

Chemical Analysis Report

SO-DIST-2022-06-21-01

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

Event Description: **2022 SMP: Peace River**
Request ID: **RQ-2022-06-20-48**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
Attn: William Mullen

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Colin Wright, Program Administrator

Date Certified: 12-JUL-2022 10:14

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Peace River Estuary @ Harbour Heights

Collection Date/Time: 06/20/2022 09:05

Field ID: G3SD0148

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335830	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P415502	
	SM 2320 B-2011	Total Alkalinity	64		mg CaCO3/L	P415767	
	SM 2540 D-2011	TSS	6	I	mg/L	P415895	
	SM 4500-F- C-2011	Fluoride	0.52		mg F/L	P415771	
2335831	EPA 350.1 Rev. 2.0	Ammonia-N	0.051		mg N/L	P415881	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P415784	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.43		mg N/L	P416225	
	EPA 365.1 Rev. 2.0	Total-P	0.64		mg P/L	P415813	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P415622	
2335867	EPA 8321B	2,4-D	0.087		ug/L	P415542	
		Acesulfame K	0.10	U	ug/L	P415517	
		AMPA	0.34	I	ug/L	P415517	
		2,4,5-T	0.0040	U	ug/L	P415542	MS, RPD
		Acetaminophen	0.0080	U	ug/L	P415542	
		Acetamiprid	0.0020	U	ug/L	P415542	
		Endothall	0.25	U	ug/L	P415517	
		Glufosinate	0.10	U	ug/L	P415517	
		Glyphosate	0.82		ug/L	P415517	
		Afidopyropen	0.0020	U	ug/L	P415542	
		Bentazon	0.0073		ug/L	P415542	
		Sucralose	0.24		ug/L	P415517	
		Benzovindiflupyr	0.0023	I	ug/L	P415542	
		Carbamazepine	0.0015	I	ug/L	P415542	
		Clothianidin	0.063		ug/L	P415542	
		Dinotefuran	0.020		ug/L	P415542	
		Diuron	0.023		ug/L	P415542	
		Fenuron	0.032	U	ug/L	P415542	
		Fluridone	8.0E-04	U	ug/L	P415542	
		Imazapyr	0.051		ug/L	P415542	
		Hydrocodone	0.0020	U	ug/L	P415542	
		Ibuprofen	0.080	U	ug/L	P415542	
		Imidacloprid	0.22		ug/L	P415542	MS
		Linuron	0.0040	U	ug/L	P415542	
		Mandestrobin	0.0020	U	ug/L	P415542	
		MCPP	0.0040	U	ug/L	P415542	
		Naproxen	0.0080	U	ug/L	P415542	MS, RPD
		Primidone	0.0040	U	ug/L	P415542	
		Pyraclostrobin	0.0020	U	ug/L	P415542	
		Silvex	0.0040	U	ug/L	P415542	
		Thiamethoxam	0.16		ug/L	P415542	MS
		Tolfenpyrad	0.0020	U	ug/L	P415542	
		Triclopyr	0.0040	U	ug/L	P415542	MS
2335869	EPA 200.7 Rev. 4.4	Calcium	45.1		mg/L	P415516	
		Iron	440		ug/L	P415516	

Field ID: G3SD0148

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335869	EPA 200.7 Rev. 4.4	Magnesium	39.0		mg/L	P415516	
		Potassium	16.3		mg/L	P415516	
		Strontium	1.87E+03		ug/L	P415516	
		Tin	3.0	U	ug/L	P415516	
		Titanium	1.3	I	ug/L	P415516	
		Vanadium	2.9	I	ug/L	P415516	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P415516	
		Aluminum	140		ug/L	P415516	
		Antimony	0.28		ug/L	P415516	
		Arsenic	1.71		ug/L	P415516	
		Beryllium	0.016	I	ug/L	P415516	
		Cadmium	0.020	U	ug/L	P415516	
		Chromium	0.79	I	ug/L	P415516	
		Cobalt	0.142		ug/L	P415516	
		Copper	1.44		ug/L	P415516	
		Lead	0.20	U	ug/L	P415516	
		Manganese	22.2		ug/L	P415516	
		Molybdenum	2.19		ug/L	P415516	
		Nickel	1.0	I	ug/L	P415516	
		Selenium	0.31	I	ug/L	P415516	
		Silver	0.010	U	ug/L	P415516	
		Thallium	0.10	U	ug/L	P415516	

Ref. Method and Comment:

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

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Emerald Pointe Canal

Collection Date/Time: 06/20/2022 08:40

Field ID: G3SD0216

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335828	EPA 180.1 Rev. 2.0	Turbidity	1.5		NTU	P415502	
	SM 2320 B-2011	Total Alkalinity	85		mg CaCO3/L	P415769	
	SM 2540 D-2011	TSS	3	IA	mg/L	P415897	
	SM 4500-F- C-2011	Fluoride	0.43		mg F/L	P415773	
2335829	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P415674	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P415785	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.072		mg N/L	P416201	
	EPA 365.1 Rev. 2.0	Total-P	0.41		mg P/L	P415811	
	SM 5310 B-2011	Organic Carbon	22		mg C/L	P415706	
2335868	EPA 200.7 Rev. 4.4	Calcium	118		mg/L	P415704	
		Iron	440		ug/L	P415704	
		Magnesium	260		mg/L	P415704	
		Strontium	3.39E+03		ug/L	P415704	
		Tin	60	U	ug/L	P415704	
		Titanium	3.0	I	ug/L	P415704	
		Vanadium	6.0	U	ug/L	P415704	
		Zinc	15	U	ug/L	P415704	
	EPA 200.8 Rev. 5.4	Aluminum	100	U	ug/L	P415704	
		Antimony	0.20	U	ug/L	P415704	
		Arsenic	2.02		ug/L	P415704	
		Beryllium	0.10	U	ug/L	P415704	
		Cadmium	0.080	U	ug/L	P415704	
		Chromium	1.6	U	ug/L	P415704	
		Cobalt	0.14	I	ug/L	P415704	
		Copper	1.7	I	ug/L	P415704	
		Lead	0.80	U	ug/L	P415704	
		Manganese	44.2		ug/L	P415704	
		Molybdenum	3.2		ug/L	P415704	
		Nickel	2.0	U	ug/L	P415704	
		Selenium	0.80	U	ug/L	P415704	
		Silver	0.040	U	ug/L	P415704	
		Thallium	0.40	U	ug/L	P415704	

Ref. Method and Comment:

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

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium and strontium are unavailable because of high analyte concentration in the QC sample.

Sample Location: BOBCAT CREEK IN PRESERVE EAST

Collection Date/Time: 06/20/2022 09:50

Field ID: G3SD0131

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335870	EPA 200.7 Rev. 4.4	Calcium	30.2		mg/L	P415516	
		Iron	3.15E+03		ug/L	P415516	
		Magnesium	7.64		mg/L	P415516	
		Potassium	1.9		mg/L	P415516	
		Sodium	15.9		mg/L	P415516	
		Strontium	309		ug/L	P415516	
		Tin	3.0	U	ug/L	P415516	
		Titanium	4.7		ug/L	P415516	
		Vanadium	3.4	I	ug/L	P415516	
		Zinc	5.0	U	ug/L	P415516	
	EPA 200.8 Rev. 5.4	Aluminum	199		ug/L	P415516	
		Antimony	0.14	I	ug/L	P415516	
		Arsenic	2.84		ug/L	P415516	
		Barium	9.08		ug/L	P415516	
		Beryllium	0.032	I	ug/L	P415516	
		Boron**	40.7		ug/L	P415516	
		Cadmium	0.034	I	ug/L	P415516	
		Chromium	2.6		ug/L	P415516	
		Cobalt	0.307		ug/L	P415516	
		Copper	0.51	I	ug/L	P415516	
		Lead	0.23	I	ug/L	P415516	
		Manganese	34.1		ug/L	P415516	
		Molybdenum	0.85		ug/L	P415516	
		Nickel	1.2	I	ug/L	P415516	
		Selenium	0.20	U	ug/L	P415516	
		Silver	0.010	U	ug/L	P415516	
		Thallium	0.10	U	ug/L	P415516	
	SM 2340 B-2011	Hardness	107		mg/L	P415516	

Sample Location: Peace River Above Horse Creek 2

Collection Date/Time: 06/20/2022 10:45

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335832	DEP SOP: NU-094-1	Color (true)**	150		PCU	P415506	
	EPA 180.1 Rev. 2.0	Turbidity	8.1		NTU	P415502	
	EPA 300.0 Rev. 2.1	Chloride	53		mg Cl/L	P415942	
		Sulfate	81		mg SO4/L	P416150	
	SM 2320 B-2011	Total Alkalinity	63		mg CaCO3/L	P415767	
	SM 2540 C-2011	TDS	322		mg/L	P415902	
	SM 2540 D-2011	TSS	11		mg/L	P415891	
	SM 4500-F- C-2011	Fluoride	0.51		mg F/L	P415771	
2335833	EPA 350.1 Rev. 2.0	Ammonia-N	0.077		mg N/L	P415881	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.7		mg N/L	P415784	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.75		mg N/L	P416226	
	EPA 365.1 Rev. 2.0	Total-P	0.72		mg P/L	P415813	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P415622	
2335842	EPA 8270E	Aldrin	0.67	U	ng/L	P415631	
		Alpha-BHC	0.10	U	ng/L	P415631	
		Alpha-Chlordane	0.21	U	ng/L	P415631	
		PCB-1016	2.1	UJ	ng/L	P415631	SUR
		Beta-BHC	0.11	I	ng/L	P415631	
		PCB-1221	2.1	UJ	ng/L	P415631	SUR
		Beta-Cyfluthrin**	1.3	U	ng/L	P415631	
		PCB-1232	2.1	UJ	ng/L	P415631	SUR
		Bifenthrin**	0.52	U	ng/L	P415631	
		PCB-1242	2.1	UJ	ng/L	P415631	SUR
		Carbophenothion	0.93	U	ng/L	P415631	
		PCB-1248	2.1	UJ	ng/L	P415631	SUR
		Chlorothalonil	2.1	I	ng/L	P415631	
		PCB-1254	2.1	UJ	ng/L	P415631	SUR
		Cis-Nonachlor**	0.21	U	ng/L	P415631	
		PCB-1260	2.1	UJ	ng/L	P415631	SUR
		Cypermethrin	1.6	U	ng/L	P415631	
		Dacthal**	0.16	U	ng/L	P415631	
		DDD-p,p'	0.26	U	ng/L	P415631	
		DDE-p,p'	0.21	U	ng/L	P415631	
		DDT-p,p'	0.28	I	ng/L	P415631	
		Delta-BHC	0.41	U	ng/L	P415631	
		Deltamethrin**	1.3	U	ng/L	P415631	
		Dichlobenil**	0.26	U	ng/L	P415631	
		Dicofol	1.3	U	ng/L	P415631	
		Dieldrin	0.56	I	ng/L	P415631	
		Endosulfan I	0.41	U	ng/L	P415631	
		Endosulfan II	0.41	U	ng/L	P415631	
		Endosulfan Sulfate	0.31	U	ng/L	P415631	
		Endrin	0.41	U	ng/L	P415631	
		Endrin Aldehyde	0.78	U	ng/L	P415631	

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335842	EPA 8270E	Endrin Ketone	0.41	U	ng/L	P415631	
		Esfenvalerate**	0.78	U	ng/L	P415631	
		Ethalfuralin**	0.16	U	ng/L	P415631	
		Fenpropathrin**	0.26	U	ng/L	P415631	
		Gamma-BHC	0.13	U	ng/L	P415631	
		Gamma-Chlordane	0.23	I	ng/L	P415631	
		Heptachlor	0.21	U	ng/L	P415631	
		Heptachlor Epoxide	0.26	U	ng/L	P415631	
		Hexachlorobenzene**	1.0	U	ng/L	P415631	
		Kepone**	5.2	U	ng/L	P415631	
		Lambda-Cyhalothrin**	0.78	U	ng/L	P415631	
		Methoprene**	0.78	U	ng/L	P415631	
		Methoxychlor	0.31	U	ng/L	P415631	
		MGK-264**	0.21	U	ng/L	P415631	
		Mirex	0.73	U	ng/L	P415631	
		Oxychlordane**	0.31	U	ng/L	P415631	
		Permethrin	2.0	I	ng/L	P415631	
		Phenothrin**	0.93	U	ng/L	P415631	
		Piperonyl Butoxide**	0.46	I	ng/L	P415631	
		Prallethrin**	2.1	U	ng/L	P415631	
		Tau-Fluvalinate**	0.26	U	ng/L	P415631	
		Tetramethrin**	0.78	U	ng/L	P415631	
		Trans-Nonachlor**	0.21	U	ng/L	P415631	
		Triclosan Methyl**	0.16	U	ng/L	P415631	
		Trifluralin	0.21	U	ng/L	P415631	
	EPA 8276	Chlordane	4.9	I	ng/L	P415631	
		Toxaphene	16	U	ng/L	P415631	
2335871	EPA 200.7 Rev. 4.4	Calcium	43.2		mg/L	P415516	
		Iron	680		ug/L	P415516	
		Magnesium	18.4		mg/L	P415516	
		Potassium	9.6		mg/L	P415516	
		Sodium	25.2		mg/L	P415516	
		Strontium	2.36E+03		ug/L	P415516	
		Tin	3.0	U	ug/L	P415516	
		Titanium	2.0	I	ug/L	P415516	
		Vanadium	3.7	I	ug/L	P415516	
		Zinc	5.0	U	ug/L	P415516	
	EPA 200.8 Rev. 5.4	Aluminum	305		ug/L	P415516	
		Antimony	0.29		ug/L	P415516	
		Arsenic	1.88		ug/L	P415516	
		Barium	24.7		ug/L	P415516	
		Beryllium	0.026	I	ug/L	P415516	
		Boron**	64.6		ug/L	P415516	
		Cadmium	0.073	I	ug/L	P415516	
		Chromium	1.1	I	ug/L	P415516	

Field ID: G3SD0154

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2335871	EPA 200.8 Rev. 5.4	Cobalt	0.263		ug/L	P415516	
		Copper	2.66		ug/L	P415516	
		Lead	0.37	I	ug/L	P415516	
		Manganese	43.6		ug/L	P415516	
		Molybdenum	1.67		ug/L	P415516	
		Nickel	1.3	I	ug/L	P415516	
		Selenium	0.36	I	ug/L	P415516	
		Silver	0.010	U	ug/L	P415516	
		Thallium	0.10	I	ug/L	P415516	
	SM 2340 B-2011	Hardness	183		mg/L	P415516	

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.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P415506

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415502

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415516

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 200.7 Rev. 4.4
Batch ID: P415704

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	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: P415516

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415516

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P415704

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
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: P415942

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416150

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415674

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415881

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: P415784

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415785

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416201

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416225

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416226

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415811

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415813

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

Reference Method: EPA 8270E
Batch ID: P415631

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415631

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415631

Component	Result	Code	Units
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8276

Batch ID: P415631

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: P415517

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

Reference Method: EPA 8321B

Batch ID: P415542

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	0.032	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	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: SM 2320 B-2011

Batch ID: P415767

Component	Result	Code	Units
-----------	--------	------	-------

Quality Assurance Report Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P415767

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO ₃ /L

Reference Method: SM 2320 B-2011
Batch ID: P415769

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P415902

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P415891

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P415895

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P415897

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415771

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P415773

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P415622

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P415706

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: P415506

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	91.7		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415502

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	96.5		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	107		P	85 - 115
Magnesium	110		P	85 - 115
Potassium	102		P	85 - 115
Sodium	99.1		P	85 - 115
Strontium	98.3		P	85 - 115
Tin	101		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	95.8		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	106		P	85 - 115
Iron	106		P	85 - 115
Magnesium	102		P	85 - 115
Strontium	104		P	85 - 115
Tin	107		P	85 - 115
Titanium	104		P	85 - 115
Vanadium	95.4		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	106		P	85 - 115
Antimony	108		P	85 - 115
Arsenic	99.9		P	85 - 115
Barium	109		P	85 - 115
Beryllium	101		P	85 - 115
Boron	106		P	85 - 115
Cadmium	106		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	103		P	85 - 115
Copper	99.9		P	85 - 115
Lead	98.6		P	85 - 115
Manganese	107		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415516

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Molybdenum	103		P	85 - 115
Nickel	102		P	85 - 115
Selenium	101		P	85 - 115
Silver	104		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415704

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	98.4		P	85 - 115
Arsenic	98.3		P	85 - 115
Beryllium	89.8		P	85 - 115
Cadmium	98.1		P	85 - 115
Chromium	95.5		P	85 - 115
Cobalt	97.5		P	85 - 115
Copper	95.4		P	85 - 115
Lead	98.9		P	85 - 115
Manganese	96.4		P	85 - 115
Molybdenum	99.1		P	85 - 115
Nickel	97.9		P	85 - 115
Selenium	95.0		P	85 - 115
Silver	96.9		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P415942

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P416150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	97.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415674

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415881

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415784

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415785

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416201

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416225

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416226

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415811

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415813

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

Reference Method: EPA 8270E
Batch ID: P415631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	56.4		P	10 - 93.0
Alpha-BHC	100		P	75 - 106
Alpha-Chlordane	76.9		P	50 - 109
Beta-BHC	108		P	36 - 138
Beta-Cyfluthrin	62.6		P	23 - 167
Bifenthrin	48.9		P	11 - 123
Carbophenothion	65.3		P	18 - 96.0
Chlorothalonil	64.9		P	27 - 190
Cis-Nonachlor	69.8		P	40 - 111
Cypermethrin	59.1		P	25 - 155

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P415631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dacthal	96.4		P	72 - 119
DDD-p,p'	76.9		P	47 - 108
DDE-p,p'	80.5		P	48 - 107
DDT-p,p'	74.3		P	49 - 111
Delta-BHC	110		P	54 - 138
Deltamethrin	60.3		P	22 - 189
Dichlobenil	101		P	32 - 113
Dicofol	82.0		P	50 - 108
Dieldrin	87.4		P	56 - 110
Endosulfan I	81.0		P	60 - 105
Endosulfan II	86.0		P	50 - 120
Endosulfan Sulfate	98.5		P	55 - 121
Endrin	75.3		P	31 - 119
Endrin Aldehyde	94.6		P	36 - 116
Endrin Ketone	104		P	69 - 177
Esfenvalerate	58.3		P	10 - 179
Ethalfuralin	83.1		P	49 - 99.0
Fenpropathrin	65.7		P	35 - 119
Gamma-BHC	103		P	69 - 120
Gamma-Chlordane	72.6		P	45 - 107
Heptachlor	63.1		P	41 - 100
Heptachlor Epoxide	83.2		P	58 - 106
Hexachlorobenzene	69.1		P	39 - 100
Kepone	73.3		P	10 - 191
Lambda-Cyhalothrin	54.3		P	21 - 206
Methoprene	58.1		P	10 - 129
Methoxychlor	85.3		P	61 - 111
MGK-264	103		P	20 - 123
Mirex	54.2		P	10 - 182
Oxychlordane	75.4		P	39 - 110
PCB-1016	97.8		P	49 - 111
PCB-1260	96.1		P	42 - 116
Permethrin	60.6		P	26 - 152
Phenothrin	51.0		P	10 - 109
Piperonyl Butoxide	102		P	19 - 147
Prallethrin	95.6		P	14 - 109
Tau-Fluvalinate	49.7		P	16 - 134
Tetramethrin	99.7		P	10 - 125
Trans-Nonachlor	72.5		P	45 - 107
Triclosan Methyl	82.4		P	60 - 110
Trifluralin	72.9		P	44 - 101

Reference Method: EPA 8276
Batch ID: P415631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	94.2		P	61 - 118
Toxaphene	122		P	51 - 122

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P415517

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	86.3		P	40 - 150
AMPA	107		P	40 - 150
Endothall	105		P	40 - 150
Glufosinate	117		P	40 - 150
Glyphosate	101		P	40 - 150
Sucralose	97.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P415542

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	62.0		P	40 - 150
2,4,5-T	40.5		P	40 - 150
Acetaminophen	75.5		P	30 - 150
Acetamiprid	70.1		P	40 - 150
Afidopyropen	56.4		P	30 - 150
Bentazon	72.6		P	30 - 150
Benzovindiflupyr	80.1		P	40 - 150
Carbamazepine	82.6		P	40 - 150
Clothianidin	89.5		P	40 - 150
Dinotefuran	87.8		P	40 - 150
Diuron	75.1		P	40 - 150
Fenuron	85.8		P	40 - 150
Fluridone	81.5		P	40 - 150
Hydrocodone	79.6		P	40 - 150
Ibuprofen	67.0		P	40 - 150
Imazapyr	82.4		P	40 - 150
Imidacloprid	94.6		P	40 - 150
Linuron	80.9		P	40 - 150
Mandestrobin	79.8		P	40 - 150
MCPP	74.9		P	40 - 150
Naproxen	62.5		P	40 - 150
Primidone	94.8		P	40 - 150
Pyraclostrobin	66.0		P	40 - 150
Silvex	45.1		P	40 - 150
Thiamethoxam	86.5		P	40 - 150
Tolfenpyrad	37.2		P	30 - 150
Triclopyr	46.9		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P415767

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

Reference Method: SM 2320 B-2011
Batch ID: P415769

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P415771

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.9		P	96 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P415773

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.9		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P415622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P415706

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334462	Calcium	96.4		P	80 - 120
2334462	Iron	109		P	80 - 120
2334462	Magnesium	109		P	80 - 120
2334462	Potassium	101		P	80 - 120
2334462	Sodium	103		P	80 - 120
2334462	Strontium	101		P	80 - 120
2334462	Tin	103		P	80 - 120
2334462	Titanium	106		P	80 - 120
2334462	Vanadium	102		P	80 - 120
2334462	Zinc	103		P	80 - 120
2336029	Calcium	98.6		P	80 - 120
2336029	Iron	104	107	P/P	80 - 120
2336029	Magnesium	104	108	P/P	80 - 120
2336029	Potassium	100	101	P/P	80 - 120
2336029	Sodium	95.5	97.6	P/P	80 - 120
2336029	Strontium	97.7	99.2	P/P	80 - 120
2336029	Tin	97.8	99.7	P/P	80 - 120
2336029	Titanium	102	103	P/P	80 - 120
2336029	Vanadium	94.9	95.8	P/P	80 - 120
2336029	Zinc	100	101	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335868	Iron	105	105	P/P	70 - 130
2335868	Tin	105	112	P/P	70 - 130
2335868	Titanium	100	101	P/P	70 - 130
2335868	Vanadium	96.6	95.8	P/P	70 - 130
2335868	Zinc	101	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334462	Aluminum	105		P	80 - 120
2334462	Antimony	109		P	80 - 120
2334462	Arsenic	101		P	80 - 120
2334462	Barium	109		P	80 - 120
2334462	Beryllium	101		P	80 - 120
2334462	Boron	108		P	80 - 120
2334462	Cadmium	108		P	80 - 120
2334462	Chromium	104		P	80 - 120
2334462	Cobalt	103		P	80 - 120
2334462	Copper	97.8		P	80 - 120
2334462	Lead	98.8		P	80 - 120
2334462	Manganese	107		P	80 - 120
2334462	Molybdenum	106		P	80 - 120
2334462	Nickel	99.9		P	80 - 120
2334462	Selenium	99.9		P	80 - 120
2334462	Silver	104		P	80 - 120
2334462	Thallium	105		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415516

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336029	Aluminum	108	108	P/P	80 - 120
2336029	Antimony	105	109	P/P	80 - 120
2336029	Arsenic	102	103	P/P	80 - 120
2336029	Barium	109	110	P/P	80 - 120
2336029	Beryllium	102	104	P/P	80 - 120
2336029	Boron	108	106	P/P	80 - 120
2336029	Cadmium	103	104	P/P	80 - 120
2336029	Chromium	102	104	P/P	80 - 120
2336029	Cobalt	103	105	P/P	80 - 120
2336029	Copper	102	104	P/P	80 - 120
2336029	Lead	99.4	99.7	P/P	80 - 120
2336029	Manganese	105	107	P/P	80 - 120
2336029	Molybdenum	104	106	P/P	80 - 120
2336029	Nickel	99.6	102	P/P	80 - 120
2336029	Selenium	103	103	P/P	80 - 120
2336029	Silver	103	104	P/P	80 - 120
2336029	Thallium	105	105	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415704

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335868	Aluminum	101	103	P/P	70 - 130
2335868	Antimony	96.8	96.1	P/P	70 - 130
2335868	Arsenic	110	107	P/P	70 - 130
2335868	Beryllium	108	112	P/P	70 - 130
2335868	Cadmium	90.8	89.7	P/P	70 - 130
2335868	Chromium	95.3	93.4	P/P	70 - 130
2335868	Cobalt	111	109	P/P	70 - 130
2335868	Copper	102	101	P/P	70 - 130
2335868	Lead	102	101	P/P	70 - 130
2335868	Manganese	97.0	92.1	P/P	70 - 130
2335868	Molybdenum	109	109	P/P	70 - 130
2335868	Nickel	114	111	P/P	70 - 130
2335868	Selenium	99.7	97.6	P/P	70 - 130
2335868	Silver	89.1	87.4	P/P	70 - 130
2335868	Thallium	104	104	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415942

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336037	Chloride	98.2		P	90 - 110
2336038	Chloride	95.7		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P416150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2336966	Sulfate	97.0		P	90 - 110
2337151	Sulfate	94.9		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415674

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334807	Ammonia-N	107	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415881

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335780	Ammonia-N	96.4	96.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335448	Kjeldahl Nitrogen	102	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415785

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335801	Kjeldahl Nitrogen	110	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416201

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335950	NO2NO3-N	100	103	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416225

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335675	NO2NO3-N	97.0	99.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416226

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335976	NO2NO3-N	107	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335406	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335704	Total-P	104	108	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P415631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335766	Aldrin	62.9	71.8	P/P	10 - 89.0
2335766	Alpha-BHC	102	101	P/P	71 - 105
2335766	Alpha-Chlordane	86.3	96.3	P/P	43 - 107
2335766	Beta-BHC	106	103	P/P	57 - 152
2335766	Beta-Cyfluthrin	79.5	91.0	P/P	29 - 186
2335766	Bifenthrin	61.4	81.7	P/P	19 - 119
2335766	Carbophenothion	79.0	86.9	P/P	19 - 107
2335766	Chlorothalonil	84.0	85.9	P/P	10 - 245
2335766	Cis-Nonachlor	80.5	87.2	P/P	36 - 110
2335766	Cypermethrin	70.8	84.2	P/P	24 - 169
2335766	Dacthal	104	107	P/P	62 - 115
2335766	DDD-p,p'	90.9	98.6	P/P	36 - 109
2335766	DDE-p,p'	87.8	95.5	P/P	30 - 114
2335766	DDT-p,p'	81.8	89.3	P/P	42 - 108
2335766	Delta-BHC	120	113	P/P	60 - 164
2335766	Deltamethrin	72.7	87.1	P/P	10 - 210
2335766	Dichlobenil	107	97.2	P/P	23 - 108
2335766	Dicofol	85.7	91.6	P/P	44 - 109
2335766	Dieldrin	97.3	105	P/P	37 - 119
2335766	Endosulfan I	94.9	99.1	P/P	52 - 105
2335766	Endosulfan II	90.7	97.9	P/P	35 - 127
2335766	Endosulfan Sulfate	110	105	P/P	39 - 130
2335766	Endrin	85.4	88.4	P/P	30 - 116
2335766	Endrin Aldehyde	95.2	92.5	P/P	20 - 110
2335766	Endrin Ketone	109	106	P/P	48 - 134
2335766	Esfenvalerate	72.0	85.7	P/P	10 - 199
2335766	Ethalfuralin	88.1	89.7	P/P	48 - 95.0
2335766	Fenpropathrin	84.4	88.5	P/P	37 - 121
2335766	Gamma-BHC	109	99.6	P/P	61 - 126
2335766	Gamma-Chlordane	82.2	93.6	P/P	39 - 105
2335766	Heptachlor	71.0	76.4	P/P	38 - 96.0
2335766	Heptachlor Epoxide	89.9	96.3	P/P	42 - 114
2335766	Hexachlorobenzene	79.2	85.3	P/P	39 - 93.0
2335766	Kepone	72.9	62.1	P/P	10 - 215
2335766	Lambda-Cyhalothrin	69.3	85.8	P/P	10 - 204
2335766	Methoprene	70.8	92.4	P/P	17 - 108
2335766	Methoxychlor	93.5	96.4	P/P	56 - 115
2335766	MGK-264	107	112	P/P	35 - 120
2335766	Mirex	60.3	73.6	P/P	10 - 178
2335766	Oxychlordane	83.9	90.8	P/P	47 - 91.0
2335766	Permethrin	71.8	85.7	P/P	27 - 170
2335766	Phenothrin	63.6	80.0	P/P	10 - 133
2335766	Piperonyl Butoxide	109	108	P/P	23 - 150
2335766	Prallethrin	104	105	P/P	21 - 113
2335766	Tau-Fluvalinate	62.5	79.8	P/P	16 - 158
2335766	Tetramethrin	118	115	P/P	22 - 132
2335766	Trans-Nonachlor	81.2	90.2	P/P	43 - 102
2335766	Triclosan Methyl	93.7	101	P/P	49 - 109
2335766	Trifluralin	81.2	84.7	P/P	48 - 93.0
2335788	PCB-1016	92.7	93.9	P/P	46 - 110
2335788	PCB-1260	94.2	101	P/P	42 - 111

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8276

Batch ID: P415631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335788	Chlordane	85.0	93.1	P/P	55 - 128
2335788	Toxaphene	119	131	P/P	57 - 211

Reference Method: EPA 8321B

Batch ID: P415517

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335341	Acesulfame K	80.6	79.9	P/P	40 - 150
2335341	AMPA	104	100	P/P	40 - 150
2335341	Endothall	108	112	P/P	40 - 150
2335341	Glufosinate	94.8	97.4	P/P	40 - 150
2335341	Glyphosate	87.7	94.8	P/P	40 - 150
2335341	Sucralose	94.0	96.9	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P415542

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335680	2,4-D	80.4	55.2	P/P	40 - 150
2335680	2,4,5-T	43.1	29.3	P/F	40 - 150
2335680	Acetaminophen	96.2	93.8	P/P	30 - 150
2335680	Acetamiprid	93.2	83.2	P/P	40 - 150
2335680	Afidopyropen	84.1	66.4	P/P	30 - 150
2335680	Benzovindiflupyr	94.2	87.7	P/P	40 - 150
2335680	Carbamazepine	92.8	94.4	P/P	40 - 150
2335680	Clothianidin	112	108	P/P	40 - 150
2335680	Dinotefuran	137	129	P/P	40 - 150
2335680	Diuron	83.2	77.9	P/P	40 - 150
2335680	Fenuron	82.5	76.4	P/P	40 - 150
2335680	Hydrocodone	99.1	91.1	P/P	40 - 150
2335680	Ibuprofen	49.7	47.8	P/P	40 - 150
2335680	Imidacloprid	158	137	F/P	40 - 150
2335680	Linuron	75.2	82.1	P/P	40 - 150
2335680	Mandestrobin	79.6	75.5	P/P	40 - 150
2335680	MCPP	66.6	59.3	P/P	40 - 150
2335680	Naproxen	27.6	58.0	F/P	40 - 150
2335680	Primidone	92.5	93.2	P/P	40 - 150
2335680	Pyraclostrobin	86.0	79.5	P/P	40 - 150
2335680	Silvex	52.5	42.6	P/P	40 - 150
2335680	Thiamethoxam	150	142	F/P	40 - 150
2335680	Tolfenpyrad	51.6	50.3	P/P	30 - 150
2335680	Triclopyr	44.5	35.1	P/F	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P415771

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335661	Fluoride	99.9	99.9	P/P	94 - 104

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P415773

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333620	Fluoride	99.0	99.0	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P415622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335689	Organic Carbon	97.1	97.6	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P415706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2335829	Organic Carbon	96.1	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P415506

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335777	Color (true)	0.0114	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P415502

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335624	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336029	Calcium	1.02	Spike	P	0 - 20
2336029	Iron	3.02	Spike	P	0 - 20
2336029	Magnesium	2.62	Spike	P	0 - 20
2336029	Potassium	1.17	Spike	P	0 - 20
2336029	Sodium	1.35	Spike	P	0 - 20
2336029	Strontium	1.56	Spike	P	0 - 20
2336029	Tin	1.97	Spike	P	0 - 20
2336029	Titanium	0.697	Spike	P	0 - 20
2336029	Vanadium	0.898	Spike	P	0 - 20
2336029	Zinc	1.02	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335868	Calcium	3.12	Spike	P	0 - 20
2335868	Iron	0.0577	Spike	P	0 - 20
2335868	Magnesium	3.46	Spike	P	0 - 20
2335868	Strontium	1.02	Spike	P	0 - 20
2335868	Tin	6.07	Spike	P	0 - 20
2335868	Titanium	0.468	Spike	P	0 - 20
2335868	Vanadium	0.749	Spike	P	0 - 20
2335868	Zinc	0.781	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336029	Aluminum	0.0885	Spike	P	0 - 20
2336029	Antimony	3.15	Spike	P	0 - 20
2336029	Arsenic	0.482	Spike	P	0 - 20
2336029	Barium	1.24	Spike	P	0 - 20
2336029	Beryllium	2.03	Spike	P	0 - 20
2336029	Boron	1.65	Spike	P	0 - 20
2336029	Cadmium	0.997	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415516

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336029	Chromium	2.58	Spike	P	0 - 20
2336029	Cobalt	1.63	Spike	P	0 - 20
2336029	Copper	1.81	Spike	P	0 - 20
2336029	Lead	0.232	Spike	P	0 - 20
2336029	Manganese	1.39	Spike	P	0 - 20
2336029	Molybdenum	1.49	Spike	P	0 - 20
2336029	Nickel	1.95	Spike	P	0 - 20
2336029	Selenium	0.426	Spike	P	0 - 20
2336029	Silver	1.10	Spike	P	0 - 20
2336029	Thallium	0.883	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415704

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335868	Aluminum	2.09	Spike	P	0 - 20
2335868	Antimony	0.707	Spike	P	0 - 20
2335868	Arsenic	2.36	Spike	P	0 - 20
2335868	Beryllium	3.46	Spike	P	0 - 20
2335868	Cadmium	1.23	Spike	P	0 - 20
2335868	Chromium	2.02	Spike	P	0 - 20
2335868	Cobalt	1.79	Spike	P	0 - 20
2335868	Copper	1.40	Spike	P	0 - 20
2335868	Lead	0.827	Spike	P	0 - 20
2335868	Manganese	3.28	Spike	P	0 - 20
2335868	Molybdenum	0.684	Spike	P	0 - 20
2335868	Nickel	2.10	Spike	P	0 - 20
2335868	Selenium	2.08	Spike	P	0 - 20
2335868	Silver	1.94	Spike	P	0 - 20
2335868	Thallium	0.392	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P415942

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336037	Chloride	0.461	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P416150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2336966	Sulfate	0.163	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
--------------------------	-----------	-----------	-------------------	-----------	----------------

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415674

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334807	Ammonia-N	0.533	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415881

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335780	Ammonia-N	0.177	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335448	Kjeldahl Nitrogen	3.37	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P415785

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335801	Kjeldahl Nitrogen	2.46	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416201

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335950	NO2NO3-N	2.84	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416225

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335675	NO2NO3-N	2.40	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P416226

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335976	NO2NO3-N	1.14	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P415811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335406	Total-P	0.489	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P415813

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335704	Total-P	3.43	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P415631

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335766	Aldrin	13.2	Spike	P	0 - 37
2335766	Alpha-BHC	0.612	Spike	P	0 - 16
2335766	Alpha-Chlordane	11.0	Spike	P	0 - 28
2335766	Beta-BHC	3.53	Spike	P	0 - 32
2335766	Beta-Cyfluthrin	13.5	Spike	P	0 - 41
2335766	Bifenthrin	28.4	Spike	P	0 - 36
2335766	Carbophenothion	9.59	Spike	P	0 - 30
2335766	Chlorothalonil	2.28	Spike	P	0 - 54
2335766	Cis-Nonachlor	7.93	Spike	P	0 - 33
2335766	Cypermethrin	17.3	Spike	P	0 - 38
2335766	Dacthal	2.11	Spike	P	0 - 23
2335766	DDD-p,p'	8.20	Spike	P	0 - 35
2335766	DDE-p,p'	8.40	Spike	P	0 - 27
2335766	DDT-p,p'	8.83	Spike	P	0 - 31
2335766	Delta-BHC	5.78	Spike	P	0 - 30
2335766	Deltamethrin	18.0	Spike	P	0 - 76
2335766	Dichlobenil	9.40	Spike	P	0 - 33
2335766	Dicofol	6.61	Spike	P	0 - 24
2335766	Dieldrin	7.74	Spike	P	0 - 35
2335766	Endosulfan I	4.40	Spike	P	0 - 25
2335766	Endosulfan II	7.66	Spike	P	0 - 31
2335766	Endosulfan Sulfate	4.38	Spike	P	0 - 38
2335766	Endrin	3.53	Spike	P	0 - 53
2335766	Endrin Aldehyde	2.90	Spike	P	0 - 81
2335766	Endrin Ketone	2.78	Spike	P	0 - 33
2335766	Esfenvalerate	17.4	Spike	P	0 - 46
2335766	Ethalfuralin	1.82	Spike	P	0 - 22
2335766	Fenpropathrin	4.74	Spike	P	0 - 29
2335766	Gamma-BHC	8.58	Spike	P	0 - 17
2335766	Gamma-Chlordane	13.0	Spike	P	0 - 28
2335766	Heptachlor	7.31	Spike	P	0 - 28
2335766	Heptachlor Epoxide	6.91	Spike	P	0 - 23
2335766	Hexachlorobenzene	7.32	Spike	P	0 - 22
2335766	Kepone	15.9	Spike	P	0 - 61
2335766	Lambda-Cyhalothrin	21.2	Spike	P	0 - 52
2335766	Methoprene	26.4	Spike	P	0 - 38
2335766	Methoxychlor	3.09	Spike	P	0 - 29
2335766	MGK-264	4.40	Spike	P	0 - 41
2335766	Mirex	19.8	Spike	P	0 - 39
2335766	Oxychlordane	7.97	Spike	P	0 - 33
2335766	Permethrin	17.6	Spike	P	0 - 39
2335766	Phenothrin	22.8	Spike	P	0 - 52
2335766	Piperonyl Butoxide	0.956	Spike	P	0 - 91
2335766	Prallethrin	0.666	Spike	P	0 - 34

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P415631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335766	Tau-Fluvalinate	24.3	Spike	P	0 - 41
2335766	Tetramethrin	2.25	Spike	P	0 - 43
2335766	Trans-Nonachlor	10.5	Spike	P	0 - 31
2335766	Triclosan Methyl	7.22	Spike	P	0 - 24
2335766	Trifluralin	4.24	Spike	P	0 - 23
2335788	PCB-1016	1.31	Spike	P	0 - 32
2335788	PCB-1260	6.43	Spike	P	0 - 31

Reference Method: EPA 8276
Batch ID: P415631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335788	Chlordane	8.34	Spike	P	0 - 25
2335788	Toxaphene	9.72	Spike	P	0 - 24

Reference Method: EPA 8321B
Batch ID: P415517

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335341	Acesulfame K	0.916	Spike	P	0 - 30
2335341	AMPA	3.24	Spike	P	0 - 30
2335341	Endothall	3.05	Spike	P	0 - 30
2335341	Glufosinate	2.62	Spike	P	0 - 30
2335341	Glyphosate	7.05	Spike	P	0 - 30
2335341	Sucralose	2.98	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P415542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335680	2,4-D	19.8	Spike	P	0 - 30
2335680	2,4,5-T	38.2	Spike	F	0 - 30
2335680	Acetaminophen	2.51	Spike	P	0 - 30
2335680	Acetamiprid	11.4	Spike	P	0 - 30
2335680	Afidopyropen	23.5	Spike	P	0 - 30
2335680	Bentazon	5.57	Spike	P	0 - 30
2335680	Benzovindiflupyr	7.18	Spike	P	0 - 30
2335680	Carbamazepine	1.75	Spike	P	0 - 30
2335680	Clothianidin	4.11	Spike	P	0 - 30
2335680	Dinotefuran	5.75	Spike	P	0 - 30
2335680	Diuron	5.60	Spike	P	0 - 30
2335680	Fenuron	7.69	Spike	P	0 - 30
2335680	Fluridone	1.26	Spike	P	0 - 30
2335680	Hydrocodone	8.37	Spike	P	0 - 30
2335680	Ibuprofen	3.99	Spike	P	0 - 30
2335680	Imazapyr	3.68	Spike	P	0 - 30
2335680	Imidacloprid	13.8	Spike	P	0 - 30
2335680	Linuron	8.74	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P415542

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335680	Mandestrobin	5.25	Spike	P	0 - 30
2335680	MCP	11.6	Spike	P	0 - 30
2335680	Naproxen	71.1	Spike	F	0 - 30
2335680	Primidone	0.743	Spike	P	0 - 30
2335680	Pyraclostrobin	7.85	Spike	P	0 - 30
2335680	Silvex	20.8	Spike	P	0 - 30
2335680	Thiamethoxam	5.99	Spike	P	0 - 30
2335680	Tolfenpyrad	2.45	Spike	P	0 - 30
2335680	Triclopyr	23.5	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P415767

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335661	Total Alkalinity	0.256	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P415769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335322	Total Alkalinity	0.391	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P415902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335661	TDS	2.39	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P415771

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335661	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 4500-F- C-2011
Batch ID: P415773

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333620	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P415622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335689	Organic Carbon	0.372	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P415706

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2335829	Organic Carbon	0.399	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2335842

Field Sample ID: G3SD0154

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	135	F	38 - 115
EPA 8270E	Decachlorobiphenyl	117	P	31 - 118
EPA 8270E	Tetrachloro-m-xylene	90.4	P	29 - 98.0
EPA 8270E	Tetrachloro-m-xylene	77.3	P	28 - 96.0
EPA 8276	Decachlorobiphenyl	91.5	P	30 - 97.0
EPA 8276	PCNB	116	P	45 - 119

Lab Sample ID: 2335867

Field Sample ID: G3SD0148

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	61.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	93.4	P	30 - 160
EPA 8321B	Diuron-d6	57.0	P	30 - 160
EPA 8321B	Endothall-d6	60.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	69.1	P	30 - 160
EPA 8321B	Primidone-d5	99.1	P	30 - 160
EPA 8321B	Sucralose-d6	48.3	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112963

Included Lab Sample IDs: 2335828, 2335830, 2335832

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

Reference Method: DEP SOP: NU-094-1

Run ID: A112965

Included Lab Sample IDs: 2335832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	96.5	93.9	P/P	85 - 115

Reference Method: SM 5310 B-2011

Run ID: A113000

Included Lab Sample IDs: 2335831, 2335833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.4	98.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A113016

Included Lab Sample IDs: 2335867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	101	104	P/P	60 - 160
Endothall	81.9	80.6	P/P	60 - 160
Glufosinate	89.6	92.2	P/P	60 - 160
Glyphosate	98.7	102	P/P	60 - 160

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113018

Included Lab Sample IDs: 2335829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	98.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A113025

Included Lab Sample IDs: 2335869, 2335870, 2335871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	95.2	P/P	90 - 110
Iron	103	96.0	P/P	90 - 110
Magnesium	104	96.9	P/P	90 - 110
Potassium	100	93.8	P/P	90 - 110
Sodium	99.5	91.4	P/P	90 - 110
Strontium	100	94.3	P/P	90 - 110
Tin	102	94.6	P/P	90 - 110
Titanium	103	96.2	P/P	90 - 110
Zinc	102	95.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A113034
Included Lab Sample IDs: 2335867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	100	99.8	P/P	50 - 150
2,4,5-T	99.1	112	P/P	50 - 150
Acetaminophen	96.6	98.6	P/P	60 - 160
Acetamiprid	100	105	P/P	50 - 150
Afidopyropen	100	89.6	P/P	50 - 150
Bentazon	93.8	94.5	P/P	50 - 160
Benzovindiflupyr	108	107	P/P	50 - 150
Carbamazepine	99.0	101	P/P	60 - 150
Clothianidin	126	108	P/P	60 - 150
Dinotefuran	105	102	P/P	50 - 150
Diuron	99.3	98.0	P/P	60 - 160
Fenuron	100	98.2	P/P	60 - 150
Fluridone	106	110	P/P	60 - 160
Hydrocodone	97.4	104	P/P	60 - 150
Ibuprofen	71.4	80.5	P/P	50 - 160
Imazapyr	85.5	85.2	P/P	50 - 150
Imidacloprid	94.2	101	P/P	60 - 150
Linuron	105	86.8	P/P	60 - 150
Mandestrobin	96.0	99.2	P/P	50 - 150
MCPP	110	109	P/P	50 - 150
Naproxen	112	89.2	P/P	50 - 160
Primidone	116	96.2	P/P	60 - 150
Pyraclostrobin	101	101	P/P	60 - 150
Silvex	90.4	96.7	P/P	50 - 150
Thiamethoxam	95.3	98.9	P/P	50 - 150
Tolfenpyrad	98.4	101	P/P	60 - 150
Triclopyr	100	103	P/P	50 - 150

Reference Method: SM 5310 B-2011
Run ID: A113036
Included Lab Sample IDs: 2335829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.7	98.4	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A113044
Included Lab Sample IDs: 2335867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	77.7	75.6	P/P	60 - 160
Sucralose	96.3	94.9	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A113059
Included Lab Sample IDs: 2335869, 2335870, 2335871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Vanadium	97.6	99.1	P/P	95 - 105

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A113067

Included Lab Sample IDs: 2335828, 2335830, 2335832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	100	97.8	P/P	90 - 110
Total Alkalinity	100	97.9	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A113067

Included Lab Sample IDs: 2335828, 2335830, 2335832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	102	P/P	90 - 110
Fluoride	102	103	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113085

Included Lab Sample IDs: 2335869, 2335870, 2335871

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	103	P/P	90 - 110
Aluminum	105	104	P/P	90 - 110
Antimony	104	103	P/P	90 - 110
Antimony	104	104	P/P	90 - 110
Arsenic	101	99.4	P/P	90 - 110
Arsenic	99.4	98.6	P/P	90 - 110
Barium	103	102	P/P	90 - 110
Barium	105	103	P/P	90 - 110
Beryllium	102	98.3	P/P	90 - 110
Beryllium	98.3	97.5	P/P	90 - 110
Boron	101	103	P/P	90 - 110
Boron	103	100	P/P	90 - 110
Cadmium	103	101	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Chromium	100	100	P/P	90 - 110
Chromium	103	100	P/P	90 - 110
Cobalt	102	99.5	P/P	90 - 110
Cobalt	99.5	99.4	P/P	90 - 110
Copper	101	97.9	P/P	90 - 110
Copper	97.9	98.3	P/P	90 - 110
Lead	96.4	95.5	P/P	90 - 110
Lead	97.1	96.4	P/P	90 - 110
Manganese	104	103	P/P	90 - 110
Manganese	105	104	P/P	90 - 110
Molybdenum	101	99.2	P/P	90 - 110
Molybdenum	99.2	98.2	P/P	90 - 110
Nickel	101	98.0	P/P	90 - 110
Nickel	98.0	97.6	P/P	90 - 110
Selenium	101	98.8	P/P	90 - 110
Selenium	103	101	P/P	90 - 110
Silver	101	100	P/P	90 - 110
Silver	103	101	P/P	90 - 110
Thallium	101	99.5	P/P	90 - 110
Thallium	99.5	97.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113117

Included Lab Sample IDs: 2335868

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	97.2	96.4	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Cadmium	96.6	96.8	P/P	90 - 110
Chromium	96.0	96.1	P/P	90 - 110
Cobalt	102	102	P/P	90 - 110
Copper	103	103	P/P	90 - 110
Lead	96.7	95.9	P/P	90 - 110
Manganese	96.3	97.3	P/P	90 - 110
Molybdenum	99.3	98.4	P/P	90 - 110
Nickel	104	104	P/P	90 - 110
Selenium	98.3	97.6	P/P	90 - 110
Silver	99.6	99.1	P/P	90 - 110
Thallium	96.2	95.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A113138

Included Lab Sample IDs: 2335831, 2335833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.0	98.2	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A113147

Included Lab Sample IDs: 2335868

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	107	P/P	90 - 110
Iron	100	102	P/P	90 - 110
Magnesium	100	102	P/P	90 - 110
Strontium	99.0	103	P/P	90 - 110
Tin	101	100	P/P	90 - 110
Titanium	99.1	99.5	P/P	90 - 110
Vanadium	99.4	101	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A113148

Included Lab Sample IDs: 2335868

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.1	101	P/P	90 - 110
Beryllium	97.0	97.6	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A113156

Included Lab Sample IDs: 2335832

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	98.8	99.4	P/P	90 - 110
Sulfate	99.3	99.7	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A113163

Included Lab Sample IDs: 2335829, 2335831, 2335833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	105	P/P	90 - 110
Kjeldahl Nitrogen	108	102	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A113188

Included Lab Sample IDs: 2335842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	102		P	80 - 120
Alpha-BHC	98.8		P	80 - 120
Alpha-Chlordane	101		P	80 - 120
Beta-BHC	97.6		P	80 - 120
Beta-Cyfluthrin	93.4		P	80 - 120
Bifenthrin	94.3		P	80 - 120
Carbophenothion	99.2		P	80 - 120
Chlorothalonil	93.6		P	80 - 120
Cis-Nonachlor	99.2		P	80 - 120
Cypermethrin	85.5		P	80 - 120
Dacthal	97.8		P	80 - 120
DDD-p,p'	97.5		P	80 - 120
DDE-p,p'	102		P	80 - 120
DDT-p,p'	98.9		P	80 - 120
Delta-BHC	96.6		P	80 - 120
Deltamethrin	92.3		P	80 - 120
Dichlobenil	99.0		P	80 - 120
Dicofol	104		P	80 - 120
Dieldrin	110		P	80 - 120
Endosulfan I	99.5		P	80 - 120
Endosulfan II	101		P	80 - 120
Endosulfan Sulfate	95.6		P	80 - 120
Endrin	98.3		P	80 - 120
Endrin Aldehyde	95.1		P	80 - 120
Endrin Ketone	98.1		P	80 - 120
Esfenvalerate	94.8		P	80 - 120
Ethalfuralin	99.0		P	80 - 120
Fenpropathrin	96.4		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	99.9		P	80 - 120
Heptachlor	97.6		P	80 - 120
Heptachlor Epoxide	103		P	80 - 120
Hexachlorobenzene	99.7		P	80 - 120
Kepone	102		P	80 - 120
Lambda-Cyhalothrin	95.2		P	80 - 120
Methoprene	107		P	80 - 120
Methoxychlor	97.9		P	80 - 120
MGK-264	103		P	80 - 120
Mirex	92.7		P	80 - 120
Oxychlordane	101		P	80 - 120
Permethrin	90.6		P	80 - 120
Phenothrin	94.2		P	80 - 120
Piperonyl Butoxide	88.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A113188
Included Lab Sample IDs: 2335842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Prallethrin	106		P	80 - 120
Tau-Fluvalinate	94.0		P	80 - 120
Tetramethrin	96.1		P	80 - 120
Trans-Nonachlor	102		P	80 - 120
Triclosan Methyl	100		P	80 - 120
Trifluralin	96.4		P	80 - 120

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A113200
Included Lab Sample IDs: 2335829, 2335831, 2335833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.0	P/P	90 - 110
Total-P	100	102	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A113203
Included Lab Sample IDs: 2335842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	92.8		P	80 - 120
PCB-1260	93.8		P	80 - 120

Reference Method: EPA 8276
Run ID: A113296
Included Lab Sample IDs: 2335842

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	96.8		P	80 - 120
Toxaphene	107		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113298
Included Lab Sample IDs: 2335829

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113310
Included Lab Sample IDs: 2335831, 2335833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110
NO2NO3-N	102	103	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)	91.7					0.0114	
EPA 180.1 Rev. 2.0	Turbidity	96.5					0.0	
EPA 200.7 Rev. 4.4	Calcium	104	96.4	98.6				1.02
	Calcium	106						3.12
	Iron	107	109	104	107			3.02
	Iron	106	105	105				0.0577
	Magnesium	110	109	104	108			2.62
	Magnesium	102						3.46
	Potassium	102	101	100	101			1.17
	Sodium	99.1	103	95.5	97.6			1.35
	Strontium	98.3	101	97.7	99.2			1.56
	Strontium	104						1.02
	Tin	101	103	97.8	99.7			1.97
	Tin	107	105	112				6.07
	Titanium	103	106	102	103			0.697
	Titanium	104	100	101				0.468
	Vanadium	95.8	102	94.9	95.8			0.898
	Vanadium	95.4	96.6	95.8				0.749
	Zinc	101	103	100	101			1.02
	Zinc	103	101	101				0.781
EPA 200.8 Rev. 5.4	Aluminum	106	108	108	105			0.0885
	Aluminum	100	101	103				2.09
	Antimony	108	105	109	109			3.15
	Antimony	98.4	96.8	96.1				0.707
	Arsenic	99.9	102	103	101			0.482
	Arsenic	98.3	110	107				2.36
	Barium	109	109	110	109			1.24
	Beryllium	101	102	104	101			2.03
	Beryllium	89.8	108	112				3.46
	Boron	106	108	106	108			1.65
	Cadmium	106	104	108	103			0.997
	Cadmium	98.1	90.8	89.7				1.23
	Chromium	102	102	104	104			2.58
	Chromium	95.5	95.3	93.4				2.02
	Cobalt	103	103	105	103			1.63
	Cobalt	97.5	111	109				1.79
	Copper	99.9	102	104	97.8			1.81
	Copper	95.4	102	101				1.40
	Lead	98.6	99.4	99.7	98.8			0.232
	Lead	98.9	102	101				0.827
	Manganese	107	105	107	107			1.39
	Manganese	96.4	97.0	92.1				3.28
	Molybdenum	103	104	106	106			1.49
	Molybdenum	99.1	109	109				0.684
	Nickel	102	99.6	102	99.9			1.95
	Nickel	97.9	114	111				2.10
	Selenium	101	103	103	99.9			0.426
	Selenium	95.0	99.7	97.6				2.08
	Silver	104	103	104	104			1.10
	Silver	96.9	89.1	87.4				1.94
	Thallium	103	105	105	105			0.883
	Thallium	101	104	104				0.392
EPA 300.0 Rev. 2.1	Chloride	97.6	98.2	95.7			0.461	
	Sulfate	97.7	97.0	94.9			0.163	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 350.1 Rev. 2.0	Ammonia-N	97.6	107	106			0.533
	Ammonia-N	98.2	96.4	96.6			0.177
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	102	96.0			3.37
	Kjeldahl Nitrogen	105	110	106			2.46
EPA 353.2 Rev. 2.0	NO2NO3-N	103	100	103			2.84
	NO2NO3-N	102	97.0	99.5			2.40
	NO2NO3-N	100	107	105			1.14
EPA 365.1 Rev. 2.0	Total-P	102	102	103			0.489
	Total-P	106	104	108			3.43
EPA 8270E	Aldrin	56.4	62.9	71.8			13.2
	Alpha-BHC	100	102	101			0.612
	Alpha-Chlordane	76.9	86.3	96.3			11.0
	Beta-BHC	108	106	103			3.53
	Beta-Cyfluthrin	62.6	79.5	91.0			13.5
	Bifenthrin	48.9	61.4	81.7			28.4
	Carbophenothion	65.3	79.0	86.9			9.59
	Chlorothalonil	64.9	84.0	85.9			2.28
	Cis-Nonachlor	69.8	80.5	87.2			7.93
	Cypermethrin	59.1	70.8	84.2			17.3
	Dacthal	96.4	104	107			2.11
	DDD-p,p'	76.9	90.9	98.6			8.20
	DDE-p,p'	80.5	87.8	95.5			8.40
	DDT-p,p'	74.3	81.8	89.3			8.83
	Delta-BHC	110	120	113			5.78
	Deltamethrin	60.3	72.7	87.1			18.0
	Dichlobenil	101	107	97.2			9.40
	Dicofol	82.0	85.7	91.6			6.61
	Dieldrin	87.4	97.3	105			7.74
	Endosulfan I	81.0	94.9	99.1			4.40
	Endosulfan II	86.0	90.7	97.9			7.66
	Endosulfan Sulfate	98.5	110	105			4.38
	Endrin	75.3	85.4	88.4			3.53
	Endrin Aldehyde	94.6	95.2	92.5			2.90
	Endrin Ketone	104	109	106			2.78
	Esfenvalerate	58.3	72.0	85.7			17.4
	Ethalfuralin	83.1	88.1	89.7			1.82
	Fenpropathrin	65.7	84.4	88.5			4.74
	Gamma-BHC	103	109	99.6			8.58
	Gamma-Chlordane	72.6	82.2	93.6			13.0
	Heptachlor	63.1	71.0	76.4			7.31
	Heptachlor Epoxide	83.2	89.9	96.3			6.91
	Hexachlorobenzene	69.1	79.2	85.3			7.32
	Kepone	73.3	72.9	62.1			15.9
	Lambda-Cyhalothrin	54.3	69.3	85.8			21.2
	Methoprene	58.1	70.8	92.4			26.4
	Methoxychlor	85.3	93.5	96.4			3.09
	MGK-264	103	107	112			4.40
	Mirex	54.2	60.3	73.6			19.8
	Oxychlordane	75.4	83.9	90.8			7.97
	PCB-1016	97.8	92.7	93.9			1.31
	PCB-1260	96.1	94.2	101			6.43
	Permethrin	60.6	71.8	85.7			17.6
	Phenothrin	51.0	63.6	80.0			22.8
	Piperonyl Butoxide	102	109	108			0.956

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 8270E	Prallethrin	95.6	104	105			0.666
	Tau-Fluvalinate	49.7	62.5	79.8			24.3
	Tetramethrin	99.7	118	115			2.25
	Trans-Nonachlor	72.5	81.2	90.2			10.5
	Triclosan Methyl	82.4	93.7	101			7.22
	Trifluralin	72.9	81.2	84.7			4.24
EPA 8276	Chlordane	94.2	85.0	93.1			8.34
	Toxaphene	122	119	131			9.72
EPA 8321B	2,4-D	62.0	80.4	55.2			19.8
	2,4,5-T	40.5	43.1	29.3			38.2
	Acesulfame K	86.3	80.6	79.9			0.916
	Acetaminophen	75.5	96.2	93.8			2.51
	Acetamiprid	70.1	93.2	83.2			11.4
	Afidopyropen	56.4	84.1	66.4			23.5
	AMPA	107	104	100			3.24
	Bentazon	72.6					5.57
	Benzovindiflupyr	80.1	94.2	87.7			7.18
	Carbamazepine	82.6	92.8	94.4			1.75
	Clothianidin	89.5	112	108			4.11
	Dinotefuran	87.8	137	129			5.75
	Diuron	75.1	83.2	77.9			5.60
	Endothall	105	108	112			3.05
	Fenuron	85.8	82.5	76.4			7.69
	Fluridone	81.5					1.26
	Glufosinate	117	94.8	97.4			2.62
	Glyphosate	101	87.7	94.8			7.05
	Hydrocodone	79.6	99.1	91.1			8.37
	Ibuprofen	67.0	49.7	47.8			3.99
	Imazapyr	82.4					3.68
	Imidacloprid	94.6	158	137			13.8
	Linuron	80.9	75.2	82.1			8.74
	Mandestrobin	79.8	79.6	75.5			5.25
	MCPP	74.9	66.6	59.3			11.6
	Naproxen	62.5	27.6	58.0			71.1
	Primidone	94.8	92.5	93.2			0.743
	Pyraclostrobin	66.0	86.0	79.5			7.85
	Silvex	45.1	52.5	42.6			20.8
	Sucralose	97.2	94.0	96.9			2.98
	Thiamethoxam	86.5	150	142			5.99
	Tolfenpyrad	37.2	51.6	50.3			2.45
	Triclopyr	46.9	44.5	35.1			23.5
SM 2320 B-2011	Total Alkalinity	101				0.256	
	Total Alkalinity	102				0.391	
SM 2540 C-2011	TDS					2.39	
SM 4500-F- C-2011	Fluoride	99.9	99.9	99.9			0.0
	Fluoride	98.9	99.0	99.0			0.0
SM 5310 B-2011	Organic Carbon	94.0	97.1	97.6			0.372
	Organic Carbon	96.8	96.1	95.5			0.399

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2335832

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2335828, 2335830, 2335832
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2335868, 2335869, 2335870, 2335871
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2335868, 2335869, 2335870, 2335871
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2335832
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2335832
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2335829, 2335831, 2335833
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2335829, 2335831, 2335833
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2335829, 2335831, 2335833
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2335829, 2335831, 2335833
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2335842
EPA 8270E	PCBs in water matrices by GC/MS/MS	2335842
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2335842
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2335867
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2335828, 2335830, 2335832
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2335870, 2335871
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2335832
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2335828, 2335830, 2335832
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2335828, 2335830, 2335832
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2335829, 2335831, 2335833

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	06/21/2022			06/21/2022 16:25	Anna M. Plaviak	2335832
EPA 180.1 Rev. 2.0	06/21/2022			06/21/2022 15:32	Khloe J Berg	2335828
	06/21/2022			06/21/2022 15:33	Khloe J Berg	2335830
	06/21/2022			06/21/2022 15:34	Khloe J Berg	2335832
EPA 200.7 Rev. 4.4	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/23/2022 18:56	McKinley C Carter	2335869
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/23/2022 19:00	McKinley C Carter	2335870
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/23/2022 19:06	McKinley C Carter	2335871
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/24/2022 15:26	McKinley C Carter	2335869
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/24/2022 15:32	McKinley C Carter	2335870
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/24/2022 15:37	McKinley C Carter	2335871
	06/21/2022	06/24/2022 10:02	Mackenzie Hunt	06/28/2022 21:48	McKinley C Carter	2335868
	06/21/2022	06/24/2022 10:02	Mackenzie Hunt	06/28/2022 22:47	McKinley C Carter	2335868
EPA 200.8 Rev. 5.4	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/24/2022 19:17	Emily M Philpot	2335869
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/24/2022 19:26	Emily M Philpot	2335870
	06/21/2022	06/22/2022 09:56	Megan Whitefoot	06/24/2022 20:20	Emily M Philpot	2335871
	06/21/2022	06/24/2022 10:02	Mackenzie Hunt	06/27/2022 19:49	Alexander Thompson	2335868
	06/21/2022	06/24/2022 10:02	Mackenzie Hunt	06/28/2022 12:21	Alexander Thompson	2335868
	06/21/2022	06/24/2022 10:02	Mackenzie Hunt	06/28/2022 16:59	Alexander Thompson	2335868
EPA 300.0 Rev. 2.1	06/21/2022			06/28/2022 14:12	Anna M. Plaviak	2335832
	06/21/2022			07/01/2022 14:11	Anna M. Plaviak	2335832
EPA 350.1 Rev. 2.0	06/21/2022			06/23/2022 11:45	Judith K. Clark	2335829
	06/21/2022			06/28/2022 11:12	Ping Hua	2335831
	06/21/2022			06/28/2022 11:13	Ping Hua	2335833
EPA 351.2 Rev. 2.0	06/21/2022	06/28/2022 15:50	Samantha L Bates	06/29/2022 12:07	Alexandra J Mattheus	2335831
	06/21/2022	06/28/2022 15:50	Samantha L Bates	06/29/2022 12:08	Alexandra J Mattheus	2335833
	06/21/2022	06/28/2022 15:50	Samantha L Bates	06/29/2022 13:17	Alexandra J Mattheus	2335829
EPA 353.2 Rev. 2.0	06/21/2022			07/05/2022 14:55	Touraj Touran	2335829
	06/21/2022			07/06/2022 12:20	Judith K. Clark	2335831
	06/21/2022			07/06/2022 12:27	Judith K. Clark	2335833
EPA 365.1 Rev. 2.0	06/21/2022	06/28/2022 16:02	Adam P Silver	06/30/2022 11:02	James L Waggeberby	2335829
	06/21/2022	06/28/2022 16:02	Adam P Silver	06/30/2022 11:34	James L Waggeberby	2335831
	06/21/2022	06/28/2022 16:02	Adam P Silver	06/30/2022 11:35	James L Waggeberby	2335833
EPA 8270E	06/21/2022	06/24/2022 08:00	Rasheda Ghaffari	06/29/2022 21:11	Michael Poppell	2335842
	06/21/2022	06/24/2022 08:00	Rasheda Ghaffari	06/30/2022 05:44	Arthur Maknenko	2335842
EPA 8276	06/21/2022	06/24/2022 08:00	Rasheda Ghaffari	07/01/2022 14:13	Julie Wi	2335842
EPA 8321B	06/21/2022	06/22/2022 12:00	Umesh Chiluwai	06/22/2022 15:21	Umesh Chiluwai	2335867
	06/21/2022	06/22/2022 12:00	Umesh Chiluwai	06/23/2022 04:51	Umesh Chiluwai	2335867
	06/21/2022	06/23/2022 09:00	June Rhew	06/24/2022 01:01	Juyoung Kim	2335867
SM 2320 B-2011	06/21/2022			06/25/2022 07:17	Dale L. Simmons	2335832
	06/21/2022			06/25/2022 07:31	Dale L. Simmons	2335830

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	06/21/2022			06/25/2022 18:59	Dale L. Simmons	2335828
SM 2340 B-2011	06/21/2022			06/23/2022 19:00	McKinley C Carter	2335870
	06/21/2022			06/23/2022 19:06	McKinley C Carter	2335871
SM 2540 C-2011	06/21/2022			06/24/2022 15:21	Yijie Li	2335832
SM 2540 D-2011	06/21/2022			06/24/2022 15:21	Yijie Li	2335828, 2335830, 2335832
SM 4500-F- C-2011	06/21/2022			06/25/2022 07:17	Dale L. Simmons	2335832
	06/21/2022			06/25/2022 07:31	Dale L. Simmons	2335830
	06/21/2022			06/25/2022 16:13	Dale L. Simmons	2335828
SM 5310 B-2011	06/21/2022			06/22/2022 19:05	Khloe J Berg	2335831
	06/21/2022			06/22/2022 19:19	Khloe J Berg	2335833
	06/21/2022			06/23/2022 23:01	Khloe J Berg	2335829