	Titanium	109	109	P/P	80 - 120
2299995	Vanadium	106	106	P/P	80 - 120
2299995	Zinc	105	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299928	Aluminum	98.0		P	80 - 120
2299928	Antimony	103		P	80 - 120
2299928	Arsenic	103		P	80 - 120
2299928	Barium	106		P	80 - 120
2299928	Beryllium	101		P	80 - 120
2299928	Boron	98.4		P	80 - 120
2299928	Cadmium	101		P	80 - 120
2299928	Chromium	103		P	80 - 120
2299928	Cobalt	98.0		P	80 - 120
2299928	Copper	97.9		P	80 - 120
2299928	Lead	95.4		P	80 - 120
2299928	Manganese	101		P	80 - 120
2299928	Molybdenum	103		P	80 - 120
2299928	Nickel	99.1		P	80 - 120
2299928	Selenium	99.5		P	80 - 120
2299928	Silver	98.6		P	80 - 120
2299928	Thallium	105		P	80 - 120
2299995	Aluminum	101	101	P/P	80 - 120
2299995	Antimony	101	98.7	P/P	80 - 120
2299995	Arsenic	101	99.2	P/P	80 - 120
2299995	Barium	107	104	P/P	80 - 120
2299995	Beryllium	100	95.0	P/P	80 - 120
2299995	Boron	97.8	95.7	P/P	80 - 120
2299995	Cadmium	101	97.9	P/P	80 - 120
2299995	Chromium	102	100	P/P	80 - 120
2299995	Cobalt	99.0	96.3	P/P	80 - 120
2299995	Copper	102	99.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P408711

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299995	Lead	95.9	95.2	P/P	80 - 120
2299995	Manganese	104	101	P/P	80 - 120
2299995	Molybdenum	101	99.0	P/P	80 - 120
2299995	Nickel	102	99.9	P/P	80 - 120
2299995	Selenium	98.9	97.2	P/P	80 - 120
2299995	Silver	101	97.6	P/P	80 - 120
2299995	Thallium	106	106	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299916	Chloride	103		P	90 - 110
2299975	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P409193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299916	Sulfate	98.0		P	90 - 110
2299975	Sulfate	98.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299976	Ammonia-N	95.8	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299446	Kjeldahl Nitrogen	109	107	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408854

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299364	Kjeldahl Nitrogen	99.3	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408732

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300057	NO2NO3-N	101	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408654

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299961	Total-P	108	108	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P408548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299657	Aldrin	57.5	57.2	P/P	10 - 89.0
2299657	Alpha-BHC	95.7	91.0	P/P	71 - 105
2299657	Alpha-Chlordane	73.1	74.0	P/P	43 - 107
2299657	Beta-BHC	117	112	P/P	57 - 152
2299657	Beta-Cyfluthrin	81.5	71.5	P/P	29 - 186
2299657	Bifenthrin	61.0	51.3	P/P	19 - 119
2299657	Carbophenothion	53.4	56.9	P/P	19 - 107
2299657	Chlorothalonil	136	122	P/P	10 - 245
2299657	Cis-Nonachlor	58.7	58.9	P/P	36 - 110
2299657	Cypermethrin	77.9	64.2	P/P	24 - 169
2299657	Dacthal	94.1	90.8	P/P	62 - 115
2299657	DDD-p,p'	62.8	63.7	P/P	36 - 109
2299657	DDE-p,p'	79.1	79.1	P/P	30 - 114
2299657	DDT-p,p'	82.7	81.3	P/P	42 - 108
2299657	Delta-BHC	122	113	P/P	60 - 164
2299657	Deltamethrin	69.8	61.6	P/P	10 - 210
2299657	Dichlobenil	72.8	67.2	P/P	23 - 108
2299657	Dicofol	71.0	71.3	P/P	44 - 109
2299657	Dieldrin	79.5	82.3	P/P	37 - 119
2299657	Endosulfan I	86.6	89.5	P/P	52 - 105
2299657	Endosulfan II	90.5	88.9	P/P	35 - 127
2299657	Endosulfan Sulfate	93.3	78.2	P/P	39 - 130
2299657	Endrin	66.1	69.9	P/P	30 - 116
2299657	Endrin Aldehyde	45.1	51.5	P/P	20 - 110
2299657	Endrin Ketone	89.4	80.7	P/P	48 - 134
2299657	Esfenvalerate	75.6	66.2	P/P	10 - 199
2299657	Ethalfuralin	71.3	71.2	P/P	48 - 95.0
2299657	Fenpropathrin	75.5	70.2	P/P	37 - 121
2299657	Gamma-BHC	107	99.4	P/P	61 - 126
2299657	Gamma-Chlordane	72.7	70.8	P/P	39 - 105
2299657	Heptachlor	67.8	62.3	P/P	38 - 96.0
2299657	Heptachlor Epoxide	81.8	81.2	P/P	42 - 114
2299657	Hexachlorobenzene	74.4	72.3	P/P	39 - 93.0
2299657	Kepone	44.3	38.5	P/P	10 - 215
2299657	Lambda-Cyhalothrin	74.7	68.3	P/P	10 - 204
2299657	Methoprene	61.2	61.1	P/P	17 - 108
2299657	Methoxychlor	82.7	84.0	P/P	56 - 115
2299657	MGK-264	81.5	78.0	P/P	35 - 120
2299657	Mirex	57.1	54.4	P/P	10 - 178
2299657	Oxychlordane	78.7	74.4	P/P	47 - 91.0
2299657	Permethrin	79.4	63.7	P/P	27 - 170
2299657	Phenothrin	68.3	57.8	P/P	10 - 133
2299657	Piperonyl Butoxide	70.6	74.3	P/P	23 - 150
2299657	Prallethrin	59.0	66.8	P/P	21 - 113
2299657	Tau-Fluvalinate	71.2	56.9	P/P	16 - 158
2299657	Tetramethrin	68.7	73.6	P/P	22 - 132
2299657	Trans-Nonachlor	75.1	74.6	P/P	43 - 102
2299657	Triclosan Methyl	81.9	85.6	P/P	49 - 109
2299657	Trifluralin	75.7	73.0	P/P	48 - 93.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P408548

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300069	Chlordane	80.8	76.5	P/P	55 - 128
2300069	Toxaphene	104	96.3	P/P	29 - 164

Reference Method: EPA 8321B

Batch ID: P408581

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	2,4-D	132	98.7	P/P	40 - 150
2299564	2,4,5-T	80.5	88.5	P/P	40 - 150
2299564	Acetaminophen	111	115	P/P	30 - 150
2299564	Acetamiprid	114	102	P/P	40 - 150
2299564	Afidopyropen	75.5	65.6	P/P	40 - 150
2299564	Benzovindiflupyr	96.5	117	P/P	40 - 150
2299564	Carbamazepine	102	109	P/P	40 - 150
2299564	Clothianidin	166	183	F/F	40 - 150
2299564	Dinotefuran	128	141	P/P	40 - 150
2299564	Diuron	86.2	68.9	P/P	40 - 150
2299564	Fenuron	86.1	99.7	P/P	40 - 150
2299564	Fluridone	74.0	95.1	P/P	40 - 150
2299564	Hydrocodone	97.3	106	P/P	40 - 150
2299564	Ibuprofen	59.7	80.1	P/P	40 - 150
2299564	Imazapyr	66.2	95.9	P/P	40 - 150
2299564	Imidacloprid	188	203	F/F	40 - 150
2299564	Linuron	93.8	77.9	P/P	40 - 150
2299564	Mandestrobin	100	98.9	P/P	40 - 150
2299564	MCPP	111	98.9	P/P	40 - 150
2299564	Naproxen	57.6	47.3	P/P	40 - 150
2299564	Primidone	108	72.8	P/P	40 - 150
2299564	Pyraclostrobin	80.0	83.3	P/P	40 - 150
2299564	Silvex	64.6	81.9	P/P	40 - 150
2299564	Thiamethoxam	184	186	F/F	40 - 150
2299564	Tolfenpyrad	50.5	42.9	P/P	30 - 150
2299564	Triclopyr	106	98.8	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P408582

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299564	Acesulfame K	145	139	P/P	40 - 150
2299564	AMPA	148	154	P/F	40 - 150
2299564	Endothall	162	163	F/F	40 - 150
2299564	Glufosinate	140	146	P/P	40 - 150
2299564	Glyphosate	143	141	P/P	40 - 150
2299564	Sucralose	127	153	P/F	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P408797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2300414	Fluoride	97.5	96.9	P/P	92 - 107

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P408838

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2299901	Organic Carbon	95.4		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P408711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299995	Calcium	1.52	Spike	P	0 - 20
2299995	Iron	1.25	Spike	P	0 - 20
2299995	Magnesium	1.40	Spike	P	0 - 20
2299995	Potassium	0.0952	Spike	P	0 - 20
2299995	Sodium	0.434	Spike	P	0 - 20
2299995	Strontium	0.761	Spike	P	0 - 20
2299995	Tin	0.152	Spike	P	0 - 20
2299995	Titanium	0.292	Spike	P	0 - 20
2299995	Vanadium	0.0282	Spike	P	0 - 20
2299995	Zinc	0.728	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P408711

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299995	Aluminum	0.00639	Spike	P	0 - 20
2299995	Antimony	2.74	Spike	P	0 - 20
2299995	Arsenic	1.84	Spike	P	0 - 20
2299995	Barium	1.61	Spike	P	0 - 20
2299995	Beryllium	5.02	Spike	P	0 - 20
2299995	Boron	1.88	Spike	P	0 - 20
2299995	Cadmium	3.05	Spike	P	0 - 20
2299995	Chromium	1.93	Spike	P	0 - 20
2299995	Cobalt	2.77	Spike	P	0 - 20
2299995	Copper	2.53	Spike	P	0 - 20
2299995	Lead	0.764	Spike	P	0 - 20
2299995	Manganese	2.06	Spike	P	0 - 20
2299995	Molybdenum	2.12	Spike	P	0 - 20
2299995	Nickel	2.27	Spike	P	0 - 20
2299995	Selenium	1.75	Spike	P	0 - 20
2299995	Silver	3.30	Spike	P	0 - 20
2299995	Thallium	0.293	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299916	Chloride	1.65	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P409193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299916	Sulfate	0.575	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P409150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299976	Ammonia-N	1.08	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408849

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299446	Kjeldahl Nitrogen	0.937	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P408854

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299364	Kjeldahl Nitrogen	2.29	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P408732

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300057	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P408654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299961	Total-P	0.302	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P408548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299657	Aldrin	0.535	Spike	P	0 - 37
2299657	Alpha-BHC	5.02	Spike	P	0 - 16
2299657	Alpha-Chlordane	1.33	Spike	P	0 - 28
2299657	Beta-BHC	3.70	Spike	P	0 - 32
2299657	Beta-Cyfluthrin	13.1	Spike	P	0 - 41
2299657	Bifenthrin	12.9	Spike	P	0 - 36
2299657	Carbophenothion	6.34	Spike	P	0 - 30
2299657	Chlorothalonil	11.0	Spike	P	0 - 54
2299657	Cis-Nonachlor	0.242	Spike	P	0 - 33
2299657	Cypermethrin	19.2	Spike	P	0 - 38
2299657	Dacthal	3.55	Spike	P	0 - 23
2299657	DDD-p,p'	1.42	Spike	P	0 - 35
2299657	DDE-p,p'	0.0158	Spike	P	0 - 27
2299657	DDT-p,p'	1.66	Spike	P	0 - 31
2299657	Delta-BHC	7.95	Spike	P	0 - 30
2299657	Deltamethrin	12.5	Spike	P	0 - 76

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P408548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299657	Dichlobenil	8.12	Spike	P	0 - 33
2299657	Dicofol	0.404	Spike	P	0 - 24
2299657	Dieldrin	3.23	Spike	P	0 - 35
2299657	Endosulfan I	3.27	Spike	P	0 - 25
2299657	Endosulfan II	1.85	Spike	P	0 - 31
2299657	Endosulfan Sulfate	17.6	Spike	P	0 - 38
2299657	Endrin	5.56	Spike	P	0 - 53
2299657	Endrin Aldehyde	13.3	Spike	P	0 - 81
2299657	Endrin Ketone	10.2	Spike	P	0 - 33
2299657	Esfenvalerate	13.3	Spike	P	0 - 46
2299657	Ethalfuralin	0.107	Spike	P	0 - 22
2299657	Fenpropathrin	7.36	Spike	P	0 - 29
2299657	Gamma-BHC	7.81	Spike	P	0 - 17
2299657	Gamma-Chlordane	2.64	Spike	P	0 - 28
2299657	Heptachlor	8.51	Spike	P	0 - 28
2299657	Heptachlor Epoxide	0.828	Spike	P	0 - 23
2299657	Hexachlorobenzene	2.90	Spike	P	0 - 22
2299657	Kepone	4.85	Spike	P	0 - 61
2299657	Lambda-Cyhalothrin	8.91	Spike	P	0 - 52
2299657	Methoprene	0.203	Spike	P	0 - 38
2299657	Methoxychlor	1.49	Spike	P	0 - 29
2299657	MGK-264	4.35	Spike	P	0 - 41
2299657	Mirex	4.78	Spike	P	0 - 39
2299657	Oxychlordane	5.64	Spike	P	0 - 33
2299657	Permethrin	15.7	Spike	P	0 - 39
2299657	Phenothrin	16.6	Spike	P	0 - 52
2299657	Piperonyl Butoxide	3.87	Spike	P	0 - 91
2299657	Prallethrin	12.5	Spike	P	0 - 34
2299657	Tau-Fluvalinate	22.2	Spike	P	0 - 41
2299657	Tetramethrin	6.78	Spike	P	0 - 43
2299657	Trans-Nonachlor	0.634	Spike	P	0 - 31
2299657	Triclosan Methyl	4.42	Spike	P	0 - 24
2299657	Trifluralin	3.67	Spike	P	0 - 23

Reference Method: EPA 8276
Batch ID: P408548

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300069	Chlordane	5.49	Spike	P	0 - 30
2300069	Toxaphene	7.88	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P408581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	2,4-D	28.9	Spike	P	0 - 30
2299564	2,4,5-T	9.39	Spike	P	0 - 30
2299564	Acetaminophen	3.65	Spike	P	0 - 30
2299564	Acetamidrid	11.1	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P408581

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	Afidopyropen	14.1	Spike	P	0 - 30
2299564	Bentazon	6.76	Spike	P	0 - 30
2299564	Benzovindiflupyr	19.4	Spike	P	0 - 30
2299564	Carbamazepine	6.72	Spike	P	0 - 30
2299564	Clothianidin	9.47	Spike	P	0 - 30
2299564	Dinotefuran	9.41	Spike	P	0 - 30
2299564	Diuron	22.3	Spike	P	0 - 30
2299564	Fenuron	14.6	Spike	P	0 - 30
2299564	Fluridone	15.1	Spike	P	0 - 30
2299564	Hydrocodone	8.23	Spike	P	0 - 30
2299564	Ibuprofen	29.1	Spike	P	0 - 30
2299564	Imazapyr	18.3	Spike	P	0 - 30
2299564	Imidacloprid	7.77	Spike	P	0 - 30
2299564	Linuron	18.6	Spike	P	0 - 30
2299564	Mandestrobin	1.28	Spike	P	0 - 30
2299564	MCCP	11.6	Spike	P	0 - 30
2299564	Naproxen	19.6	Spike	P	0 - 30
2299564	Primidone	36.5	Spike	F	0 - 30
2299564	Pyraclostrobin	4.10	Spike	P	0 - 30
2299564	Silvex	23.7	Spike	P	0 - 30
2299564	Thiamethoxam	1.01	Spike	P	0 - 30
2299564	Tolfenpyrad	16.3	Spike	P	0 - 30
2299564	Triclopyr	7.17	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P408582

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299564	Acesulfame K	4.14	Spike	P	0 - 30
2299564	AMPA	4.30	Spike	P	0 - 30
2299564	Endothall	0.858	Spike	P	0 - 30
2299564	Glufosinate	4.15	Spike	P	0 - 30
2299564	Glyphosate	1.31	Spike	P	0 - 30
2299564	Sucralose	16.1	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P408794

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300414	Total Alkalinity	4.54	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P408977

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299906	TDS	7.29	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500 F-C-2011
Batch ID: P408797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2300414	Fluoride	0.490	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P408838

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2299901	Organic Carbon	1.01	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2299988

Field Sample ID: FB_01122022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	65.2	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	61.8	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	71.0	P	30 - 97.0
EPA 8276	PCNB	68.2	P	45 - 119

Lab Sample ID: 2299989

Field Sample ID: G4NW0506

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	129	P	30 - 160
EPA 8321B	Acetaminophen-d4	92.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	94.8	P	30 - 160
EPA 8321B	Diuron-d6	89.3	P	30 - 160
EPA 8321B	Endothall-d6	145	P	30 - 160
EPA 8321B	Endothall-d6	145	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	128	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	128	P	30 - 160
EPA 8321B	Ibuprofen-d3	99.8	P	30 - 160
EPA 8321B	Primidone-d5	80.0	P	30 - 160
EPA 8321B	Sucralose-d6	86.4	P	30 - 160
EPA 8321B	Sucralose-d6	86.4	P	30 - 160

Lab Sample ID: 2299990

Field Sample ID: G4NW0481

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	141	P	30 - 160
EPA 8321B	Acetaminophen-d4	99.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	113	P	30 - 160
EPA 8321B	Diuron-d6	55.7	P	30 - 160
EPA 8321B	Endothall-d6	155	P	30 - 160
EPA 8321B	Endothall-d6	155	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	137	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	137	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.1	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	137	P	30 - 160
EPA 8321B	Sucralose-d6	137	P	30 - 160

Lab Sample ID: 2299991

Field Sample ID: G4NW0003

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	124	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	102	P	30 - 160
EPA 8321B	Diuron-d6	107	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Endothall-d6	142	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	135	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	135	P	30 - 160
EPA 8321B	Ibuprofen-d3	75.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2299991

Field Sample ID: G4NW0003

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Primidone-d5	90.3	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160
EPA 8321B	Sucralose-d6	109	P	30 - 160

Lab Sample ID: 2299992

Field Sample ID: G4NW0146

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	104	P	30 - 160
EPA 8321B	Diuron-d6	85.9	P	30 - 160
EPA 8321B	Endothall-d6	149	P	30 - 160
EPA 8321B	Endothall-d6	149	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	86.0	P	30 - 160
EPA 8321B	Primidone-d5	102	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160
EPA 8321B	Sucralose-d6	116	P	30 - 160

Lab Sample ID: 2299993

Field Sample ID: FB_01122022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	80.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	66.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	90.2	P	30 - 160
EPA 8321B	Diuron-d6	97.0	P	30 - 160
EPA 8321B	Endothall-d6	152	P	30 - 160
EPA 8321B	Endothall-d6	152	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	127	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	127	P	30 - 160
EPA 8321B	Ibuprofen-d3	91.7	P	30 - 160
EPA 8321B	Primidone-d5	83.4	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160
EPA 8321B	Sucralose-d6	117	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A109919

Included Lab Sample IDs: 2299989, 2299990, 2299991, 2299992, 2299993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	119	115	P/P	60 - 160
Acesulfame K	123	119	P/P	60 - 160
Endothall	80.8	87.8	P/P	60 - 160
Endothall	89.8	80.8	P/P	60 - 160
Sucralose	104	93.1	P/P	60 - 160
Sucralose	91.1	107	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A109920

Included Lab Sample IDs: 2299989, 2299990, 2299991, 2299992, 2299993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	117	74.7	P/P	50 - 150
2,4,5-T	98.2	96.2	P/P	50 - 150
Acetaminophen	79.9	73.1	P/P	60 - 160
Acetamiprid	99.3	106	P/P	50 - 150
Afidopyropen	98.7	87.4	P/P	50 - 150
Bentazon	94.9	106	P/P	50 - 160
Benzovindiflupyr	116	131	P/P	50 - 150
Carbamazepine	92.8	91.9	P/P	60 - 150
Clothianidin	100	84.5	P/P	60 - 150
Dinotefuran	96.8	93.1	P/P	50 - 150
Diuron	89.7	120	P/P	60 - 160
Fenuron	101	97.0	P/P	60 - 150
Fluridone	111	110	P/P	60 - 160
Hydrocodone	94.9	79.5	P/P	60 - 150
Ibuprofen	69.2	128	P/P	50 - 160
Imazapyr	107	90.0	P/P	50 - 150
Imidacloprid	82.2	93.9	P/P	60 - 150
Linuron	105	155*	P/F	60 - 150
Mandestrobin	109	110	P/P	50 - 150
MCPP	95.3	92.8	P/P	50 - 150
Naproxen	64.8	96.1	P/P	50 - 160
Primidone	66.0	81.5	P/P	60 - 150
Pyraclostrobin	98.7	90.7	P/P	60 - 150
Silvex	114	95.3	P/P	50 - 150
Thiamethoxam	111	98.6	P/P	50 - 150
Tolfenpyrad	74.8	97.4	P/P	60 - 150
Triclopyr	121	106	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A109941

Included Lab Sample IDs: 2299989, 2299990, 2299991, 2299992, 2299993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	96.5	99.8	P/P	60 - 160
Glufosinate	91.6	97.8	P/P	60 - 160
Glyphosate	88.6	94.0	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A109944

Included Lab Sample IDs: 2299976, 2299978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109953

Included Lab Sample IDs: 2299994, 2299995, 2299996, 2299997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	99.0	P/P	90 - 110
Aluminum	99.0	99.7	P/P	90 - 110
Aluminum	99.7	100	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Antimony	99.2	101	P/P	90 - 110
Arsenic	101	99.5	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110
Arsenic	99.5	102	P/P	90 - 110
Barium	100	101	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Barium	101	102	P/P	90 - 110
Beryllium	101	101	P/P	90 - 110
Beryllium	101	101	P/P	90 - 110
Beryllium	99.2	101	P/P	90 - 110
Boron	93.2	97.0	P/P	90 - 110
Boron	96.9	95.1	P/P	90 - 110
Boron	97.0	96.9	P/P	90 - 110
Cadmium	100	100	P/P	90 - 110
Cadmium	100	101	P/P	90 - 110
Cadmium	98.6	100	P/P	90 - 110
Chromium	100	101	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Chromium	98.8	100	P/P	90 - 110
Cobalt	94.5	96.2	P/P	90 - 110
Cobalt	95.2	94.5	P/P	90 - 110
Cobalt	96.2	95.7	P/P	90 - 110
Copper	96.3	99.1	P/P	90 - 110
Copper	98.6	96.3	P/P	90 - 110
Copper	99.1	98.6	P/P	90 - 110
Lead	91.3	92.0	P/P	90 - 110
Lead	92.0	92.2	P/P	90 - 110
Lead	92.2	92.8	P/P	90 - 110
Manganese	100	101	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Manganese	98.1	100	P/P	90 - 110
Molybdenum	98.6	99.3	P/P	90 - 110
Molybdenum	99.1	98.6	P/P	90 - 110
Molybdenum	99.3	99.1	P/P	90 - 110
Nickel	97.0	98.9	P/P	90 - 110
Nickel	98.8	97.0	P/P	90 - 110
Nickel	98.9	98.1	P/P	90 - 110
Selenium	100	101	P/P	90 - 110
Selenium	101	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A109953

Included Lab Sample IDs: 2299994, 2299995, 2299996, 2299997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	101	100	P/P	90 - 110
Silver	98.3	99.0	P/P	90 - 110
Silver	99.0	99.0	P/P	90 - 110
Silver	99.0	99.4	P/P	90 - 110
Thallium	101	103	P/P	90 - 110
Thallium	103	103	P/P	90 - 110
Thallium	103	103	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A109978

Included Lab Sample IDs: 2299975, 2299977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.3	97.5	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A109978

Included Lab Sample IDs: 2299975, 2299977

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

Reference Method: EPA 8270E

Run ID: A109989

Included Lab Sample IDs: 2299988

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	103		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	103		P	80 - 120
Beta-BHC	102		P	80 - 120
Beta-Cyfluthrin	93.1		P	80 - 120
Bifenthrin	96.4		P	80 - 120
Carbophenothion	94.2		P	80 - 120
Chlorothalonil	99.1		P	80 - 120
Cis-Nonachlor	92.7		P	80 - 120
Cypermethrin	99.3		P	80 - 120
Dacthal	99.6		P	80 - 120
DDD-p,p'	93.0		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	101		P	80 - 120
Delta-BHC	99.7		P	80 - 120
Deltamethrin	93.2		P	80 - 120
Dichlobenil	104		P	80 - 120
Dicofol	98.9		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	99.4		P	80 - 120
Endosulfan Sulfate	97.0		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	93.2		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A109989
Included Lab Sample IDs: 2299988

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endrin Ketone	101		P	80 - 120
Esfenvalerate	93.2		P	80 - 120
Ethalfuralin	100		P	80 - 120
Fenpropathrin	94.8		P	80 - 120
Gamma-BHC	92.7		P	80 - 120
Gamma-Chlordane	106		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	105		P	80 - 120
Hexachlorobenzene	104		P	80 - 120
Kepone	66.2*		F	80 - 120
Lambda-Cyhalothrin	95.5		P	80 - 120
Methoprene	95.9		P	80 - 120
Methoxychlor	97.6		P	80 - 120
MGK-264	95.4		P	80 - 120
Mirex	100		P	80 - 120
Oxychlordane	105		P	80 - 120
Permethrin	97.2		P	80 - 120
Phenothrin	89.6		P	80 - 120
Piperonyl Butoxide	78.1*		F	80 - 120
Prallethrin	87.7		P	80 - 120
Tau-Fluvalinate	91.8		P	80 - 120
Tetramethrin	86.2		P	80 - 120
Trans-Nonachlor	98.8		P	80 - 120
Triclosan Methyl	102		P	80 - 120
Trifluralin	96.8		P	80 - 120

Reference Method: EPA 8276
Run ID: A109996
Included Lab Sample IDs: 2299988

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	97.5		P	80 - 120
Toxaphene	101		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A109998
Included Lab Sample IDs: 2299976, 2299978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.6	96.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A110001
Included Lab Sample IDs: 2299994, 2299995, 2299996, 2299997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	100	P/P	90 - 110
Calcium	102	101	P/P	90 - 110
Iron	102	101	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A110001

Included Lab Sample IDs: 2299994, 2299995, 2299996, 2299997

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Magnesium	102	101	P/P	90 - 110
Potassium	99.2	99.1	P/P	90 - 110
Potassium	99.3	99.1	P/P	90 - 110
Sodium	102	102	P/P	90 - 110
Sodium	102	103	P/P	90 - 110
Strontium	104	105	P/P	90 - 110
Strontium	105	105	P/P	90 - 110
Tin	103	103	P/P	90 - 110
Tin	103	101	P/P	90 - 110
Titanium	103	103	P/P	90 - 110
Titanium	103	99.4	P/P	90 - 110
Vanadium	102	102	P/P	90 - 110
Vanadium	102	101	P/P	90 - 110
Zinc	102	100	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A110010

Included Lab Sample IDs: 2299976, 2299978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.2	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110025

Included Lab Sample IDs: 2299976

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	94.7	98.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A110029

Included Lab Sample IDs: 2299978

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.8	95.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A110090

Included Lab Sample IDs: 2299993

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	111	104	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A110102

Included Lab Sample IDs: 2299976, 2299978

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A11040

Included Lab Sample IDs: 2299975, 2299977

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	103	104	P/P	90 - 110
Chloride	104	103	P/P	90 - 110
Sulfate	98.8	99.8	P/P	90 - 110
Sulfate	99.8	99.2	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			Precision SMP	MS
			LCS				
EPA 200.7 Rev. 4.4	Calcium	106	101	108	105		1.52
	Iron	107	110	108	107		1.25
	Magnesium	106	104	108	106		1.40
	Potassium	104	106	104	104		0.0952
	Sodium	106	104	104	103		0.434
	Strontium	105	108	107	106		0.761
	Tin	107	110	109	109		0.152
	Titanium	107	111	109	109		0.292
	Vanadium	105	110	106	106		0.0282
	Zinc	104	107	105	104		0.728
EPA 200.8 Rev. 5.4	Aluminum	99.4	98.0	101	101		0.0063
	Antimony	100	103	101	98.7		2.74
	Arsenic	101	103	101	99.2		1.84
	Barium	104	106	107	104		1.61
	Beryllium	99.7	101	100	95.0		5.02
	Boron	94.1	98.4	97.8	95.7		1.88
	Cadmium	98.6	101	101	97.9		3.05
	Chromium	100	103	102	100		1.93
	Cobalt	98.1	98.0	99.0	96.3		2.77
	Copper	100	97.9	102	99.6		2.53
	Lead	94.1	95.4	95.9	95.2		0.764
	Manganese	99.2	101	104	101		2.06
	Molybdenum	101	103	101	99.0		2.12
	Nickel	101	99.1	102	99.9		2.27
	Selenium	98.8	99.5	98.9	97.2		1.75
	Silver	99.9	98.6	101	97.6		3.30
	Thallium	102	105	106	106		0.293
EPA 300.0 Rev. 2.1	Chloride	103	103	105		1.65	
	Sulfate	98.0	98.0	98.6		0.575	
EPA 350.1 Rev. 2.0	Ammonia-N	97.2	95.8	97.2			1.08
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	109	107			0.937
	Kjeldahl Nitrogen	99.5	99.3	96.8			2.29
EPA 353.2 Rev. 2.0	NO2NO3-N	104	101	101			0.0
EPA 365.1 Rev. 2.0	Total-P	109	108	108			0.302
EPA 8270E	Aldrin	62.5	57.5	57.2			0.535
	Alpha-BHC	94.2	95.7	91.0			5.02
	Alpha-Chlordane	82.2	73.1	74.0			1.33
	Beta-BHC	109	117	112			3.70
	Beta-Cyfluthrin	80.9	81.5	71.5			13.1
	Bifenthrin	76.9	61.0	51.3			12.9
	Carbophenothion	60.2	53.4	56.9			6.34
	Chlorothalonil	111	136	122			11.0
	Cis-Nonachlor	69.8	58.7	58.9			0.242
	Cypermethrin	82.7	77.9	64.2			19.2
	Dacthal	98.7	94.1	90.8			3.55
	DDD-p,p'	74.7	62.8	63.7			1.42
	DDE-p,p'	90.6	79.1	79.1			0.0158
	DDT-p,p'	89.8	82.7	81.3			1.66
	Delta-BHC	109	122	113			7.95
	Deltamethrin	68.7	69.8	61.6			12.5
	Dichlobenil	87.4	72.8	67.2			8.12
	Dicofol	75.6	71.0	71.3			0.404
	Dieldrin	91.5	79.5	82.3			3.23
	Endosulfan I	91.3	86.6	89.5			3.27

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8270E	Endosulfan II	101	90.5	88.9		1.85	
	Endosulfan Sulfate	76.0	93.3	78.2		17.6	
	Endrin	77.5	66.1	69.9		5.56	
	Endrin Aldehyde	66.9	45.1	51.5		13.3	
	Endrin Ketone	87.5	89.4	80.7		10.2	
	Esfenvalerate	74.7	75.6	66.2		13.3	
	Ethalfuralin	78.2	71.3	71.2		0.107	
	Fenpropathrin	79.6	75.5	70.2		7.36	
	Gamma-BHC	95.5	107	99.4		7.81	
	Gamma-Chlordane	83.7	72.7	70.8		2.64	
	Heptachlor	73.2	67.8	62.3		8.51	
	Heptachlor Epoxide	90.3	81.8	81.2		0.828	
	Hexachlorobenzene	85.0	74.4	72.3		2.90	
	Kepone	55.3	44.3	38.5		4.85	
	Lambda-Cyhalothrin	77.2	74.7	68.3		8.91	
	Methoprene	68.9	61.2	61.1		0.203	
	Methoxychlor	90.6	82.7	84.0		1.49	
	MGK-264	85.6	81.5	78.0		4.35	
	Mirex	64.2	57.1	54.4		4.78	
	Oxychlordane	74.3	78.7	74.4		5.64	
	Permethrin	88.6	79.4	63.7		15.7	
	Phenothrin	68.0	68.3	57.8		16.6	
	Piperonyl Butoxide	87.6	70.6	74.3		3.87	
	Prallethrin	69.9	59.0	66.8		12.5	
	Tau-Fluvalinate	61.7	71.2	56.9		22.2	
	Tetramethrin	79.0	68.7	73.6		6.78	
	Trans-Nonachlor	83.9	75.1	74.6		0.634	
	Triclosan Methyl	96.0	81.9	85.6		4.42	
	Trifluralin	79.9	75.7	73.0		3.67	
	EPA 8276	Chlordane	99.6	80.8	76.5		5.49
		Toxaphene	106	104	96.3		7.88
	EPA 8321B	2,4-D	114	132	98.7		28.9
2,4,5-T		106	80.5	88.5		9.39	
Acesulfame K		101	145	139		4.14	
Acetaminophen		85.5	115	111		3.65	
Acetamiprid		96.7	102	114		11.1	
Afidopyropen		80.4	65.6	75.5		14.1	
AMPA		137	148	154		4.30	
Bentazon		81.0				6.76	
Benzovindiflupyr		117	96.5	117		19.4	
Carbamazepine		112	109	102		6.72	
Clothianidin		92.7	183	166		9.47	
Dinotefuran		105	141	128		9.41	
Diuron		82.3	68.9	86.2		22.3	
Endothall		106	162	163		0.858	
Fenuron		100	99.7	86.1		14.6	
Fluridone		73.4	74.0	95.1		15.1	
Glufosinate		139	140	146		4.15	
Glyphosate		130	143	141		1.31	
Hydrocodone		86.4	106	97.3		8.23	
Ibuprofen		145	59.7	80.1		29.1	
Imazapyr		104	66.2	95.9		18.3	
Imidacloprid		79.9	203	188		7.77	
Linuron		91.7	93.8	77.9		18.6	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Mandestrobin	114	100	98.9			1.28
	MCPP	102	111	98.9			11.6
	Naproxen	98.8	57.6	47.3			19.6
	Primidone	91.6	72.8	108			36.5
	Pyraclostrobin	89.6	80.0	83.3			4.10
	Silvex	75.6	64.6	81.9			23.7
	Sucralose	108	127	153			16.1
	Thiamethoxam	99.5	186	184			1.01
	Tolfenpyrad	51.7	50.5	42.9			16.3
	Triclopyr	126	106	98.8			7.17
	Total Alkalinity	98.6				4.54	
SM 2320 B-2011	TDS					7.29	
SM 2540 C-2011	Fluoride	97.5	97.5	96.9			0.490
SM 4500 F-C-2011	Organic Carbon	95.8	95.4				1.01

Reference Method Descriptions

Method	Description	Associated Samples
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2299994, 2299995, 2299996, 2299997
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2299994, 2299995, 2299996, 2299997
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2299975, 2299977
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2299975, 2299977
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2299976, 2299978
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2299976, 2299978
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2299976, 2299978
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2299976, 2299978
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2299988
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2299988
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2299989, 2299990, 2299991, 2299992, 2299993
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2299989, 2299990, 2299991, 2299992, 2299993
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2299975, 2299977
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2299994, 2299995, 2299996
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2299975, 2299977
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2299975, 2299977
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2299975, 2299977
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2299976, 2299978

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 200.7 Rev. 4.4	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 21:42	Josef B Mick	2299997
	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/22/2022 01:13	Josef B Mick	2299994
	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/22/2022 01:21	Josef B Mick	2299995
	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/22/2022 01:50	Josef B Mick	2299996
EPA 200.8 Rev. 5.4	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 00:34	McKinley C Carter	2299997
	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 03:07	McKinley C Carter	2299995
	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 04:23	McKinley C Carter	2299994
	01/14/2022	01/20/2022 10:56	Emily M Philpot	01/21/2022 04:33	McKinley C Carter	2299996
EPA 300.0 Rev. 2.1	01/14/2022			01/28/2022 20:08	James L Waggeberby	2299975
	01/14/2022			01/28/2022 23:59	James L Waggeberby	2299977
EPA 350.1 Rev. 2.0	01/14/2022			01/28/2022 13:36	Ping Hua	2299976
	01/14/2022			01/28/2022 13:51	Ping Hua	2299978
EPA 351.2 Rev. 2.0	01/14/2022	01/24/2022 11:37	Samantha L Bates	01/25/2022 13:47	Alexandra J Mattheus	2299978
	01/14/2022	01/24/2022 11:42	Samantha L Bates	01/25/2022 11:15	Alexandra J Mattheus	2299976
EPA 353.2 Rev. 2.0	01/14/2022			01/20/2022 11:02	Beverly Y. Sanders	2299976
	01/14/2022			01/20/2022 11:16	Beverly Y. Sanders	2299978
EPA 365.1 Rev. 2.0	01/14/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 15:17	Shengyu Ding	2299978
	01/14/2022	01/20/2022 17:50	Simonne.V. Calhoun	01/24/2022 15:20	Shengyu Ding	2299976
EPA 8270E	01/14/2022	01/19/2022 08:00	Fe-Val Siddell	01/21/2022 23:44	Vandana T. Nagar	2299988
EPA 8276	01/14/2022	01/19/2022 08:00	Fe-Val Siddell	01/21/2022 14:16	Arthur Maknenko	2299988
EPA 8321B	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 16:38	Juyoung Kim	2299989
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 16:49	Juyoung Kim	2299990
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 16:59	Juyoung Kim	2299991
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 17:10	Juyoung Kim	2299992
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 17:21	Juyoung Kim	2299993
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 21:44	Manjita Shrestha	2299989
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 21:59	Manjita Shrestha	2299990
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 22:29	Manjita Shrestha	2299991
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 22:43	Manjita Shrestha	2299992
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/18/2022 22:58	Manjita Shrestha	2299993
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/19/2022 12:39	Manjita Shrestha	2299989
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/19/2022 12:53	Manjita Shrestha	2299991
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/19/2022 13:08	Manjita Shrestha	2299992
	01/14/2022	01/18/2022 12:00	Juyoung Kim	01/26/2022 19:56	Manjita Shrestha	2299993
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 14:59	Juyoung Kim	2299989
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 15:34	Juyoung Kim	2299990
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 16:08	Juyoung Kim	2299991
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 16:43	Juyoung Kim	2299992
	01/14/2022	01/19/2022 09:00	Hoor Shaik	01/20/2022 17:18	Juyoung Kim	2299993
SM 2320 B-2011	01/14/2022			01/21/2022 00:53	Dale L. Simmons	2299975

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	01/14/2022			01/21/2022 01:00	Dale L. Simmons	2299977
SM 2340B	01/14/2022			01/22/2022 01:13	Josef B Mick	2299994
	01/14/2022			01/22/2022 01:21	Josef B Mick	2299995
	01/14/2022			01/22/2022 01:50	Josef B Mick	2299996
	01/14/2022			01/18/2022 15:32	Yijie Li	2299975, 2299977
SM 2540 C-2011	01/14/2022			01/18/2022 15:32	Yijie Li	2299975, 2299977
SM 2540 D-2011	01/14/2022			01/21/2022 00:53	Dale L. Simmons	2299975
SM 4500 F-C-2011	01/14/2022			01/21/2022 01:00	Dale L. Simmons	2299977
	01/14/2022			01/21/2022 07:58	Nathaniel J Jones	2299976
SM 5310 B-2011	01/14/2022			01/21/2022 08:16	Nathaniel J Jones	2299978