

Chemical Analysis Report

SW-DIST-2023-09-19-02

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **Run 9**
Request ID: **RQ-2023-09-18-35**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Devin Mathias

For additional information please contact
Colin Wright, Ph.D.
Chris Bowen, B.S.
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-OCT-2023 14:27

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink rectangular background.

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: MULLET CREEK TIDAL AT PARK

Collection Date/Time: 09/18/2023 11:25

Field ID: G1SW0095

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438041	EPA 8270E	Aldrin	0.69	U	ng/L	P435235	
		Alpha-BHC	0.11	U	ng/L	P435235	
		Alpha-Chlordane	0.21	U	ng/L	P435235	
		PCB-1016	2.1	U	ng/L	P435235	
		Beta-BHC	0.11	U	ng/L	P435235	
		PCB-1221	2.1	U	ng/L	P435235	
		Beta-Cyfluthrin	1.3	U	ng/L	P435235	
		PCB-1232	2.1	U	ng/L	P435235	
		Bifenthrin	0.53	U	ng/L	P435235	
		PCB-1242	2.1	U	ng/L	P435235	
		Carbophenothion	0.95	U	ng/L	P435235	
		PCB-1248	2.1	U	ng/L	P435235	
		Chlorothalonil	3.8	U	ng/L	P435235	
		PCB-1254	2.1	U	ng/L	P435235	
		Cis-Nonachlor	0.21	U	ng/L	P435235	
		PCB-1260	2.1	U	ng/L	P435235	
		Cypermethrin	1.6	U	ng/L	P435235	
		Dacthal	0.16	U	ng/L	P435235	
		DDD-p,p'	0.26	U	ng/L	P435235	
		DDE-p,p'	0.21	U	ng/L	P435235	
		DDT-p,p'	0.85	U	ng/L	P435235	MS
		Delta-BHC	0.42	U	ng/L	P435235	
		Deltamethrin	1.3	U	ng/L	P435235	
		Dichlobenil	0.26	U	ng/L	P435235	
		Dicofol	1.3	U	ng/L	P435235	
		Dieldrin	0.42	U	ng/L	P435235	
		Endosulfan I	0.42	U	ng/L	P435235	MS
		Endosulfan II	0.95	U	ng/L	P435235	
		Endosulfan Sulfate	0.32	U	ng/L	P435235	
		Endrin	0.95	U	ng/L	P435235	
		Endrin Aldehyde	0.79	U	ng/L	P435235	
		Endrin Ketone	0.42	U	ng/L	P435235	
		Esfenvalerate	0.79	U	ng/L	P435235	
		Ethalfuralin	0.16	U	ng/L	P435235	
		Fenpropathrin	0.26	U	ng/L	P435235	
		Gamma-BHC	0.13	U	ng/L	P435235	
		Gamma-Chlordane	0.21	U	ng/L	P435235	
		Heptachlor	0.21	U	ng/L	P435235	
		Heptachlor Epoxide	0.26	U	ng/L	P435235	
		Hexachlorobenzene**	1.1	U	ng/L	P435235	
		Kepone	14	UJ	ng/L	P435235	CCV
		Lambda-Cyhalothrin	0.79	U	ng/L	P435235	
		Methoprene	0.79	U	ng/L	P435235	
		Methoxychlor	0.32	U	ng/L	P435235	

Field ID: G1SW0095

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438041	EPA 8270E	MGK-264	0.21	U	ng/L	P435235	MS
		Mirex	0.37	U	ng/L	P435235	
		Oxychlordane	0.32	U	ng/L	P435235	
		Permethrin	1.7	U	ng/L	P435235	
		Phenothrin	0.95	U	ng/L	P435235	
		Piperonyl Butoxide	0.58	I	ng/L	P435235	
		Prallethrin	2.1	U	ng/L	P435235	
		Tau-Fluvalinate	0.26	U	ng/L	P435235	
		Tetramethrin	0.79	U	ng/L	P435235	
		Trans-Nonachlor	0.21	U	ng/L	P435235	
		Triclosan Methyl	0.16	U	ng/L	P435235	
		Trifluralin	0.28	I	ng/L	P435235	
		Chlordane	2.1	U	ng/L	P435235	
		Toxaphene	16	U	ng/L	P435235	
2438048	EPA 8321B						MS
		2,4-D	0.37		ug/L	P435120	
		Acesulfame K	0.10	U	ug/L	P435158	
		2,4,5-T	0.0040	U	ug/L	P435120	
		AMPA	1.0	U	ug/L	P435158	
		Acetaminophen	0.0080	U	ug/L	P435120	
		Acetamiprid	0.0020	U	ug/L	P435120	
		Endothall	0.25	U	ug/L	P435158	
		Glufosinate	1.0	U	ug/L	P435158	
		Glyphosate	1.0	U	ug/L	P435158	
		Afidopyropen	0.0020	U	ug/L	P435120	
		Bentazon	0.15		ug/L	P435120	
		Sucralose	1.6		ug/L	P435158	
		Benzovindiflupyr	0.0020	U	ug/L	P435120	
		Carbamazepine	8.6E-04	I	ug/L	P435120	
		Clothianidin	0.0076	I	ug/L	P435120	
		Dinotefuran	0.0020	U	ug/L	P435120	
		Diuron	0.0020	U	ug/L	P435120	
		Fenuron	0.032	U	ug/L	P435120	
		Fluridone	0.031		ug/L	P435120	
		Imazapyr	0.12		ug/L	P435120	
		Hydrocodone	0.0020	U	ug/L	P435120	
		Ibuprofen	0.080	U	ug/L	P435120	
		Imidacloprid	0.044		ug/L	P435120	
		Linuron	0.0040	U	ug/L	P435120	
		Mandestrobin	0.0020	U	ug/L	P435120	
		MCP	0.0029	I	ug/L	P435120	
		Naproxen	0.0080	U	ug/L	P435120	
		Primidone	0.0054	I	ug/L	P435120	
		Pyraclostrobin	0.0020	U	ug/L	P435120	
		Silvex	0.0040	U	ug/L	P435120	
		Thiamethoxam	0.0020	U	ug/L	P435120	

Field ID: G1SW0095

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438048	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P435120	
		Triclopyr	0.0040	U	ug/L	P435120	
2438052	EPA 200.7 Rev. 4.4	Calcium	153		mg/L	P435452	
		Iron	250	I	ug/L	P435452	
		Magnesium	336		mg/L	P435452	
		Potassium	99		mg/L	P435452	
		Sodium	2.75E+03		mg/L	P435452	
		Strontium	1.92E+03		ug/L	P435452	
		Tin	9.0	U	ug/L	P435452	
		Titanium	4.1	I	ug/L	P435452	
		Vanadium	6.0	U	ug/L	P435452	
		Zinc	15	U	ug/L	P435452	
	EPA 200.8 Rev. 5.4	Aluminum	161		ug/L	P435452	
		Antimony	0.21	I	ug/L	P435452	
		Arsenic	2.20		ug/L	P435452	
		Barium	17.2		ug/L	P435452	
		Beryllium	0.040	U	ug/L	P435452	
		Boron	1.04E+03		ug/L	P435452	
		Cadmium	0.080	U	ug/L	P435452	
		Chromium	1.6	U	ug/L	P435452	
		Cobalt	0.082	I	ug/L	P435452	
		Copper	1.6	U	ug/L	P435452	
		Lead	0.80	U	ug/L	P435452	
		Manganese	15.9		ug/L	P435452	
		Molybdenum	3.8		ug/L	P435452	
		Nickel	2.0	U	ug/L	P435452	
		Selenium	0.80	U	ug/L	P435452	
		Silver	0.040	U	ug/L	P435452	
		Thallium	0.40	U	ug/L	P435452	
	SM 2340 B-2011	Hardness	1.76E+03		mg/L	P435452	

Ref. Method and Comment:

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.

EPA 8321B: Some MDLs are elevated due to required dilution of sample matrix.

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

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable because of high analyte concentration in the QC sample.

Sample Location: LONG BRANCH TIDALATWHITNEY RD

Collection Date/Time: 09/18/2023 11:55

Field ID: G1SW0107

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438024	DEP SOP: NU-094-1	Color (true)	55		PCU	P435216	
	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P435198	
	EPA 300.0 Rev. 2.1	Chloride	540		mg Cl/L	P435834	
		Sulfate	67		mg SO4/L	P435837	
	SM 2320 B-2011	Total Alkalinity	202		mg CaCO3/L	P435435	
	SM 2540 C-2015	TDS	1.06E+03	Q	mg/L	P436127	
	SM 2540 D-2015	TSS	3	U	mg/L	P435686	
	SM 4500-F- C-2011	Fluoride	0.27		mg F/L	P435589	
2438025	EPA 350.1 Rev. 2.0	Ammonia-N	0.50		mg N/L	P435416	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P435713	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.096		mg N/L	P435968	
	EPA 365.1 Rev. 2.0	Total-P	0.16		mg P/L	P435245	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P435499	

Ref. Method and Comment:

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

SM 2540 C-2015: The sample needed to be reanalyzed because it was processed according to incorrect field conductivity. The reported result is consistent with the conductivity measured in the laboratory, 2220 umhos/cm.

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: PP DITCH AT 71ST ST

Collection Date/Time: 09/18/2023 12:25

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438043	EPA 8270E	Aldrin	0.68	U	ng/L	P435235	
		Alpha-BHC	0.10	U	ng/L	P435235	
		Alpha-Chlordane	0.21	U	ng/L	P435235	
		PCB-1016	2.1	U	ng/L	P435235	
		Beta-BHC	0.10	U	ng/L	P435235	
		PCB-1221	2.1	U	ng/L	P435235	
		Beta-Cyfluthrin	1.3	U	ng/L	P435235	
		PCB-1232	2.1	U	ng/L	P435235	
		Bifenthrin	0.52	U	ng/L	P435235	
		PCB-1242	2.1	U	ng/L	P435235	
		Carbophenothion	0.94	U	ng/L	P435235	
		PCB-1248	2.1	U	ng/L	P435235	
		Chlorothalonil	3.8	U	ng/L	P435235	
		PCB-1254	2.1	U	ng/L	P435235	
		Cis-Nonachlor	0.21	U	ng/L	P435235	
		PCB-1260	2.1	U	ng/L	P435235	
		Cypermethrin	1.6	U	ng/L	P435235	
		Dacthal	0.16	U	ng/L	P435235	
		DDD-p,p'	0.26	U	ng/L	P435235	
		DDE-p,p'	0.21	U	ng/L	P435235	
		DDT-p,p'	0.84	U	ng/L	P435235	MS
		Delta-BHC	0.42	U	ng/L	P435235	
		Deltamethrin	1.3	U	ng/L	P435235	
		Dichlobenil	0.31	I	ng/L	P435235	
		Dicofol	1.3	U	ng/L	P435235	
		Dieldrin	0.57	I	ng/L	P435235	
		Endosulfan I	0.42	U	ng/L	P435235	MS
		Endosulfan II	0.94	U	ng/L	P435235	
		Endosulfan Sulfate	0.76	I	ng/L	P435235	
		Endrin	0.94	U	ng/L	P435235	
		Endrin Aldehyde	0.79	U	ng/L	P435235	
		Endrin Ketone	0.42	U	ng/L	P435235	
		Esfenvalerate	0.79	U	ng/L	P435235	
		Ethalfuralin	0.16	U	ng/L	P435235	
		Fenpropathrin	0.26	U	ng/L	P435235	
		Gamma-BHC	0.13	U	ng/L	P435235	
		Gamma-Chlordane	0.21	U	ng/L	P435235	
		Heptachlor	0.21	U	ng/L	P435235	
		Heptachlor Epoxide	0.26	U	ng/L	P435235	
		Hexachlorobenzene**	1.0	U	ng/L	P435235	
		Kepone	14	UJ	ng/L	P435235	CCV
		Lambda-Cyhalothrin	0.79	U	ng/L	P435235	
		Methoprene	0.79	U	ng/L	P435235	
		Methoxychlor	0.31	U	ng/L	P435235	

Field ID: G5SW0134

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438043	EPA 8270E	MGK-264	0.21	U	ng/L	P435235	MS
		Mirex	0.37	U	ng/L	P435235	
		Oxychlordane	0.31	U	ng/L	P435235	
		Permethrin	1.7	U	ng/L	P435235	
		Phenothrin	0.94	U	ng/L	P435235	
		Piperonyl Butoxide	1.7		ng/L	P435235	
		Prallethrin	2.1	U	ng/L	P435235	
		Tau-Fluvalinate	0.26	U	ng/L	P435235	
		Tetramethrin	0.79	U	ng/L	P435235	
		Trans-Nonachlor	0.21	U	ng/L	P435235	
		Triclosan Methyl	0.16	U	ng/L	P435235	
		Trifluralin	0.22	I	ng/L	P435235	
		Chlordane	2.1	U	ng/L	P435235	
		Toxaphene	16	U	ng/L	P435235	
2438054	EPA 200.7 Rev. 4.4	Calcium	129		mg/L	P435236	
		Iron	310		ug/L	P435236	
		Magnesium	130		mg/L	P435236	
	EPA 200.8 Rev. 5.4	Potassium	40		mg/L	P435236	
		Sodium	1.04E+03		mg/L	P435236	
		Strontium	1.22E+03		ug/L	P435236	
		Tin	30	U	ug/L	P435236	
		Titanium	1.0	I	ug/L	P435236	
		Vanadium	2.2	I	ug/L	P435236	
		Zinc	5.0	U	ug/L	P435236	
		Aluminum	52		ug/L	P435236	
		Antimony	0.31		ug/L	P435236	
		Arsenic	1.94		ug/L	P435236	
		Barium	47.3		ug/L	P435236	
		Beryllium	0.010	U	ug/L	P435236	
		Boron	417		ug/L	P435236	
		Cadmium	0.020	U	ug/L	P435236	
		Chromium	0.40	U	ug/L	P435236	
		Cobalt	0.130		ug/L	P435236	
		Copper	0.91		ug/L	P435236	
		Lead	0.29	I	ug/L	P435236	
		Manganese	25.9		ug/L	P435236	
		Molybdenum	3.88		ug/L	P435236	
		Nickel	1.3	I	ug/L	P435236	
		Selenium	0.28	I	ug/L	P435236	
		Silver	0.010	U	ug/L	P435236	
		Thallium	0.10	U	ug/L	P435236	
	SM 2340 B-2011	Hardness	855		mg/L	P435236	

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

Sample Location: GULF CREEK AT 9TH AVE NORTH

Collection Date/Time: 09/18/2023 12:50

Field ID: G5SW0191

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2438026	DEP SOP: NU-094-1	Color (true)	95		PCU	P435216	
	EPA 180.1 Rev. 2.0	Turbidity	2.1		NTU	P435198	
	EPA 300.0 Rev. 2.1	Chloride	170		mg Cl/L	P435622	
		Sulfate	35		mg SO4/L	P435625	
	SM 2320 B-2011	Total Alkalinity	191		mg CaCO3/L	P435435	
	SM 2540 C-2015	TDS	594		mg/L	P435727	
	SM 2540 D-2015	TSS	5	I	mg/L	P435683	
	SM 4500-F- C-2011	Fluoride	0.49		mg F/L	P435589	
2438028	EPA 350.1 Rev. 2.0	Ammonia-N	0.054		mg N/L	P435418	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.98		mg N/L	P435898	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P435970	
	EPA 365.1 Rev. 2.0	Total-P	0.69		mg P/L	P435312	
	SM 5310 B-2011	Organic Carbon	19		mg C/L	P435642	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P435216

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435198

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435236

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: P435452

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: P435236

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435236

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P435452

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: P435622

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435625

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435834

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435837

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435837

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435416

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435418

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435713

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435898

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435968

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435970

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435245

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435312

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P435235

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.80	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.90	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.90	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	14	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P435235

Component	Result	Code	Units
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P435235

Component	Result	Code	Units
Chlordane	2.0	U	ng/L
Toxaphene	15	U	ng/L

Reference Method: EPA 8321B

Batch ID: P435120

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	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B

Batch ID: P435158

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P435158

Component	Result	Code	Units
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2320 B-2011
Batch ID: P435435

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

Reference Method: SM 2540 C-2015
Batch ID: P435727

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P436127

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P435683

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P435686

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P435589

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P435499

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

Reference Method: SM 5310 B-2011
Batch ID: P435642

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: P435216

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435198

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435236

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	105		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	103		P	85 - 115
Sodium	104		P	85 - 115
Strontium	97.9		P	85 - 115
Tin	97.9		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	100		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435452

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	103		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	100		P	85 - 115
Sodium	102		P	85 - 115
Strontium	99.8		P	85 - 115
Tin	99.2		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435236

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.8		P	85 - 115
Antimony	97.7		P	85 - 115
Arsenic	101		P	85 - 115
Barium	102		P	85 - 115
Beryllium	93.1		P	85 - 115
Boron	100		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	97.8		P	85 - 115
Cobalt	99.5		P	85 - 115
Copper	99.9		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435236

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Lead	95.7		P	85 - 115
Manganese	98.1		P	85 - 115
Molybdenum	98.6		P	85 - 115
Nickel	99.6		P	85 - 115
Selenium	101		P	85 - 115
Silver	110		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435452

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.9		P	85 - 115
Antimony	98.2		P	85 - 115
Arsenic	101		P	85 - 115
Barium	102		P	85 - 115
Beryllium	91.6		P	85 - 115
Boron	108		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	102		P	85 - 115
Copper	98.9		P	85 - 115
Lead	96.7		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	98.3		P	85 - 115
Nickel	99.9		P	85 - 115
Selenium	99.9		P	85 - 115
Silver	111		P	85 - 115
Thallium	102		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435622

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435625

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435834

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435837

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435837

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435416

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435418

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435713

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435898

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435968

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435970

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435245

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435312

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P435235

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	53.9		P	30 - 96.0
Alpha-BHC	86.7		P	70 - 109
Alpha-Chlordane	89.2		P	45 - 107
Beta-BHC	89.7		P	64 - 138
Beta-Cyfluthrin	51.7		P	17 - 141
Bifenthrin	43.4		P	10 - 113
Carbophenothion	73.0		P	24 - 91.0
Chlorothalonil	40.9		P	26 - 180
Cis-Nonachlor	65.2		P	37 - 102
Cypermethrin	65.2		P	20 - 133
Dacthal	84.0		P	69 - 114
DDD-p,p'	89.3		P	42 - 105
DDE-p,p'	79.3		P	42 - 106
DDT-p,p'	106		P	42 - 107
Delta-BHC	80.3		P	67 - 144
Deltamethrin	35.0		P	15 - 149
Dichlobenil	76.2		P	46 - 117
Dicofol	79.1		P	34 - 114
Dieldrin	96.3		P	50 - 108
Endosulfan I	83.9		P	55 - 104
Endosulfan II	73.4		P	51 - 111
Endosulfan Sulfate	79.8		P	56 - 121
Endrin	94.7		P	10 - 106
Endrin Aldehyde	89.5		P	34 - 114
Endrin Ketone	72.4		P	63 - 177
Esfenvalerate	47.8		P	29 - 143
Ethalfuralin	68.3		P	46 - 96.0
Fenpropathrin	55.3		P	28 - 115
Gamma-BHC	86.7		P	65 - 121
Gamma-Chlordane	81.3		P	39 - 103
Heptachlor	74.1		P	39 - 94.0
Heptachlor Epoxide	81.7		P	54 - 104
Hexachlorobenzene	77.8		P	36 - 100
Kepone	62.5		P	10 - 225
Lambda-Cyhalothrin	40.9		P	10 - 135
Methoprene	39.8		P	10 - 109
Methoxychlor	87.0		P	52 - 112
MGK-264	92.4		P	44 - 117
Mirex	56.4		P	20 - 90.0
Oxychlordane	82.4		P	44 - 102
PCB-1016	79.8		P	45 - 107
PCB-1260	79.6		P	40 - 118
Permethrin	76.2		P	18 - 135
Phenothrin	35.1		P	10 - 102
Piperonyl Butoxide	88.2		P	28 - 156
Prallethrin	56.0		P	28 - 113
Tau-Fluvalinate	41.8		P	10 - 123
Tetramethrin	85.3		P	18 - 158
Trans-Nonachlor	66.2		P	39 - 104
Triclosan Methyl	94.9		P	54 - 108
Trifluralin	72.5		P	46 - 97.0

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276

Batch ID: P435235

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	78.5		P	52 - 117
Toxaphene	89.2		P	44 - 125

Reference Method: EPA 8321B

Batch ID: P435120

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	65.2		P	40 - 150
2,4,5-T	63.9		P	40 - 150
Acetaminophen	80.9		P	30 - 150
Acetamiprid	80.8		P	40 - 150
Afidopyropen	60.9		P	30 - 150
Bentazon	59.3		P	30 - 150
Benzovindiflupyr	83.8		P	40 - 150
Carbamazepine	73.6		P	40 - 150
Clothianidin	79.3		P	40 - 150
Dinotefuran	90.0		P	40 - 150
Diuron	74.9		P	40 - 150
Fenuron	85.2		P	40 - 150
Fluridone	84.2		P	40 - 150
Hydrocodone	79.8		P	40 - 150
Ibuprofen	49.1		P	40 - 150
Imazapyr	64.3		P	40 - 150
Imidacloprid	79.7		P	40 - 150
Linuron	60.1		P	40 - 150
Mandestrobin	83.5		P	40 - 150
MCPP	78.7		P	40 - 150
Naproxen	52.9		P	40 - 150
Primidone	74.1		P	40 - 150
Pyraclostrobin	72.1		P	40 - 150
Silvex	65.0		P	40 - 150
Thiamethoxam	81.8		P	40 - 150
Tolfenpyrad	48.2		P	30 - 150
Triclopyr	67.9		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P435158

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	97.3		P	40 - 150
AMPA	121		P	40 - 150
Endothall	96.0		P	40 - 150
Glufosinate	96.8		P	40 - 150
Glyphosate	89.6		P	40 - 150
Sucralose	95.2		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P435435

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	95.6		P	92 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P435727

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

Reference Method: SM 2540 C-2015
Batch ID: P436127

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.0		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P435683

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P435686

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	93.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P435589

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435499

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.2		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P435642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P435236

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437783	Calcium	105		P	80 - 120
2437783	Iron	106	108	P/P	80 - 120
2437783	Magnesium	106	108	P/P	80 - 120
2437783	Potassium	101	103	P/P	80 - 120
2437783	Sodium	104	106	P/P	80 - 120
2437783	Strontium	97.9	99.2	P/P	80 - 120
2437783	Tin	100	101	P/P	80 - 120
2437783	Titanium	102	103	P/P	80 - 120
2437783	Vanadium	102	103	P/P	80 - 120
2437783	Zinc	98.4	101	P/P	80 - 120
2437951	Calcium	104		P	80 - 120
2437951	Iron	107		P	80 - 120
2437951	Magnesium	104		P	80 - 120
2437951	Potassium	102		P	80 - 120
2437951	Sodium	102		P	80 - 120
2437951	Strontium	99.3		P	80 - 120
2437951	Tin	98.2		P	80 - 120
2437951	Titanium	101		P	80 - 120
2437951	Vanadium	102		P	80 - 120
2437951	Zinc	102		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P435452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438052	Iron	100	101	P/P	80 - 120
2438052	Strontium	96.9	97.2	P/P	80 - 120
2438052	Tin	83.7	84.0	P/P	80 - 120
2438052	Titanium	96.4	95.8	P/P	80 - 120
2438052	Vanadium	103	104	P/P	80 - 120
2438052	Zinc	98.7	99.0	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435236

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437783	Aluminum	96.5	98.7	P/P	80 - 120
2437783	Antimony	99.7	100	P/P	80 - 120
2437783	Arsenic	101	100	P/P	80 - 120
2437783	Barium	103	105	P/P	80 - 120
2437783	Beryllium	96.8	96.9	P/P	80 - 120
2437783	Boron	101	101	P/P	80 - 120
2437783	Cadmium	101	101	P/P	80 - 120
2437783	Chromium	98.3	99.2	P/P	80 - 120
2437783	Cobalt	97.2	96.7	P/P	80 - 120
2437783	Copper	95.2	95.2	P/P	80 - 120
2437783	Lead	95.6	96.1	P/P	80 - 120
2437783	Manganese	98.8	98.8	P/P	80 - 120
2437783	Molybdenum	102	103	P/P	80 - 120
2437783	Nickel	94.9	95.1	P/P	80 - 120
2437783	Selenium	99.8	101	P/P	80 - 120
2437783	Silver	110	111	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435236

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437783	Thallium	103	104	P/P	80 - 120
2437951	Aluminum	99.6		P	80 - 120
2437951	Antimony	99.1		P	80 - 120
2437951	Arsenic	97.2		P	80 - 120
2437951	Barium	103		P	80 - 120
2437951	Beryllium	92.8		P	80 - 120
2437951	Boron	104		P	80 - 120
2437951	Cadmium	101		P	80 - 120
2437951	Chromium	100		P	80 - 120
2437951	Cobalt	94.9		P	80 - 120
2437951	Copper	96.3		P	80 - 120
2437951	Lead	96.6		P	80 - 120
2437951	Manganese	100		P	80 - 120
2437951	Molybdenum	99.9		P	80 - 120
2437951	Nickel	93.2		P	80 - 120
2437951	Selenium	99.6		P	80 - 120
2437951	Silver	110		P	80 - 120
2437951	Thallium	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435452

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438052	Aluminum	106	104	P/P	70 - 130
2438052	Antimony	103	103	P/P	70 - 130
2438052	Arsenic	109	108	P/P	70 - 130
2438052	Barium	104	105	P/P	70 - 130
2438052	Beryllium	104	105	P/P	70 - 130
2438052	Cadmium	99.1	98.3	P/P	70 - 130
2438052	Chromium	89.1	89.8	P/P	70 - 130
2438052	Cobalt	100	98.6	P/P	70 - 130
2438052	Copper	99.9	100	P/P	70 - 130
2438052	Lead	99.9	98.7	P/P	70 - 130
2438052	Manganese	88.0	88.2	P/P	70 - 130
2438052	Molybdenum	108	108	P/P	70 - 130
2438052	Nickel	96.8	96.1	P/P	70 - 130
2438052	Selenium	104	104	P/P	70 - 130
2438052	Silver	104	103	P/P	70 - 130
2438052	Thallium	102	102	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P435622

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437992	Chloride	103		P	90 - 110
2438163	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P435625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437992	Sulfate	104		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438163	Sulfate	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435834

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2440108	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435837

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2439916	Sulfate	103		P	90 - 110
2440108	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435416

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437849	Ammonia-N	96.4	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435418

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437991	Ammonia-N	97.6	99.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435713

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437927	Kjeldahl Nitrogen	101	99.9	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435898

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438166	Kjeldahl Nitrogen	98.4	98.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435968

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437642	NO2NO3-N	99.5	98.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437995	NO2NO3-N	102	100	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435245

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437927	Total-P	100	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P435312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437995	Total-P	107	108	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P435235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438013	PCB-1016	62.8	66.6	P/P	45 - 107
2438013	PCB-1260	54.5	62.3	P/P	40 - 112
2438070	Aldrin	68.5	60.1	P/P	24 - 81.0
2438070	Alpha-BHC	91.8	86.0	P/P	65 - 110
2438070	Alpha-Chlordane	96.1	107	P/P	43 - 119
2438070	Beta-BHC	113	127	P/P	54 - 165
2438070	Beta-Cyfluthrin	86.0	82.5	P/P	27 - 165
2438070	Bifenthrin	74.3	79.7	P/P	17 - 117
2438070	Carbophenothion	79.1	84.5	P/P	21 - 108
2438070	Chlorothalonil	173	165	P/P	10 - 255
2438070	Cis-Nonachlor	78.6	71.7	P/P	34 - 98.0
2438070	Cypermethrin	83.6	106	P/P	25 - 143
2438070	Dacthal	91.4	73.3	P/P	55 - 139
2438070	DDD-p,p'	80.2	86.6	P/P	30 - 109
2438070	DDE-p,p'	80.7	82.0	P/P	35 - 106
2438070	DDT-p,p'	178	177	F/F	41 - 101
2438070	Delta-BHC	124	152	P/P	58 - 165
2438070	Deltamethrin	85.4	90.9	P/P	10 - 194
2438070	Dichlobenil	57.6	57.1	P/P	22 - 114
2438070	Dicofol	91.2	99.8	P/P	17 - 133
2438070	Dieldrin	74.1	80.5	P/P	45 - 129
2438070	Endosulfan I	102	115	P/F	49 - 104
2438070	Endosulfan II	74.9	63.1	P/P	37 - 117
2438070	Endosulfan Sulfate	63.7	76.9	P/P	38 - 128
2438070	Endrin	83.9	79.4	P/P	35 - 116
2438070	Endrin Aldehyde	51.9	52.8	P/P	19 - 108
2438070	Endrin Ketone	73.1	94.3	P/P	44 - 134
2438070	Esfenvalerate	88.5	85.9	P/P	27 - 176
2438070	Ethalfuralin	83.4	82.5	P/P	49 - 100
2438070	Fenpropathrin	80.1	81.7	P/P	34 - 117
2438070	Gamma-BHC	100	99.7	P/P	59 - 129
2438070	Gamma-Chlordane	103	102	P/P	33 - 107
2438070	Heptachlor	88.8	89.9	P/P	37 - 94.0
2438070	Heptachlor Epoxide	107	110	P/P	38 - 118
2438070	Hexachlorobenzene	86.1	84.4	P/P	35 - 97.0
2438070	Kepone	55.7	70.2	P/P	10 - 221
2438070	Lambda-Cyhalothrin	83.2	83.9	P/P	23 - 190
2438070	Methoprene	77.9	68.9	P/P	21 - 109
2438070	Methoxychlor	66.7	78.5	P/P	46 - 118
2438070	MGK-264	114	119	P/P	39 - 122

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P435235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438070	Mirex	71.7	58.6	P/P	25 - 90.0
2438070	Oxychlordane	99.9	110	P/F	42 - 100
2438070	Permethrin	74.9	88.8	P/P	33 - 181
2438070	Phenothrin	90.3	81.9	P/P	12 - 125
2438070	Piperonyl Butoxide	98.7	99.6	P/P	10 - 178
2438070	Prallethrin	82.0	73.2	P/P	24 - 122
2438070	Tau-Fluvalinate	88.8	84.2	P/P	13 - 151
2438070	Tetramethrin	89.9	91.5	P/P	16 - 172
2438070	Trans-Nonachlor	82.3	91.0	P/P	39 - 100
2438070	Triclosan Methyl	85.4	89.5	P/P	43 - 110
2438070	Trifluralin	87.8	85.2	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P435235

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438013	Chlordane	53.7	57.5	P/P	43 - 123
2438013	Toxaphene	80.1	70.5	P/P	27 - 156

Reference Method: EPA 8321B

Batch ID: P435120

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437693	2,4-D	115	85.8	P/P	40 - 150
2437693	2,4,5-T	100	82.3	P/P	40 - 150
2437693	Acetaminophen	64.7	63.5	P/P	30 - 150
2437693	Acetamiprid	61.0	54.8	P/P	40 - 150
2437693	Afidopyropen	63.5	49.3	P/P	30 - 150
2437693	Benzovindiflupyr	81.6	75.0	P/P	40 - 150
2437693	Carbamazepine	61.5	55.4	P/P	40 - 150
2437693	Clothianidin	59.3	55.5	P/P	40 - 150
2437693	Dinotefuran	55.3	53.2	P/P	40 - 150
2437693	Diuron	57.8	51.9	P/P	40 - 150
2437693	Fenuron	40.9	38.4	P/F	40 - 150
2437693	Fluridone	68.3	60.4	P/P	40 - 150
2437693	Hydrocodone	46.7	44.9	P/P	40 - 150
2437693	Ibuprofen	50.1	51.4	P/P	40 - 150
2437693	Imazapyr	70.9	62.7	P/P	40 - 150
2437693	Imidacloprid	102	97.2	P/P	40 - 150
2437693	Linuron	57.1	52.4	P/P	40 - 150
2437693	Mandestrobin	79.4	70.8	P/P	40 - 150
2437693	MCPP	107	94.0	P/P	40 - 150
2437693	Naproxen	47.9	60.5	P/P	40 - 150
2437693	Primidone	58.3	53.1	P/P	40 - 150
2437693	Pyraclostrobin	74.6	68.6	P/P	40 - 150
2437693	Silvex	82.0	69.1	P/P	40 - 150
2437693	Thiamethoxam	63.0	58.4	P/P	40 - 150
2437693	Tolfenpyrad	49.8	45.7	P/P	30 - 150
2437693	Triclopyr	105	93.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P435158

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437647	Acesulfame K	103	102	P/P	40 - 150
2437647	AMPA	106	115	P/P	40 - 150
2437647	Endothall	96.3	96.4	P/P	40 - 150
2437647	Glufosinate	105	91.4	P/P	40 - 150
2437647	Glyphosate	73.4	68.2	P/P	40 - 150
2437647	Sucralose	112	110	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P435589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2438825	Fluoride	100	99.0	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P435499

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437166	Organic Carbon	89.6	90.1	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P435642

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2437905	Organic Carbon	96.8	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P435216

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437986	Color (true)	4.35	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P435198

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437988	Turbidity	2.84	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435236

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437783	Calcium	1.15	Spike	P	0 - 20
2437783	Iron	1.31	Spike	P	0 - 20
2437783	Magnesium	1.07	Spike	P	0 - 20
2437783	Potassium	2.00	Spike	P	0 - 20
2437783	Sodium	1.44	Spike	P	0 - 20
2437783	Strontium	1.21	Spike	P	0 - 20
2437783	Tin	0.829	Spike	P	0 - 20
2437783	Titanium	1.35	Spike	P	0 - 20
2437783	Vanadium	0.988	Spike	P	0 - 20
2437783	Zinc	2.21	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P435452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438052	Calcium	0.376	Spike	P	0 - 20
2438052	Iron	0.918	Spike	P	0 - 20
2438052	Magnesium	0.300	Spike	P	0 - 20
2438052	Potassium	0.00546	Spike	P	0 - 20
2438052	Sodium	2.01	Spike	P	0 - 20
2438052	Strontium	0.154	Spike	P	0 - 20
2438052	Tin	0.378	Spike	P	0 - 20
2438052	Titanium	0.542	Spike	P	0 - 20
2438052	Vanadium	0.781	Spike	P	0 - 20
2438052	Zinc	0.306	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P435236

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437783	Aluminum	2.23	Spike	P	0 - 20
2437783	Antimony	0.729	Spike	P	0 - 20
2437783	Arsenic	0.744	Spike	P	0 - 20
2437783	Barium	1.00	Spike	P	0 - 20
2437783	Beryllium	0.129	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435236

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437783	Boron	0.538	Spike	P	0 - 20
2437783	Cadmium	0.0474	Spike	P	0 - 20
2437783	Chromium	0.867	Spike	P	0 - 20
2437783	Cobalt	0.527	Spike	P	0 - 20
2437783	Copper	0.0384	Spike	P	0 - 20
2437783	Lead	0.458	Spike	P	0 - 20
2437783	Manganese	0.0858	Spike	P	0 - 20
2437783	Molybdenum	1.17	Spike	P	0 - 20
2437783	Nickel	0.149	Spike	P	0 - 20
2437783	Selenium	1.42	Spike	P	0 - 20
2437783	Silver	0.823	Spike	P	0 - 20
2437783	Thallium	1.23	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P435452

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438052	Aluminum	2.03	Spike	P	0 - 20
2438052	Antimony	0.248	Spike	P	0 - 20
2438052	Arsenic	0.225	Spike	P	0 - 20
2438052	Barium	0.175	Spike	P	0 - 20
2438052	Beryllium	1.07	Spike	P	0 - 20
2438052	Boron	0.0750	Spike	P	0 - 20
2438052	Cadmium	0.742	Spike	P	0 - 20
2438052	Chromium	0.790	Spike	P	0 - 20
2438052	Cobalt	1.68	Spike	P	0 - 20
2438052	Copper	0.430	Spike	P	0 - 20
2438052	Lead	1.28	Spike	P	0 - 20
2438052	Manganese	0.119	Spike	P	0 - 20
2438052	Molybdenum	0.440	Spike	P	0 - 20
2438052	Nickel	0.776	Spike	P	0 - 20
2438052	Selenium	0.927	Spike	P	0 - 20
2438052	Silver	0.894	Spike	P	0 - 20
2438052	Thallium	0.422	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P435622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437992	Chloride	0.360	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P435625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437992	Sulfate	0.920	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435834

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439916	Chloride	0.00286	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P435837

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2439916	Sulfate	0.503	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437849	Ammonia-N	2.10	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P435418

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437991	Ammonia-N	0.944	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435713

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437927	Kjeldahl Nitrogen	0.853	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P435898

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438166	Kjeldahl Nitrogen	0.272	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435968

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437642	NO2NO3-N	1.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P435970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437995	NO2NO3-N	1.04	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P435245

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437927	Total-P	0.259	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P435312

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437995	Total-P	0.201	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P435235

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438013	PCB-1016	5.86	Spike	P	0 - 25
2438013	PCB-1260	13.5	Spike	P	0 - 30
2438070	Aldrin	13.1	Spike	P	0 - 41
2438070	Alpha-BHC	6.56	Spike	P	0 - 25
2438070	Alpha-Chlordane	10.8	Spike	P	0 - 32
2438070	Beta-BHC	11.9	Spike	P	0 - 33
2438070	Beta-Cyfluthrin	4.20	Spike	P	0 - 43
2438070	Bifenthrin	7.05	Spike	P	0 - 52
2438070	Carbophenothion	6.60	Spike	P	0 - 30
2438070	Chlorothalonil	4.85	Spike	P	0 - 82
2438070	Cis-Nonachlor	9.30	Spike	P	0 - 33
2438070	Cypermethrin	24.1	Spike	P	0 - 51
2438070	Dacthal	22.0	Spike	P	0 - 27
2438070	DDD-p,p'	7.63	Spike	P	0 - 39
2438070	DDE-p,p'	1.69	Spike	P	0 - 31
2438070	DDT-p,p'	1.07	Spike	P	0 - 29
2438070	Delta-BHC	20.7	Spike	P	0 - 35
2438070	Deltamethrin	6.21	Spike	P	0 - 100
2438070	Dichlobenil	0.839	Spike	P	0 - 40
2438070	Dicofol	8.94	Spike	P	0 - 37
2438070	Dieldrin	8.33	Spike	P	0 - 27
2438070	Endosulfan I	12.1	Spike	P	0 - 23
2438070	Endosulfan II	17.1	Spike	P	0 - 34
2438070	Endosulfan Sulfate	18.8	Spike	P	0 - 36
2438070	Endrin	5.60	Spike	P	0 - 45
2438070	Endrin Aldehyde	1.82	Spike	P	0 - 76
2438070	Endrin Ketone	25.3	Spike	P	0 - 43
2438070	Esfenvalerate	2.91	Spike	P	0 - 51
2438070	Ethalfuralin	1.06	Spike	P	0 - 22
2438070	Fenpropathrin	1.97	Spike	P	0 - 49
2438070	Gamma-BHC	0.718	Spike	P	0 - 28
2438070	Gamma-Chlordane	1.69	Spike	P	0 - 40
2438070	Heptachlor	1.22	Spike	P	0 - 29
2438070	Heptachlor Epoxide	2.31	Spike	P	0 - 33
2438070	Hexachlorobenzene	2.02	Spike	P	0 - 36
2438070	Kepone	23.0	Spike	P	0 - 85
2438070	Lambda-Cyhalothrin	0.744	Spike	P	0 - 55

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P435235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438070	Methoprene	12.3	Spike	P	0 - 53
2438070	Methoxychlor	16.2	Spike	P	0 - 50
2438070	MGK-264	4.03	Spike	P	0 - 43
2438070	Mirex	20.2	Spike	P	0 - 40
2438070	Oxychlordane	9.43	Spike	P	0 - 31
2438070	Permethrin	17.0	Spike	P	0 - 50
2438070	Phenothrin	9.70	Spike	P	0 - 58
2438070	Piperonyl Butoxide	0.840	Spike	P	0 - 100
2438070	Prallethrin	11.2	Spike	P	0 - 39
2438070	Tau-Fluvalinate	5.35	Spike	P	0 - 54
2438070	Tetramethrin	1.69	Spike	P	0 - 51
2438070	Trans-Nonachlor	9.97	Spike	P	0 - 39
2438070	Triclosan Methyl	4.68	Spike	P	0 - 31
2438070	Trifluralin	2.92	Spike	P	0 - 22

Reference Method: EPA 8276

Batch ID: P435235

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438013	Chlordane	6.71	Spike	P	0 - 28
2438013	Toxaphene	12.8	Spike	P	0 - 27

Reference Method: EPA 8321B

Batch ID: P435120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437693	2,4-D	20.7	Spike	P	0 - 30
2437693	2,4,5-T	19.9	Spike	P	0 - 30
2437693	Acetaminophen	1.83	Spike	P	0 - 30
2437693	Acetamiprid	10.7	Spike	P	0 - 30
2437693	Afidopyropen	25.3	Spike	P	0 - 30
2437693	Bentazon	10.5	Spike	P	0 - 30
2437693	Benzovindiflupyr	8.39	Spike	P	0 - 30
2437693	Carbamazepine	9.41	Spike	P	0 - 30
2437693	Clothianidin	6.75	Spike	P	0 - 30
2437693	Dinotefuran	3.84	Spike	P	0 - 30
2437693	Diuron	10.7	Spike	P	0 - 30
2437693	Fenuron	6.44	Spike	P	0 - 30
2437693	Fluridone	10.3	Spike	P	0 - 30
2437693	Hydrocodone	3.80	Spike	P	0 - 30
2437693	Ibuprofen	2.51	Spike	P	0 - 30
2437693	Imazapyr	8.01	Spike	P	0 - 30
2437693	Imidacloprid	4.77	Spike	P	0 - 30
2437693	Linuron	8.65	Spike	P	0 - 30
2437693	Mandestrobin	11.3	Spike	P	0 - 30
2437693	MCP	12.7	Spike	P	0 - 30
2437693	Naproxen	23.3	Spike	P	0 - 30
2437693	Primidone	8.47	Spike	P	0 - 30
2437693	Pyraclostrobin	8.28	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P435120

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437693	Silvex	17.0	Spike	P	0 - 30
2437693	Thiamethoxam	7.63	Spike	P	0 - 30
2437693	Tolfenpyrad	8.56	Spike	P	0 - 30
2437693	Triclopyr	11.3	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P435158

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437647	Acesulfame K	0.615	Spike	P	0 - 30
2437647	AMPA	8.48	Spike	P	0 - 30
2437647	Endothall	0.122	Spike	P	0 - 30
2437647	Glufosinate	13.7	Spike	P	0 - 30
2437647	Glyphosate	7.29	Spike	P	0 - 30
2437647	Sucralose	1.73	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P435435

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437957	Total Alkalinity	0.921	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P435727

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437759	TDS	4.35	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P436127

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2440330	TDS	7.16	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P435589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2438825	Fluoride	0.990	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P435499

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437166	Organic Carbon	0.452	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2011
Batch ID: P435642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2437905	Organic Carbon	3.30	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2438041

Field Sample ID: G1SW0095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	85.1	P	37 - 129
EPA 8270E	Decachlorobiphenyl	86.8	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	66.5	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	73.8	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	86.2	P	28 - 102
EPA 8276	PCNB	99.7	P	49 - 115

Lab Sample ID: 2438043

Field Sample ID: G5SW0134

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	88.4	P	37 - 129
EPA 8270E	Decachlorobiphenyl	65.9	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	71.6	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	71.5	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	77.3	P	28 - 102
EPA 8276	PCNB	109	P	49 - 115

Lab Sample ID: 2438048

Field Sample ID: G1SW0095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.8	P	30 - 160
EPA 8321B	Diuron-d6	44.0	P	30 - 160
EPA 8321B	Endothall-d6	88.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	124	P	30 - 160
EPA 8321B	Ibuprofen-d3	46.5	P	30 - 160
EPA 8321B	Primidone-d5	60.6	P	30 - 160
EPA 8321B	Sucralose-d6	75.5	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A121627

Included Lab Sample IDs: 2438024, 2438026

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: A121632

Included Lab Sample IDs: 2438024, 2438026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.9	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121665

Included Lab Sample IDs: 2438048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	112	104	P/P	60 - 160
Sucralose	107	119	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A121666

Included Lab Sample IDs: 2438048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	104	118	P/P	60 - 160
Endothall	95.5	95.8	P/P	60 - 160
Glufosinate	95.2	95.5	P/P	60 - 160
Glyphosate	95.6	105	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121703

Included Lab Sample IDs: 2438054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	104	P/P	90 - 110
Iron	104	106	P/P	90 - 110
Magnesium	104	105	P/P	90 - 110
Potassium	102	104	P/P	90 - 110
Sodium	101	104	P/P	90 - 110
Strontium	99.2	101	P/P	90 - 110
Titanium	102	101	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Zinc	103	104	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121706

Included Lab Sample IDs: 2438054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.2	101	P/P	90 - 110
Antimony	96.4	94.6	P/P	90 - 110
Arsenic	97.5	99.9	P/P	90 - 110
Barium	99.8	99.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121706

Included Lab Sample IDs: 2438054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	97.8	97.4	P/P	90 - 110
Cadmium	102	100	P/P	90 - 110
Chromium	103	96.7	P/P	90 - 110
Cobalt	95.7	97.4	P/P	90 - 110
Copper	94.2	97.4	P/P	90 - 110
Lead	94.4	94.1	P/P	90 - 110
Manganese	103	98.4	P/P	90 - 110
Molybdenum	97.4	97.8	P/P	90 - 110
Nickel	94.6	96.3	P/P	90 - 110
Selenium	100	99.3	P/P	90 - 110
Silver	99.8	99.0	P/P	90 - 110
Thallium	98.3	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121717

Included Lab Sample IDs: 2438028

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121721

Included Lab Sample IDs: 2438054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tin	103	102	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A121723

Included Lab Sample IDs: 2438025

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121734

Included Lab Sample IDs: 2438025, 2438028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.1	P/P	90 - 110
Ammonia-N	99.1	99.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121737

Included Lab Sample IDs: 2438054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Boron	94.1	92.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A121739

Included Lab Sample IDs: 2438024, 2438026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.0	96.6	P/P	90 - 110
Total Alkalinity	96.6	93.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A121742

Included Lab Sample IDs: 2438041, 2438043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	99.1		P	80 - 120
PCB-1260	98.3		P	80 - 120

Reference Method: EPA 8321B

Run ID: A121760

Included Lab Sample IDs: 2438048

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	73.9	66.4	P/P	50 - 150
2,4,5-T	86.7	84.2	P/P	50 - 150
Acetaminophen	107	105	P/P	60 - 160
Acetamiprid	107	106	P/P	50 - 150
Afidopyropen	103	103	P/P	50 - 150
Bentazon	91.7	90.1	P/P	50 - 160
Benzovindiflupyr	108	105	P/P	50 - 150
Carbamazepine	103	104	P/P	60 - 150
Clothianidin	101	103	P/P	60 - 150
Dinotefuran	109	106	P/P	50 - 150
Diuron	114	110	P/P	60 - 160
Fenuron	105	105	P/P	60 - 150
Fluridone	113	111	P/P	60 - 160
Hydrocodone	111	106	P/P	60 - 150
Ibuprofen	83.9	70.4	P/P	50 - 160
Imazapyr	83.2	77.2	P/P	50 - 150
Imidacloprid	95.7	94.8	P/P	60 - 150
Linuron	103	93.4	P/P	60 - 150
Mandestrobin	116	108	P/P	50 - 150
MCPP	75.5	76.6	P/P	50 - 150
Naproxen	83.9	82.2	P/P	50 - 160
Primidone	98.5	89.5	P/P	60 - 150
Pyraclostrobin	107	108	P/P	60 - 150
Silvex	72.9	76.1	P/P	50 - 150
Thiamethoxam	114	127	P/P	50 - 150
Tolfenpyrad	105	104	P/P	60 - 150
Triclopyr	74.4	73.4	P/P	50 - 150

Reference Method: SM 5310 B-2011

Run ID: A121761

Included Lab Sample IDs: 2438025

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.4	99.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8276

Run ID: A121770

Included Lab Sample IDs: 2438041, 2438043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	98.1		P	80 - 120
Chlordane	98.6		P	80 - 120
Toxaphene	87.7		P	80 - 120
Toxaphene	96.1		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121771

Included Lab Sample IDs: 2438024, 2438026

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.5	100	P/P	90 - 110
Chloride	98.6	98.9	P/P	90 - 110
Sulfate	100	101	P/P	90 - 110
Sulfate	99.1	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121779

Included Lab Sample IDs: 2438052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	101	P/P	90 - 110
Antimony	94.9	96.4	P/P	90 - 110
Arsenic	99.6	101	P/P	90 - 110
Barium	99.4	100	P/P	90 - 110
Beryllium	98.2	100	P/P	90 - 110
Boron	102	100	P/P	90 - 110
Cadmium	99.5	101	P/P	90 - 110
Chromium	100	99.4	P/P	90 - 110
Cobalt	101	100	P/P	90 - 110
Lead	93.4	93.3	P/P	90 - 110
Manganese	99.0	99.7	P/P	90 - 110
Molybdenum	97.9	98.6	P/P	90 - 110
Nickel	99.7	99.3	P/P	90 - 110
Selenium	98.7	99.2	P/P	90 - 110
Silver	99.4	99.7	P/P	90 - 110
Thallium	96.1	95.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121785

Included Lab Sample IDs: 2438052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	98.9	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	100	101	P/P	90 - 110
Potassium	98.2	100	P/P	90 - 110
Sodium	101	103	P/P	90 - 110
Strontium	98.7	101	P/P	90 - 110
Tin	99.0	99.3	P/P	90 - 110
Titanium	100	100	P/P	90 - 110
Vanadium	99.6	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121785

Included Lab Sample IDs: 2438052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	102	104	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121790

Included Lab Sample IDs: 2438024, 2438026

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

Reference Method: SM 5310 B-2011

Run ID: A121814

Included Lab Sample IDs: 2438028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.3	96.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121840

Included Lab Sample IDs: 2438052

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	99.2	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121873

Included Lab Sample IDs: 2438025

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

Reference Method: EPA 8270E

Run ID: A121875

Included Lab Sample IDs: 2438041, 2438043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	89.6		P	80 - 120
Alpha-BHC	100		P	80 - 120
Alpha-Chlordane	107		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	104		P	80 - 120
Bifenthrin	85.6		P	80 - 120
Carbophenothion	115		P	80 - 120
Chlorothalonil	103		P	80 - 120
Cis-Nonachlor	104		P	80 - 120
Cypermethrin	106		P	80 - 120
Dacthal	102		P	80 - 120
DDD-p,p'	113		P	80 - 120
DDE-p,p'	85.0		P	80 - 120
DDT-p,p'	102		P	80 - 120
Delta-BHC	101		P	80 - 120
Deltamethrin	92.4		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A121875

Included Lab Sample IDs: 2438041, 2438043

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dichlobenil	112		P	80 - 120
Dicofol	103		P	80 - 120
Dieldrin	111		P	80 - 120
Endosulfan I	102		P	80 - 120
Endosulfan II	102		P	80 - 120
Endosulfan Sulfate	94.8		P	80 - 120
Endrin	116		P	80 - 120
Endrin Aldehyde	94.2		P	80 - 120
Endrin Ketone	88.3		P	80 - 120
Esfenvalerate	95.3		P	80 - 120
Ethalfuralin	102		P	80 - 120
Fenpropathrin	86.2		P	80 - 120
Gamma-BHC	110		P	80 - 120
Gamma-Chlordane	113		P	80 - 120
Heptachlor	109		P	80 - 120
Heptachlor Epoxide	107		P	80 - 120
Hexachlorobenzene	99.3		P	80 - 120
Kepone	42.5*		F	80 - 120
Lambda-Cyhalothrin	80.1		P	80 - 120
Methoprene	86.6		P	80 - 120
Methoxychlor	110		P	80 - 120
MGK-264	104		P	80 - 120
Mirex	103		P	80 - 120
Oxychlordane	101		P	80 - 120
Permethrin	106		P	80 - 120
Phenothrin	101		P	80 - 120
Piperonyl Butoxide	80.2		P	80 - 120
Prallethrin	80.8		P	80 - 120
Tau-Fluvalinate	99.9		P	80 - 120
Tetramethrin	106		P	80 - 120
Trans-Nonachlor	90.1		P	80 - 120
Triclosan Methyl	107		P	80 - 120
Trifluralin	98.2		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121945

Included Lab Sample IDs: 2438028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.0	90.3	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121950

Included Lab Sample IDs: 2438025, 2438028

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.0	98.0	P/P	90 - 110
NO2NO3-N	99.0	98.0	P/P	90 - 110

Quality Assurance Report

Calibration Verification

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

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

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	99.8					4.35	
EPA 180.1 Rev. 2.0	Turbidity	105					2.84	
EPA 200.7 Rev. 4.4	Calcium	103	105	104				1.15
	Calcium	102						0.376
	Iron	105	106	108	107			1.31
	Iron	103	100	101				0.918
	Magnesium	105	106	108	104			1.07
	Magnesium	103						0.300
	Potassium	103	101	103	102			2.00
	Potassium	100						0.0054
	Sodium	104	104	106	102			1.44
	Sodium	102						2.01
	Strontium	97.9	97.9	99.2	99.3			1.21
	Strontium	99.8	96.9	97.2				0.154
	Tin	97.9	100	101	98.2			0.829
	Tin	99.2	83.7	84.0				0.378
	Titanium	101	102	103	101			1.35
	Titanium	101	96.4	95.8				0.542
	Vanadium	100	102	103	102			0.988
	Vanadium	101	103	104				0.781
	Zinc	100	98.4	101	102			2.21
	Zinc	101	98.7	99.0				0.306
EPA 200.8 Rev. 5.4	Aluminum	99.8	96.5	98.7	99.6			2.23
	Aluminum	98.9	106	104				2.03
	Antimony	97.7	99.7	100	99.1			0.729
	Antimony	98.2	103	103				0.248
	Arsenic	101	101	100	97.2			0.744
	Arsenic	101	109	108				0.225
	Barium	102	103	105	103			1.00
	Barium	102	104	105				0.175
	Beryllium	93.1	96.8	96.9	92.8			0.129
	Beryllium	91.6	104	105				1.07
	Boron	100	101	101	104			0.538
	Boron	108						0.0750
	Cadmium	101	101	101	101			0.0474
	Cadmium	100	99.1	98.3				0.742
	Chromium	97.8	98.3	99.2	100			0.867
	Chromium	100	89.1	89.8				0.790
	Cobalt	99.5	97.2	96.7	94.9			0.527
	Cobalt	102	100	98.6				1.68
	Copper	99.9	95.2	95.2	96.3			0.0384
	Copper	98.9	99.9	100				0.430
	Lead	95.7	95.6	96.1	96.6			0.458
	Lead	96.7	99.9	98.7				1.28
	Manganese	98.1	98.8	98.8	100			0.0858
	Manganese	101	88.0	88.2				0.119
	Molybdenum	98.6	102	103	99.9			1.17
	Molybdenum	98.3	108	108				0.440
	Nickel	99.6	94.9	95.1	93.2			0.149
	Nickel	99.9	96.8	96.1				0.776
	Selenium	101	99.8	101	99.6			1.42
	Selenium	99.9	104	104				0.927
	Silver	110	110	111	110			0.823
	Silver	111	104	103				0.894

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
EPA 200.8 Rev. 5.4	Thallium	102	103	104	104		1.23
	Thallium	102	102	102			0.422
EPA 300.0 Rev. 2.1	Chloride	101	103	100		0.360	
	Chloride	102	105			0.0028	
	Sulfate	102	104	100		0.920	
	Sulfate	104	103	102		0.503	
EPA 350.1 Rev. 2.0	Ammonia-N	98.0	96.4	100			2.10
	Ammonia-N	97.4	97.6	99.4			0.944
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	101	99.9			0.853
	Kjeldahl Nitrogen	94.0	98.4	98.1			0.272
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	99.5	98.5			1.01
	NO2NO3-N	98.5	102	100			1.04
EPA 365.1 Rev. 2.0	Total-P	100	100	101			0.259
	Total-P	105	107	108			0.201
EPA 8270E	Aldrin	53.9	68.5	60.1			13.1
	Alpha-BHC	86.7	91.8	86.0			6.56
	Alpha-Chlordane	89.2	96.1	107			10.8
	Beta-BHC	89.7	113	127			11.9
	Beta-Cyfluthrin	51.7	86.0	82.5			4.20
	Bifenthrin	43.4	74.3	79.7			7.05
	Carbophenothion	73.0	79.1	84.5			6.60
	Chlorothalonil	40.9	173	165			4.85
	Cis-Nonachlor	65.2	78.6	71.7			9.30
	Cypermethrin	65.2	83.6	106			24.1
	Dacthal	84.0	91.4	73.3			22.0
	DDD-p,p'	89.3	86.6	80.2			7.63
	DDE-p,p'	79.3	80.7	82.0			1.69
	DDT-p,p'	106	178	177			1.07
	Delta-BHC	80.3	124	152			20.7
	Deltamethrin	35.0	85.4	90.9			6.21
	Dichlobenil	76.2	57.6	57.1			0.839
	Dicofol	79.1	91.2	99.8			8.94
	Dieldrin	96.3	74.1	80.5			8.33
	Endosulfan I	83.9	102	115			12.1
	Endosulfan II	73.4	74.9	63.1			17.1
	Endosulfan Sulfate	79.8	63.7	76.9			18.8
	Endrin	94.7	83.9	79.4			5.60
	Endrin Aldehyde	89.5	51.9	52.8			1.82
	Endrin Ketone	72.4	73.1	94.3			25.3
	Esfenvalerate	47.8	88.5	85.9			2.91
	Ethalfuralin	68.3	83.4	82.5			1.06
	Fenpropathrin	55.3	80.1	81.7			1.97
	Gamma-BHC	86.7	100	99.7			0.718
	Gamma-Chlordane	81.3	103	102			1.69
	Heptachlor	74.1	88.8	89.9			1.22
	Heptachlor Epoxide	81.7	107	110			2.31
	Hexachlorobenzene	77.8	86.1	84.4			2.02
	Kepone	62.5	55.7	70.2			23.0
	Lambda-Cyhalothrin	40.9	83.2	83.9			0.744
	Methoprene	39.8	77.9	68.9			12.3
	Methoxychlor	87.0	66.7	78.5			16.2
	MGK-264	92.4	114	119			4.03
	Mirex	56.4	71.7	58.6			20.2
	Oxychlordane	82.4	99.9	110			9.43

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	PCB-1016	79.8	62.8	66.6			5.86
	PCB-1260	79.6	54.5	62.3			13.5
	Permethrin	76.2	74.9	88.8			17.0
	Phenothrin	35.1	90.3	81.9			9.70
	Piperonyl Butoxide	88.2	98.7	99.6			0.840
	Prallethrin	56.0	82.0	73.2			11.2
	Tau-Fluvalinate	41.8	88.8	84.2			5.35
	Tetramethrin	85.3	89.9	91.5			1.69
	Trans-Nonachlor	66.2	82.3	91.0			9.97
	Triclosan Methyl	94.9	85.4	89.5			4.68
	Trifluralin	72.5	87.8	85.2			2.92
	Chlordane	78.5	53.7	57.5			6.71
EPA 8276	Toxaphene	89.2	80.1	70.5			12.8
EPA 8321B	2,4-D	65.2	115	85.8			20.7
	2,4,5-T	63.9	100	82.3			19.9
	Acesulfame K	97.3	103	102			0.615
	Acetaminophen	80.9	64.7	63.5			1.83
	Acetamiprid	80.8	61.0	54.8			10.7
	Afidopyropen	60.9	63.5	49.3			25.3
	AMPA	121	106	115			8.48
	Bentazon	59.3					10.5
	Benzovindiflupyr	83.8	81.6	75.0			8.39
	Carbamazepine	73.6	61.5	55.4			9.41
	Clothianidin	79.3	59.3	55.5			6.75
	Dinotefuran	90.0	55.3	53.2			3.84
	Diuron	74.9	57.8	51.9			10.7
	Endothall	96.0	96.3	96.4			0.122
	Fenuron	85.2	40.9	38.4			6.44
	Fluridone	84.2	68.3	60.4			10.3
	Glufosinate	96.8	105	91.4			13.7
	Glyphosate	89.6	73.4	68.2			7.29
	Hydrocodone	79.8	46.7	44.9			3.80
	Ibuprofen	49.1	50.1	51.4			2.51
	Imazapyr	64.3	70.9	62.7			8.01
	Imidacloprid	79.7	102	97.2			4.77
	Linuron	60.1	57.1	52.4			8.65
	Mandestrobin	83.5	79.4	70.8			11.3
	MCPP	78.7	107	94.0			12.7
	Naproxen	52.9	47.9	60.5			23.3
	Primidone	74.1	58.3	53.1			8.47
	Pyraclostrobin	72.1	74.6	68.6			8.28
	Silvex	65.0	82.0	69.1			17.0
	Sucralose	95.2	112	110			1.73
	Thiamethoxam	81.8	63.0	58.4			7.63
	Tolfenpyrad	48.2	49.8	45.7			8.56
	Triclopyr	67.9	105	93.8			11.3
SM 2320 B-2011	Total Alkalinity	95.6				0.921	
SM 2540 C-2015	TDS	104				4.35	
	TDS	94.0				7.16	
SM 2540 D-2015	TSS	95.3					
	TSS	93.1					
SM 4500-F- C-2011	Fluoride	100	100	99.0			0.990
SM 5310 B-2011	Organic Carbon	98.2	89.6	90.1			0.452
	Organic Carbon	96.2	96.8	100			3.30

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2438024, 2438026
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2438024, 2438026
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2438052, 2438054
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2438052, 2438054
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2438024, 2438026
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2438024, 2438026
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2438025, 2438028
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2438025, 2438028
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2438025, 2438028
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2438025, 2438028
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2438041, 2438043
EPA 8270E	PCBs in water matrices by GC/MS/MS	2438041, 2438043
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2438041, 2438043
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2438048
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2438024, 2438026
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2438052, 2438054
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2438024, 2438026
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2438024, 2438026
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2438024, 2438026
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2438025, 2438028

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	09/19/2023			09/19/2023 17:23	Alexis Price	2438024
	09/19/2023			09/19/2023 17:24	Alexis Price	2438026
EPA 180.1 Rev. 2.0	09/19/2023			09/19/2023 13:10	Chandler E Cox	2438024
	09/19/2023			09/19/2023 13:11	Chandler E Cox	2438026
EPA 200.7 Rev. 4.4	09/19/2023	09/20/2023 11:55	George D Taylor	09/21/2023 16:18	Samatha Luckman	2438054
	09/19/2023	09/20/2023 11:55	George D Taylor	09/21/2023 16:28	Samatha Luckman	2438054
	09/19/2023	09/20/2023 11:55	George D Taylor	09/22/2023 12:41	Samatha Luckman	2438054
	09/19/2023	09/25/2023 12:40	George D Taylor	09/26/2023 17:01	Samatha Luckman	2438052
EPA 200.8 Rev. 5.4	09/19/2023	09/25/2023 12:40	George D Taylor	09/26/2023 18:08	Samatha Luckman	2438052
	09/19/2023	09/20/2023 11:55	George D Taylor	09/21/2023 21:35	Emily M Philpot	2438054
	09/19/2023	09/20/2023 11:55	George D Taylor	09/22/2023 18:44	Emily M Philpot	2438054
	09/19/2023	09/25/2023 12:40	George D Taylor	09/26/2023 20:59	Emily M Philpot	2438052
	09/19/2023	09/25/2023 12:40	George D Taylor	09/28/2023 22:11	Emily M Philpot	2438052
EPA 300.0 Rev. 2.1	09/19/2023			09/26/2023 18:27	James L Waggeberby	2438026
	09/19/2023			09/28/2023 15:05	James L Waggeberby	2438024
EPA 350.1 Rev. 2.0	09/19/2023			09/22/2023 14:11	Khloe J Berg	2438028
	09/19/2023			09/22/2023 14:42	Khloe J Berg	2438025
EPA 351.2 Rev. 2.0	09/19/2023	09/29/2023 10:15	Samantha L Bates	10/02/2023 12:02	Samantha L Bates	2438025
	09/19/2023	10/03/2023 17:00	Simonne.V. Calhoun	10/04/2023 11:01	Ping Hua	2438028
EPA 353.2 Rev. 2.0	09/19/2023			10/04/2023 13:54	Fadila Guebre	2438025
	09/19/2023			10/04/2023 14:35	Fadila Guebre	2438028
EPA 365.1 Rev. 2.0	09/19/2023	09/20/2023 15:00	Alexis Price	09/22/2023 13:08	James L Waggeberby	2438025
	09/19/2023	09/21/2023 14:48	Adam P Silver	09/22/2023 11:09	James L Waggeberby	2438028
EPA 8270E	09/19/2023	09/21/2023 08:30	Rasheda Ghaffari	09/22/2023 23:25	Lipi Saha	2438041
	09/19/2023	09/21/2023 08:30	Rasheda Ghaffari	09/22/2023 23:55	Lipi Saha	2438043
	09/19/2023	09/21/2023 08:30	Rasheda Ghaffari	09/27/2023 01:19	Julie Wi	2438041
	09/19/2023	09/21/2023 08:30	Rasheda Ghaffari	09/27/2023 01:52	Julie Wi	2438043
EPA 8276	09/19/2023	09/21/2023 08:30	Rasheda Ghaffari	09/26/2023 08:29	Arthur Maknenko	2438041
	09/19/2023	09/21/2023 08:30	Rasheda Ghaffari	09/26/2023 10:20	Arthur Maknenko	2438043
EPA 8321B	09/19/2023	09/20/2023 08:30	Tae K Lee	09/20/2023 13:09	Hana Lee	2438048
	09/19/2023	09/20/2023 08:30	Tae K Lee	09/20/2023 14:41	Hana Lee	2438048
	09/19/2023	09/20/2023 08:30	Tae K Lee	09/20/2023 21:42	Hana Lee	2438048
	09/19/2023	09/20/2023 14:00	Hoor Shaik	09/23/2023 00:00	Juyoung Kim	2438048
	09/19/2023	09/20/2023 14:00	Hoor Shaik	09/25/2023 12:12	Juyoung Kim	2438048
SM 2320 B-2011	09/19/2023			09/22/2023 17:42	Dale L. Simmons	2438026
	09/19/2023			09/22/2023 19:37	Dale L. Simmons	2438024
SM 2340 B-2011	09/19/2023			09/21/2023 16:28	Samatha Luckman	2438054
	09/19/2023			09/26/2023 18:08	Samatha Luckman	2438052
SM 2540 C-2015	09/19/2023			09/21/2023 16:01	Yijie Li	2438026
	09/19/2023			09/27/2023 15:41	Yijie Li	2438024

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2015	09/19/2023			09/21/2023 16:01	Yijie Li	2438024, 2438026
SM 4500-F- C-2011	09/19/2023			09/27/2023 06:19	Adam P Silver	2438026
	09/19/2023			09/27/2023 06:24	Adam P Silver	2438024
SM 5310 B-2011	09/19/2023			09/26/2023 04:21	Elise M. Gillis	2438025
	09/19/2023			09/27/2023 23:41	Khloe J Berg	2438028