

Chemical Analysis Report

SE-DIST-2023-11-21-03

Florida DEP Laboratory
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DOH Accreditation E31780

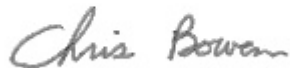
Event Description: **Highlands Run**
Request ID: **RQ-2023-11-06-53**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 19-DEC-2023 09:28



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: Indian Prairie Canal upstream of SR 70

Collection Date/Time: 11/20/2023 09:50

Field ID: G4SE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452534	EPA 8270E	Aldrin	0.67	U	ng/L	P438263	
		Alpha-BHC	0.10	U	ng/L	P438263	
		Alpha-Chlordane	0.21	UJ	ng/L	P438263	LCS
		PCB-1016	2.1	U	ng/L	P438263	
		Beta-BHC	0.10	U	ng/L	P438263	MS
		PCB-1221	2.1	U	ng/L	P438263	
		Beta-Cyfluthrin	1.3	U	ng/L	P438263	
		PCB-1232	2.1	U	ng/L	P438263	
		Bifenthrin	0.52	U	ng/L	P438263	
		PCB-1242	2.1	U	ng/L	P438263	
		PCB-1248	2.1	U	ng/L	P438263	
		Chlorothalonil	3.7	U	ng/L	P438263	
		PCB-1254	2.1	U	ng/L	P438263	
		Cis-Nonachlor	0.21	U	ng/L	P438263	RPD
		PCB-1260	2.1	U	ng/L	P438263	
		Cypermethrin	1.5	U	ng/L	P438263	
		Dacthal	0.15	U	ng/L	P438263	MS, RPD
		DDD-p,p'	0.26	U	ng/L	P438263	
		DDE-p,p'	0.21	U	ng/L	P438263	
		DDT-p,p'	0.82	U	ng/L	P438263	
		Delta-BHC	0.41	U	ng/L	P438263	
		Deltamethrin	1.3	U	ng/L	P438263	
		Dichlobenil	0.26	U	ng/L	P438263	
		Dicofol	1.3	U	ng/L	P438263	
		Dieldrin	0.41	I	ng/L	P438263	
		Endosulfan I	0.41	U	ng/L	P438263	RPD
		Endosulfan II	0.93	U	ng/L	P438263	
		Endosulfan Sulfate	0.31	U	ng/L	P438263	
		Endrin	0.93	U	ng/L	P438263	
		Endrin Aldehyde	0.77	U	ng/L	P438263	
		Endrin Ketone	0.41	UJ	ng/L	P438263	CCV, LCS, MS
		Esfenvalerate	0.77	U	ng/L	P438263	
		Ethalfuralin	0.15	UJ	ng/L	P438263	LCS
		Fenpropathrin	0.26	U	ng/L	P438263	
		Gamma-BHC	0.13	U	ng/L	P438263	
		Gamma-Chlordane	0.21	U	ng/L	P438263	
		Heptachlor	0.21	UJ	ng/L	P438263	CCV
		Heptachlor Epoxide	0.26	U	ng/L	P438263	
		Hexachlorobenzene**	1.0	U	ng/L	P438263	
		Kepone	14	U	ng/L	P438263	
		Lambda-Cyhalothrin	0.77	U	ng/L	P438263	
		Methoprene	0.77	UJ	ng/L	P438263	CCV
		Methoxychlor	0.31	U	ng/L	P438263	

Field ID: G4SE0152

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452534	EPA 8270E	MGK-264	0.21	U	ng/L	P438263	CCV
		Mirex	0.36	U	ng/L	P438263	
		Oxychlordane	0.31	UJ	ng/L	P438263	
		Permethrin	1.6	U	ng/L	P438263	
		Phenothrin	0.93	U	ng/L	P438263	
		Piperonyl Butoxide	0.40	I	ng/L	P438263	
		Prallethrin	2.1	U	ng/L	P438263	
		Tau-Fluvalinate	0.26	U	ng/L	P438263	
		Tetramethrin	0.77	U	ng/L	P438263	
		Trans-Nonachlor	0.21	U	ng/L	P438263	
		Triclosan Methyl	0.15	U	ng/L	P438263	
		Trifluralin	0.21	U	ng/L	P438263	
		Chlordane	2.1	U	ng/L	P438263	
		Toxaphene	15	U	ng/L	P438263	
2452550	EPA 200.7 Rev. 4.4	Calcium	12.3		mg/L	P438174	
		Iron	670		ug/L	P438174	
		Magnesium	6.00		mg/L	P438174	
		Potassium	5.9		mg/L	P438174	
		Sodium	13.7		mg/L	P438174	
		Strontium	389		ug/L	P438174	
		Tin	3.0	U	ug/L	P438174	
		Titanium	0.75	U	ug/L	P438174	
		Vanadium	2.0	U	ug/L	P438174	
		Zinc	22		ug/L	P438174	
	EPA 200.8 Rev. 5.4	Aluminum	70		ug/L	P438174	
		Antimony	0.055	I	ug/L	P438174	
		Arsenic	0.64		ug/L	P438174	
		Barium	15.9		ug/L	P438174	
		Beryllium	0.011	I	ug/L	P438174	
		Boron	32.9		ug/L	P438174	
		Cadmium	0.020	U	ug/L	P438174	
		Chromium	0.40	U	ug/L	P438174	
		Cobalt	0.124		ug/L	P438174	
		Copper	0.40	U	ug/L	P438174	
		Lead	0.20	U	ug/L	P438174	
		Manganese	17.8		ug/L	P438174	
		Molybdenum	0.15	U	ug/L	P438174	
		Nickel	0.50	U	ug/L	P438174	
		Selenium	0.20	U	ug/L	P438174	
		Silver	0.010	U	ug/L	P438174	
		Thallium	0.10	U	ug/L	P438174	
	SM 2340 B-2011	Hardness	55.4		mg/L	P438174	

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

Sample Location: Jackson Creek at SR66

Collection Date/Time: 11/20/2023 10:40

Field ID: G4SE0187

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452491	DEP SOP: NU-094-1	Color (true)	91		PCU	P438137	
	EPA 180.1 Rev. 2.0	Turbidity	1.6		NTU	P438141	
	EPA 300.0 Rev. 2.1	Chloride	11		mg Cl/L	P438358	
		Sulfate	15		mg SO4/L	P438361	
	SM 2320 B-2011	Total Alkalinity	4.3		mg CaCO3/L	P438221	
	SM 2540 C-2015	TDS	80		mg/L	P438381	
	SM 2540 D-2015	TSS	2	I	mg/L	P438371	
	SM 4500-F- C-2011	Fluoride	0.030	I	mg F/L	P438334	
2452493	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P438503	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P438274	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.65		mg N/L	P438306	
	EPA 365.1 Rev. 2.0	Total-P	0.036		mg P/L	P438210	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P438187	

Ref. Method and Comment:

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

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

Sample Location: Arbuckle Creek at US Hwy 98

Collection Date/Time: 11/20/2023 11:11

Field ID: G4SE0150

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452492	DEP SOP: NU-094-1	Color (true)	190		PCU	P438137	
	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P438141	
	EPA 300.0 Rev. 2.1	Chloride	15	A	mg Cl/L	P438358	
		Sulfate	17	A	mg SO4/L	P438361	
	SM 2320 B-2011	Total Alkalinity	13		mg CaCO3/L	P438221	
	SM 2540 C-2015	TDS	112		mg/L	P438381	
	SM 2540 D-2015	TSS	6	I	mg/L	P438371	
	SM 4500-F- C-2011	Fluoride	0.065	I	mg F/L	P438334	
2452494	EPA 350.1 Rev. 2.0	Ammonia-N	0.047		mg N/L	P438503	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.93		mg N/L	P438171	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.28		mg N/L	P438306	
	EPA 365.1 Rev. 2.0	Total-P	0.074		mg P/L	P438210	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P438187	

Ref. Method and Comment:

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

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

Sample Location: Kissimmee Tributary at US 98 East of Buckhorn

Collection Date/Time: 11/20/2023 12:25

Field ID: G4SE0155

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452545	EPA 8321B	2,4-D	0.0020	U	ug/L	P438135	
		Acesulfame K	0.10	U	ug/L	P438082	
		2,4,5-T	0.0040	U	ug/L	P438135	
		AMPA	0.10	U	ug/L	P438082	
		Acetaminophen	0.0080	U	ug/L	P438135	
		Acetamiprid	0.0020	U	ug/L	P438135	
		Endothall	0.25	U	ug/L	P438082	
		Glufosinate	0.10	U	ug/L	P438082	
		Glyphosate	0.10	U	ug/L	P438082	
		Afidopyropen	0.0020	U	ug/L	P438135	
		Bentazon	8.0E-04	U	ug/L	P438135	
		Sucralose	0.015	I	ug/L	P438082	
		Benzovindiflupyr	0.0020	U	ug/L	P438135	
		Carbamazepine	8.0E-04	U	ug/L	P438135	
		Clothianidin	0.025		ug/L	P438135	
		Dinotefuran	0.0020	U	ug/L	P438135	
		Diuron	0.0020	U	ug/L	P438135	
		Fenuron	0.032	U	ug/L	P438135	
		Fluridone	8.0E-04	U	ug/L	P438135	
		Imazapyr	0.0077	I	ug/L	P438135	
		Hydrocodone	0.0020	U	ug/L	P438135	
		Ibuprofen	0.080	U	ug/L	P438135	
		Imidacloprid	0.16		ug/L	P438135	
		Linuron	0.0040	U	ug/L	P438135	
		Mandestrobin	0.0020	U	ug/L	P438135	
		MCPP	0.0020	U	ug/L	P438135	
		Naproxen	0.0080	U	ug/L	P438135	
		Primidone	0.0040	U	ug/L	P438135	
		Pyraclostrobin	0.0020	U	ug/L	P438135	
		Silvex	0.0040	U	ug/L	P438135	
		Thiamethoxam	0.041		ug/L	P438135	
		Tolfenpyrad	0.0020	U	ug/L	P438135	
		Triclopyr	0.0040	U	ug/L	P438135	

Ref. Method and Comment:

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

Sample Location: Arbuckle Branch at Abuckle Creek Rd

Collection Date/Time: 11/20/2023 11:40

Field ID: G4SE0149

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452495	DEP SOP: NU-094-1	Color (true)	170		PCU	P438137	
	EPA 180.1 Rev. 2.0	Turbidity	8.8		NTU	P438141	
	EPA 300.0 Rev. 2.1	Chloride	33		mg Cl/L	P438358	
		Sulfate	21		mg SO4/L	P438361	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P438221	
	SM 2540 C-2015	TDS	146		mg/L	P438381	
	SM 2540 D-2015	TSS	6	I	mg/L	P438371	
	SM 4500-F- C-2011	Fluoride	0.051	I	mg F/L	P438334	
2452496	EPA 350.1 Rev. 2.0	Ammonia-N	0.29		mg N/L	P438503	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.6	J	mg N/L	P438171	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.12		mg N/L	P438306	
	EPA 365.1 Rev. 2.0	Total-P	0.060		mg P/L	P438210	
	SM 5310 B-2011	Organic Carbon	27		mg C/L	P438187	
2452544	EPA 8321B	2,4-D	0.0020	U	ug/L	P438135	
		Acesulfame K	0.10	U	ug/L	P438082	
		2,4,5-T	0.0040	U	ug/L	P438135	
		AMPA	0.10	U	ug/L	P438082	
		Acetaminophen	0.0080	U	ug/L	P438135	
		Acetamiprid	0.0020	U	ug/L	P438135	
		Endothall	0.25	U	ug/L	P438082	
		Glufosinate	0.10	U	ug/L	P438082	
		Glyphosate	0.10	U	ug/L	P438082	
		Afidopyropen	0.0020	U	ug/L	P438135	
		Bentazon	8.0E-04	U	ug/L	P438135	
		Sucralose	0.097		ug/L	P438082	
		Benzovindiflupyr	0.0020	U	ug/L	P438135	
		Carbamazepine	8.0E-04	U	ug/L	P438135	
		Clothianidin	0.0020	U	ug/L	P438135	
		Dinotefuran	0.0020	U	ug/L	P438135	
		Diuron	0.0020	U	ug/L	P438135	
		Fenuron	0.032	U	ug/L	P438135	
		Fluridone	8.0E-04	U	ug/L	P438135	
		Imazapyr	0.0040	U	ug/L	P438135	
		Hydrocodone	0.0020	U	ug/L	P438135	
		Ibuprofen	0.080	U	ug/L	P438135	
		Imidacloprid	0.0034	I	ug/L	P438135	
		Linuron	0.0040	U	ug/L	P438135	
		Mandestrobin	0.0020	U	ug/L	P438135	
		MCP	0.0020	U	ug/L	P438135	
		Naproxen	0.0080	U	ug/L	P438135	
		Primidone	0.0040	U	ug/L	P438135	
		Pyraclostrobin	0.0020	U	ug/L	P438135	
		Silvex	0.0040	U	ug/L	P438135	
		Thiamethoxam	0.0020	U	ug/L	P438135	

Field ID: G4SE0149

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452544	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P438135	
		Triclopyr	0.0040	U	ug/L	P438135	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: FB

Collection Date/Time: 11/20/2023 11:50

Field ID: FB_11202023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452497	DEP SOP: NU-094-1	Color (true)	2.5	U	PCU	P438137	
	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P438141	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P438358	
		Sulfate	0.20	U	mg SO4/L	P438361	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P438221	
	SM 2540 C-2015	TDS	15	U	mg/L	P438381	
	SM 2540 D-2015	TSS	2	U	mg/L	P438371	
2452498	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P438335	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P438503	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P438389	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P438409	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P438210	
2452546	SM 5310 B-2011	Organic Carbon	0.50	U	mg C/L	P438187	
	EPA 8321B	2,4-D	0.0020	U	ug/L	P438135	
		Acesulfame K	0.10	U	ug/L	P438082	
		2,4,5-T	0.0040	U	ug/L	P438135	
		AMPA	0.10	U	ug/L	P438082	
		Acetaminophen	0.0080	U	ug/L	P438135	
		Acetamiprid	0.0020	U	ug/L	P438135	
		Endothall	0.25	U	ug/L	P438082	
		Glufosinate	0.10	U	ug/L	P438082	
		Glyphosate	0.10	U	ug/L	P438082	
		Afidopyropen	0.0020	U	ug/L	P438135	
		Bentazon	8.0E-04	U	ug/L	P438135	
		Sucralose	0.010	U	ug/L	P438082	
		Benzovindiflupyr	0.0020	U	ug/L	P438135	
		Carbamazepine	8.0E-04	U	ug/L	P438135	
		Clothianidin	0.0020	U	ug/L	P438135	
		Dinotefuran	0.0020	U	ug/L	P438135	
		Diuron	0.0020	U	ug/L	P438135	
		Fenuron	0.032	U	ug/L	P438135	
		Fluridone	8.0E-04	U	ug/L	P438135	
		Imazapyr	0.0040	U	ug/L	P438135	
		Hydrocodone	0.0020	U	ug/L	P438135	
		Ibuprofen	0.080	U	ug/L	P438135	
		Imidacloprid	0.0020	U	ug/L	P438135	
		Linuron	0.0040	U	ug/L	P438135	
		Mandestrobin	0.0020	U	ug/L	P438135	
		MCPP	0.0020	U	ug/L	P438135	
		Naproxen	0.0080	U	ug/L	P438135	
		Primidone	0.0040	U	ug/L	P438135	
		Pyraclostrobin	0.0020	U	ug/L	P438135	
		Silvex	0.0040	U	ug/L	P438135	
		Thiamethoxam	0.0020	U	ug/L	P438135	

Field ID: FB_11202023

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2452546	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P438135	
		Triclopyr	0.0040	U	ug/L	P438135	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P438137

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438141

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P438174

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: P438174

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: P438358

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438361

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438503

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438171

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438274

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438389

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438306

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438409

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438210

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

Reference Method: EPA 8270E
Batch ID: P438263

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P438263

Component	Result	Code	Units
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8276

Batch ID: P438263

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

Reference Method: EPA 8321B

Batch ID: P438082

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: P438135

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: SM 2320 B-2011

Batch ID: P438221

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

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P438381

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P438371

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438334

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P438335

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P438187

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: P438137

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.9		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438141

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P438174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	108		P	85 - 115
Iron	109		P	85 - 115
Magnesium	110		P	85 - 115
Potassium	101		P	85 - 115
Sodium	106		P	85 - 115
Strontium	97.9		P	85 - 115
Tin	96.8		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	99.5		P	85 - 115
Zinc	97.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P438174

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	100		P	85 - 115
Arsenic	99.2		P	85 - 115
Barium	101		P	85 - 115
Beryllium	89.9		P	85 - 115
Boron	101		P	85 - 115
Cadmium	98.5		P	85 - 115
Chromium	107		P	85 - 115
Cobalt	93.3		P	85 - 115
Copper	98.5		P	85 - 115
Lead	94.6		P	85 - 115
Manganese	100		P	85 - 115
Molybdenum	96.7		P	85 - 115
Nickel	100		P	85 - 115
Selenium	99.7		P	85 - 115
Silver	97.8		P	85 - 115
Thallium	98.6		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438358

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	99.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438361

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438503

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438171

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438274

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438389

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.0		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438306

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: P438409

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P438210

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

Reference Method: EPA 8270E
Batch ID: P438263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	47.0		P	30 - 96.0
Alpha-BHC	72.9		P	70 - 109
Alpha-Chlordane	115		F	45 - 107
Beta-BHC	96.1		P	64 - 138

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P438263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	55.4		P	17 - 141
Bifenthrin	41.7		P	10 - 113
Chlorothalonil	64.6		P	26 - 180
Cis-Nonachlor	56.1		P	37 - 102
Cypermethrin	46.1		P	20 - 133
Dacthal	87.4		P	69 - 114
DDD-p,p'	58.0		P	42 - 105
DDE-p,p'	63.6		P	42 - 106
DDT-p,p'	83.7		P	42 - 107
Delta-BHC	106		P	67 - 144
Deltamethrin	53.7		P	15 - 149
Dichlobenil	85.8		P	46 - 117
Dicofol	78.7		P	34 - 114
Dieldrin	57.0		P	50 - 108
Endosulfan I	91.8		P	55 - 104
Endosulfan II	60.5		P	51 - 111
Endosulfan Sulfate	75.2		P	56 - 121
Endrin	59.6		P	10 - 106
Endrin Aldehyde	60.7		P	34 - 114
Endrin Ketone	58.4		F	63 - 177
Esfenvalerate	65.9		P	29 - 143
Ethalfuralin	101		F	46 - 96.0
Fenpropathrin	55.2		P	28 - 115
Gamma-BHC	98.1		P	65 - 121
Gamma-Chlordane	71.1		P	39 - 103
Heptachlor	39.9		P	39 - 94.0
Heptachlor Epoxide	61.8		P	54 - 104
Hexachlorobenzene	87.8		P	36 - 100
Kepone	177		P	10 - 225
Lambda-Cyhalothrin	55.5		P	10 - 135
Methoprene	78.1		P	10 - 109
Methoxychlor	58.2		P	52 - 112
MGK-264	57.7		P	44 - 117
Mirex	53.5		P	20 - 90.0
Oxychlordane	44.0		P	44 - 102
PCB-1016	68.5		P	45 - 107
PCB-1260	92.7		P	40 - 112
Permethrin	51.2		P	18 - 135
Phenothrin	50.4		P	10 - 102
Piperonyl Butoxide	76.5		P	28 - 156
Prallethrin	64.3		P	28 - 113
Tau-Fluvalinate	76.2		P	10 - 123
Tetramethrin	78.4		P	18 - 158
Trans-Nonachlor	103		P	39 - 104
Triclosan Methyl	59.7		P	54 - 108
Trifluralin	52.0		P	46 - 97.0

Reference Method: EPA 8276

Batch ID: P438263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	70.7		P	43 - 123

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276
Batch ID: P438263

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Toxaphene	75.0		P	27 - 156

Reference Method: EPA 8321B
Batch ID: P438082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	95.2		P	40 - 150
AMPA	98.8		P	40 - 160
Endothall	102		P	40 - 160
Glufosinate	105		P	40 - 160
Glyphosate	103		P	40 - 160
Sucralose	99.3		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P438135

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	97.8		P	40 - 150
2,4,5-T	98.4		P	40 - 150
Acetaminophen	95.5		P	30 - 150
Acetamiprid	92.3		P	40 - 150
Afidopyropen	82.1		P	30 - 150
Bentazon	70.0		P	30 - 150
Benzovindiflupyr	85.3		P	40 - 150
Carbamazepine	79.1		P	40 - 150
Clothianidin	86.7		P	40 - 150
Dinotefuran	102		P	40 - 150
Diuron	76.1		P	40 - 150
Fenuron	124		P	40 - 150
Fluridone	86.3		P	40 - 150
Hydrocodone	99.4		P	40 - 150
Ibuprofen	64.1		P	40 - 150
Imazapyr	89.2		P	40 - 150
Imidacloprid	86.9		P	40 - 150
Linuron	72.4		P	40 - 150
Mandestrobin	84.2		P	40 - 150
MCPP	92.9		P	40 - 150
Naproxen	76.2		P	40 - 150
Primidone	85.2		P	40 - 150
Pyraclostrobin	80.9		P	40 - 150
Silvex	85.5		P	40 - 150
Thiamethoxam	92.7		P	40 - 150
Tolfenpyrad	60.7		P	30 - 150
Triclopyr	107		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P438221

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.3		P	92 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P438381

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	97.2		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P438371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	92.8		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P438334

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

Reference Method: SM 4500-F- C-2011
Batch ID: P438335

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.1		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P438187

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P438174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452360	Calcium	110	109	P/P	80 - 120
2452360	Iron	110	109	P/P	80 - 120
2452360	Magnesium	111	109	P/P	80 - 120
2452360	Potassium	103	102	P/P	80 - 120
2452360	Sodium	108	108	P/P	80 - 120
2452360	Strontium	102	101	P/P	80 - 120
2452360	Tin	98.1	99.1	P/P	80 - 120
2452360	Titanium	102	102	P/P	80 - 120
2452360	Vanadium	101	101	P/P	80 - 120
2452360	Zinc	98.4	98.3	P/P	80 - 120
2452610	Calcium	106		P	80 - 120
2452610	Iron	108		P	80 - 120
2452610	Magnesium	105		P	80 - 120
2452610	Potassium	99.7		P	80 - 120
2452610	Sodium	105		P	80 - 120
2452610	Strontium	99.1		P	80 - 120
2452610	Tin	94.5		P	80 - 120
2452610	Titanium	101		P	80 - 120
2452610	Vanadium	101		P	80 - 120
2452610	Zinc	98.4		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P438174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452360	Aluminum	99.4	98.1	P/P	80 - 120
2452360	Antimony	99.2	99.8	P/P	80 - 120
2452360	Arsenic	98.2	97.7	P/P	80 - 120
2452360	Barium	100	100	P/P	80 - 120
2452360	Beryllium	89.5	87.4	P/P	80 - 120
2452360	Boron	104	103	P/P	80 - 120
2452360	Cadmium	97.9	98.2	P/P	80 - 120
2452360	Chromium	97.6	95.1	P/P	80 - 120
2452360	Cobalt	91.8	91.6	P/P	80 - 120
2452360	Copper	99.0	97.5	P/P	80 - 120
2452360	Lead	94.4	93.9	P/P	80 - 120
2452360	Manganese	100	100	P/P	80 - 120
2452360	Molybdenum	99.2	97.9	P/P	80 - 120
2452360	Nickel	95.8	95.1	P/P	80 - 120
2452360	Selenium	99.1	95.9	P/P	80 - 120
2452360	Silver	96.8	96.8	P/P	80 - 120
2452360	Thallium	99.9	98.7	P/P	80 - 120
2452610	Aluminum	99.6		P	80 - 120
2452610	Antimony	99.9		P	80 - 120
2452610	Arsenic	97.2		P	80 - 120
2452610	Barium	98.7		P	80 - 120
2452610	Beryllium	90.4		P	80 - 120
2452610	Boron	101		P	80 - 120
2452610	Cadmium	98.2		P	80 - 120
2452610	Chromium	96.2		P	80 - 120
2452610	Cobalt	89.4		P	80 - 120
2452610	Copper	98.7		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P438174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452610	Lead	94.6		P	80 - 120
2452610	Manganese	91.7		P	80 - 120
2452610	Molybdenum	99.3		P	80 - 120
2452610	Nickel	94.7		P	80 - 120
2452610	Selenium	95.3		P	80 - 120
2452610	Silver	96.2		P	80 - 120
2452610	Thallium	98.4		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438358

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452492	Chloride	101		P	90 - 110
2452502	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438361

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452492	Sulfate	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438503

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452505	Ammonia-N	97.4	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438171

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452496	Kjeldahl Nitrogen	95.2	111	P/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438274

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452569	Kjeldahl Nitrogen	111	111	F/F	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438389

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2453429	Kjeldahl Nitrogen	109	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438306

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452496	NO2NO3-N	94.5	96.5	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P438409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452773	NO2NO3-N	99.6	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438210

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452439	Total-P	103	104	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P438263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452356	PCB-1016	82.7	67.3	P/P	45 - 107
2452356	PCB-1260	80.7	102	P/P	40 - 112
2452652	Aldrin	65.6	64.0	P/P	24 - 81.0
2452652	Alpha-BHC	65.8	72.6	P/P	65 - 110
2452652	Alpha-Chlordane	50.3	67.2	P/P	43 - 119
2452652	Beta-BHC	50.9	61.4	F/P	54 - 165
2452652	Beta-Cyfluthrin	60.3	57.0	P/P	27 - 165
2452652	Bifenthrin	47.1	39.1	P/P	17 - 117
2452652	Chlorothalonil	73.3	59.8	P/P	10 - 255
2452652	Cis-Nonachlor	57.7	89.7	P/P	34 - 98.0
2452652	Cypermethrin	40.4	35.2	P/P	25 - 143
2452652	Dacthal	51.4	68.8	F/P	55 - 139
2452652	DDD-p,p'	65.7	83.2	P/P	30 - 109
2452652	DDE-p,p'	66.6	79.4	P/P	35 - 106
2452652	DDT-p,p'	55.9	57.0	P/P	41 - 101
2452652	Delta-BHC	64.1	66.2	P/P	58 - 165
2452652	Deltamethrin	80.9	69.8	P/P	10 - 194
2452652	Dichlobenil	46.8	68.0	P/P	22 - 114
2452652	Dicofol	78.2	78.3	P/P	17 - 133
2452652	Dieldrin	65.3	73.2	P/P	45 - 129
2452652	Endosulfan I	51.3	67.4	P/P	49 - 104
2452652	Endosulfan II	57.7	69.2	P/P	37 - 117
2452652	Endosulfan Sulfate	50.8	70.8	P/P	38 - 128
2452652	Endrin	59.9	74.5	P/P	35 - 116
2452652	Endrin Aldehyde	42.1	55.6	P/P	19 - 108
2452652	Endrin Ketone	41.6	60.0	F/P	44 - 134
2452652	Esfenvalerate	75.1	67.2	P/P	27 - 176
2452652	Ethalfuralin	85.1	80.9	P/P	49 - 100
2452652	Fenpropathrin	51.8	40.4	P/P	34 - 117
2452652	Gamma-BHC	66.3	74.1	P/P	59 - 129
2452652	Gamma-Chlordane	76.2	84.1	P/P	33 - 107
2452652	Heptachlor	45.7	39.0	P/P	37 - 94.0
2452652	Heptachlor Epoxide	67.8	65.6	P/P	38 - 118
2452652	Hexachlorobenzene	60.8	75.2	P/P	35 - 97.0
2452652	Kepone	168	157	P/P	10 - 221
2452652	Lambda-Cyhalothrin	76.0	88.1	P/P	23 - 190
2452652	Methoprene	102	85.6	P/P	21 - 109
2452652	Methoxychlor	60.4	58.3	P/P	46 - 118
2452652	MGK-264	63.5	59.8	P/P	39 - 122
2452652	Mirex	76.1	79.8	P/P	25 - 90.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P438263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452652	Oxychlordane	46.4	43.5	P/P	42 - 100
2452652	Permethrin	66.1	67.4	P/P	33 - 181
2452652	Phenothrin	65.9	70.2	P/P	12 - 125
2452652	Piperonyl Butoxide	80.2	122	P/P	10 - 178
2452652	Prallethrin	49.5	62.0	P/P	24 - 122
2452652	Tau-Fluvalinate	80.5	75.5	P/P	13 - 151
2452652	Tetramethrin	91.4	86.5	P/P	16 - 172
2452652	Trans-Nonachlor	61.9	68.6	P/P	39 - 100
2452652	Triclosan Methyl	46.6	48.4	P/P	43 - 110
2452652	Trifluralin	55.0	52.1	P/P	45 - 94.0

Reference Method: EPA 8276

Batch ID: P438263

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452356	Chlordane	58.2	72.3	P/P	43 - 123
2452356	Toxaphene	60.4	75.3	P/P	27 - 156

Reference Method: EPA 8321B

Batch ID: P438082

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452355	Acesulfame K	112	95.6	P/P	40 - 150
2452355	AMPA	96.0	97.6	P/P	40 - 160
2452355	Endothall	106	103	P/P	40 - 160
2452355	Glufosinate	96.0	104	P/P	40 - 160
2452355	Glyphosate	97.1	96.0	P/P	40 - 160
2452355	Sucralose	105	91.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P438135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452547	2,4-D	93.3	94.6	P/P	40 - 150
2452547	2,4,5-T	85.2	79.2	P/P	40 - 150
2452547	Acetaminophen	78.4	78.3	P/P	30 - 150
2452547	Acetamiprid	66.5	66.0	P/P	40 - 150
2452547	Afidopyropen	83.0	76.1	P/P	30 - 150
2452547	Benzovindiflupyr	82.6	81.4	P/P	40 - 150
2452547	Carbamazepine	55.7	54.9	P/P	40 - 150
2452547	Clothianidin	70.1	70.7	P/P	40 - 150
2452547	Dinotefuran	56.0	55.6	P/P	40 - 150
2452547	Diuron	57.6	57.3	P/P	40 - 150
2452547	Fenuron	57.0	56.8	P/P	40 - 150
2452547	Fluridone	87.5	81.3	P/P	40 - 150
2452547	Hydrocodone	58.4	59.5	P/P	40 - 150
2452547	Ibuprofen	70.6	67.4	P/P	40 - 150
2452547	Imazapyr	90.0	82.7	P/P	40 - 150
2452547	Imidacloprid	99.2	97.3	P/P	40 - 150
2452547	Linuron	64.1	65.3	P/P	40 - 150
2452547	Mandestrobin	79.3	77.6	P/P	40 - 150
2452547	MCPP	88.0	85.4	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P438135

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452547	Naproxen	84.9	70.7	P/P	40 - 150
2452547	Primidone	74.4	75.8	P/P	40 - 150
2452547	Pyraclostrobin	80.6	77.9	P/P	40 - 150
2452547	Silvex	101	92.9	P/P	40 - 150
2452547	Thiamethoxam	63.5	61.9	P/P	40 - 150
2452547	Tolfenpyrad	52.4	53.7	P/P	30 - 150
2452547	Triclopyr	89.2	81.6	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P438334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2451833	Fluoride	103	103	P/P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P438335

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452499	Fluoride	101	103	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P438187

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2452346	Organic Carbon	93.5	93.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P438137

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452458	Color (true)	5.40	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P438141

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452403	Turbidity	1.13	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P438174

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452360	Calcium	0.826	Spike	P	0 - 20
2452360	Iron	1.35	Spike	P	0 - 20
2452360	Magnesium	1.02	Spike	P	0 - 20
2452360	Potassium	0.746	Spike	P	0 - 20
2452360	Sodium	0.319	Spike	P	0 - 20
2452360	Strontium	0.764	Spike	P	0 - 20
2452360	Tin	0.922	Spike	P	0 - 20
2452360	Titanium	0.140	Spike	P	0 - 20
2452360	Vanadium	0.457	Spike	P	0 - 20
2452360	Zinc	0.120	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P438174

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452360	Aluminum	1.25	Spike	P	0 - 20
2452360	Antimony	0.610	Spike	P	0 - 20
2452360	Arsenic	0.485	Spike	P	0 - 20
2452360	Barium	0.104	Spike	P	0 - 20
2452360	Beryllium	2.34	Spike	P	0 - 20
2452360	Boron	1.46	Spike	P	0 - 20
2452360	Cadmium	0.394	Spike	P	0 - 20
2452360	Chromium	2.54	Spike	P	0 - 20
2452360	Cobalt	0.169	Spike	P	0 - 20
2452360	Copper	1.52	Spike	P	0 - 20
2452360	Lead	0.477	Spike	P	0 - 20
2452360	Manganese	0.118	Spike	P	0 - 20
2452360	Molybdenum	1.36	Spike	P	0 - 20
2452360	Nickel	0.727	Spike	P	0 - 20
2452360	Selenium	3.34	Spike	P	0 - 20
2452360	Silver	0.00468	Spike	P	0 - 20
2452360	Thallium	1.25	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438358

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452492	Chloride	2.72	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P438361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452492	Sulfate	3.40	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P438503

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452505	Ammonia-N	0.227	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438171

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452496	Kjeldahl Nitrogen	8.27	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438274

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452569	Kjeldahl Nitrogen	0.0634	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P438389

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2453429	Kjeldahl Nitrogen	3.86	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438306

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452496	NO2NO3-N	1.27	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P438409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452773	NO2NO3-N	1.91	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P438210

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452439	Total-P	0.484	Spike	P	0 - 20

Reference Method: EPA 8270E

Batch ID: P438263

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452356	PCB-1016	20.5	Spike	P	0 - 25
2452356	PCB-1260	23.1	Spike	P	0 - 30
2452652	Aldrin	2.45	Spike	P	0 - 41
2452652	Alpha-BHC	9.89	Spike	P	0 - 25
2452652	Alpha-Chlordane	28.7	Spike	P	0 - 32
2452652	Beta-BHC	18.6	Spike	P	0 - 33
2452652	Beta-Cyfluthrin	5.64	Spike	P	0 - 43
2452652	Bifenthrin	18.7	Spike	P	0 - 52
2452652	Chlorothalonil	20.4	Spike	P	0 - 82
2452652	Cis-Nonachlor	43.4	Spike	F	0 - 33
2452652	Cypermethrin	13.6	Spike	P	0 - 51
2452652	Dacthal	28.9	Spike	F	0 - 27
2452652	DDD-p,p'	23.4	Spike	P	0 - 39
2452652	DDE-p,p'	17.6	Spike	P	0 - 31
2452652	DDT-p,p'	1.36	Spike	P	0 - 29
2452652	Delta-BHC	3.29	Spike	P	0 - 35
2452652	Deltamethrin	14.7	Spike	P	0 - 100
2452652	Dichlobenil	37.0	Spike	P	0 - 40
2452652	Dicofol	0.155	Spike	P	0 - 37
2452652	Dieldrin	11.5	Spike	P	0 - 27
2452652	Endosulfan I	27.1	Spike	F	0 - 23
2452652	Endosulfan II	18.1	Spike	P	0 - 34
2452652	Endosulfan Sulfate	32.9	Spike	P	0 - 36
2452652	Endrin	21.7	Spike	P	0 - 45
2452652	Endrin Aldehyde	27.7	Spike	P	0 - 76
2452652	Endrin Ketone	36.2	Spike	P	0 - 43
2452652	Esfenvalerate	11.1	Spike	P	0 - 51
2452652	Ethalfuralin	5.05	Spike	P	0 - 22
2452652	Fenpropathrin	24.6	Spike	P	0 - 49
2452652	Gamma-BHC	11.0	Spike	P	0 - 28
2452652	Gamma-Chlordane	9.88	Spike	P	0 - 40
2452652	Heptachlor	15.8	Spike	P	0 - 29
2452652	Heptachlor Epoxide	3.27	Spike	P	0 - 33
2452652	Hexachlorobenzene	21.1	Spike	P	0 - 36
2452652	Kepone	7.30	Spike	P	0 - 85
2452652	Lambda-Cyhalothrin	14.8	Spike	P	0 - 55
2452652	Methoprene	17.5	Spike	P	0 - 53
2452652	Methoxychlor	3.64	Spike	P	0 - 50
2452652	MGK-264	5.99	Spike	P	0 - 43
2452652	Mirex	4.79	Spike	P	0 - 40
2452652	Oxychlordane	6.55	Spike	P	0 - 31
2452652	Permethrin	1.93	Spike	P	0 - 50
2452652	Phenothrin	6.24	Spike	P	0 - 58
2452652	Piperonyl Butoxide	37.1	Spike	P	0 - 100

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P438263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452652	Prallethrin	22.5	Spike	P	0 - 39
2452652	Tau-Fluvalinate	6.42	Spike	P	0 - 54
2452652	Tetramethrin	5.42	Spike	P	0 - 51
2452652	Trans-Nonachlor	10.2	Spike	P	0 - 39
2452652	Triclosan Methyl	3.77	Spike	P	0 - 31
2452652	Trifluralin	5.43	Spike	P	0 - 22

Reference Method: EPA 8276
Batch ID: P438263

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452356	Chlordane	21.6	Spike	P	0 - 28
2452356	Toxaphene	22.0	Spike	P	0 - 27

Reference Method: EPA 8321B
Batch ID: P438082

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452355	Acesulfame K	15.6	Spike	P	0 - 30
2452355	AMPA	1.66	Spike	P	0 - 30
2452355	Endothall	2.88	Spike	P	0 - 30
2452355	Glufosinate	7.87	Spike	P	0 - 30
2452355	Glyphosate	1.14	Spike	P	0 - 30
2452355	Sucralose	13.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P438135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452547	2,4-D	0.800	Spike	P	0 - 30
2452547	2,4,5-T	7.33	Spike	P	0 - 30
2452547	Acetaminophen	0.116	Spike	P	0 - 30
2452547	Acetamiprid	0.679	Spike	P	0 - 30
2452547	Afidopyropen	8.69	Spike	P	0 - 30
2452547	Bentazon	1.49	Spike	P	0 - 30
2452547	Benzovindiflupyr	1.38	Spike	P	0 - 30
2452547	Carbamazepine	1.51	Spike	P	0 - 30
2452547	Clothianidin	0.898	Spike	P	0 - 30
2452547	Dinotefuran	0.745	Spike	P	0 - 30
2452547	Diuron	0.535	Spike	P	0 - 30
2452547	Fenuron	0.348	Spike	P	0 - 30
2452547	Fluridone	2.28	Spike	P	0 - 30
2452547	Hydrocodone	1.94	Spike	P	0 - 30
2452547	Ibuprofen	4.54	Spike	P	0 - 30
2452547	Imazapyr	5.15	Spike	P	0 - 30
2452547	Imidacloprid	1.70	Spike	P	0 - 30
2452547	Linuron	1.79	Spike	P	0 - 30
2452547	Mandestrobin	2.13	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P438135

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452547	MCP	2.48	Spike	P	0 - 30
2452547	Naproxen	18.2	Spike	P	0 - 30
2452547	Primidone	1.85	Spike	P	0 - 30
2452547	Pyraclostrobin	3.35	Spike	P	0 - 30
2452547	Silvex	8.37	Spike	P	0 - 30
2452547	Thiamethoxam	2.57	Spike	P	0 - 30
2452547	Tolfenpyrad	2.56	Spike	P	0 - 30
2452547	Triclopyr	8.87	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P438221

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452403	Total Alkalinity	1.09	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P438381

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452047	TDS	1.17	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P438334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2451833	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P438335

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452499	Fluoride	0.947	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P438187

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2452346	Organic Carbon	0.0478	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2452534

Field Sample ID: G4SE0152

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	69.7	P	37 - 129
EPA 8270E	Decachlorobiphenyl	41.1	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	57.9	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	41.3	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	64.1	P	28 - 102
EPA 8276	PCNB	72.4	P	49 - 115

Lab Sample ID: 2452544

Field Sample ID: G4SE0149

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	58.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	40.2	P	30 - 160
EPA 8321B	Diuron-d6	34.1	P	30 - 160
EPA 8321B	Endothall-d6	96.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	89.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.7	P	30 - 160
EPA 8321B	Primidone-d5	39.1	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Lab Sample ID: 2452545

Field Sample ID: G4SE0155

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	94.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	82.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.4	P	30 - 160
EPA 8321B	Diuron-d6	48.3	P	30 - 160
EPA 8321B	Endothall-d6	89.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	93.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.0	P	30 - 160
EPA 8321B	Primidone-d5	58.9	P	30 - 160
EPA 8321B	Sucralose-d6	101	P	30 - 160

Lab Sample ID: 2452546

Field Sample ID: FB_11202023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	90.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.2	P	30 - 160
EPA 8321B	Diuron-d6	71.8	P	30 - 160
EPA 8321B	Endothall-d6	96.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	95.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	71.1	P	30 - 160
EPA 8321B	Primidone-d5	80.8	P	30 - 160
EPA 8321B	Sucralose-d6	97.4	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A122870

Included Lab Sample IDs: 2452491, 2452492, 2452495, 2452497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	100	P/P	90 - 110
Color (true)	99.0	98.8	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A122871

Included Lab Sample IDs: 2452491, 2452492, 2452495, 2452497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	99.0	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A122875

Included Lab Sample IDs: 2452544, 2452545, 2452546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	123	111	P/P	60 - 160
Sucralose	103	92.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A122878

Included Lab Sample IDs: 2452544, 2452545, 2452546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	99.9	102	P/P	60 - 160
Endothall	98.1	109	P/P	60 - 160
Glufosinate	104	97.9	P/P	60 - 160
Glyphosate	98.7	100	P/P	60 - 160

Reference Method: SM 5310 B-2011

Run ID: A122895

Included Lab Sample IDs: 2452493, 2452494, 2452496, 2452498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	94.6	95.3	P/P	90 - 110
Organic Carbon	95.3	94.7	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A122907

Included Lab Sample IDs: 2452491, 2452492, 2452495, 2452497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.8	99.9	P/P	90 - 110
Total Alkalinity	97.8	95.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122916

Included Lab Sample IDs: 2452494, 2452496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.9	92.2	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122924

Included Lab Sample IDs: 2452550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	101	P/P	90 - 110
Antimony	100	99.8	P/P	90 - 110
Arsenic	99.2	98.6	P/P	90 - 110
Barium	101	100	P/P	90 - 110
Boron	102	104	P/P	90 - 110
Cadmium	99.3	99.4	P/P	90 - 110
Chromium	101	99.4	P/P	90 - 110
Cobalt	93.0	91.1	P/P	90 - 110
Copper	97.1	96.6	P/P	90 - 110
Lead	95.0	95.3	P/P	90 - 110
Manganese	101	98.6	P/P	90 - 110
Molybdenum	98.8	99.3	P/P	90 - 110
Nickel	97.9	97.3	P/P	90 - 110
Selenium	99.6	100	P/P	90 - 110
Silver	94.4	94.7	P/P	90 - 110
Thallium	96.5	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A122927

Included Lab Sample IDs: 2452493, 2452498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.8	99.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122935

Included Lab Sample IDs: 2452494, 2452496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	95.3	93.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122945

Included Lab Sample IDs: 2452493, 2452494, 2452496

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	99.0	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A122949

Included Lab Sample IDs: 2452491, 2452492, 2452495, 2452497

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Chloride	97.1	101	P/P	90 - 110
Sulfate	97.1	99.5	P/P	90 - 110
Sulfate	99.5	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A122950

Included Lab Sample IDs: 2452491, 2452492, 2452495, 2452497

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A122952

Included Lab Sample IDs: 2452550

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	93.5	93.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A122958

Included Lab Sample IDs: 2452493

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	99.4	97.2	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A122960

Included Lab Sample IDs: 2452544, 2452545, 2452546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	106	108	P/P	50 - 150
2,4-D	108	103	P/P	50 - 150
2,4,5-T	110	99.7	P/P	50 - 150
2,4,5-T	99.7	97.5	P/P	50 - 150
Acetaminophen	110	114	P/P	60 - 160
Acetaminophen	116	110	P/P	60 - 160
Acetamiprid	108	108	P/P	50 - 150
Acetamiprid	108	108	P/P	50 - 150
Afidopyropen	101	95.2	P/P	50 - 150
Afidopyropen	95.2	100	P/P	50 - 150
Bentazon	89.8	90.7	P/P	50 - 160
Bentazon	97.8	89.8	P/P	50 - 160
Benzovindiflupyr	105	103	P/P	50 - 150
Benzovindiflupyr	107	105	P/P	50 - 150
Carbamazepine	106	109	P/P	60 - 150
Carbamazepine	109	109	P/P	60 - 150
Clothianidin	106	99.6	P/P	60 - 150
Clothianidin	99.6	99.7	P/P	60 - 150
Dinotefuran	112	114	P/P	50 - 150
Dinotefuran	114	110	P/P	50 - 150
Diuron	104	112	P/P	60 - 160
Diuron	109	104	P/P	60 - 160
Fenuron	105	104	P/P	60 - 150
Fenuron	105	105	P/P	60 - 150
Fluridone	108	113	P/P	60 - 160
Fluridone	113	115	P/P	60 - 160
Hydrocodone	111	116	P/P	60 - 150
Hydrocodone	116	113	P/P	60 - 150
Ibuprofen	79.9	83.8	P/P	50 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A122960

Included Lab Sample IDs: 2452544, 2452545, 2452546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ibuprofen	83.8	88.4	P/P	50 - 160
Imazapyr	101	107	P/P	50 - 150
Imazapyr	99.4	101	P/P	50 - 150
Imidacloprid	96.4	96.6	P/P	60 - 150
Imidacloprid	96.6	96.1	P/P	60 - 150
Linuron	109	103	P/P	60 - 150
Linuron	115	109	P/P	60 - 150
Mandestrobin	110	99.3	P/P	50 - 150
Mandestrobin	99.3	106	P/P	50 - 150
MCPP	101	106	P/P	50 - 150
MCPP	110	101	P/P	50 - 150
Naproxen	122	112	P/P	50 - 160
Naproxen	64.9	122	P/P	50 - 160
Primidone	103	97.3	P/P	60 - 150
Primidone	89.5	103	P/P	60 - 150
Pyraclostrobin	106	105	P/P	60 - 150
Pyraclostrobin	108	106	P/P	60 - 150
Silvex	102	93.8	P/P	50 - 150
Silvex	93.8	93.2	P/P	50 - 150
Thiamethoxam	109	108	P/P	50 - 150
Thiamethoxam	110	109	P/P	50 - 150
Tolfenpyrad	97.3	99.5	P/P	60 - 150
Tolfenpyrad	98.8	97.3	P/P	60 - 150
Triclopyr	111	99.0	P/P	50 - 150
Triclopyr	99.0	103	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A122966

Included Lab Sample IDs: 2452498

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123024

Included Lab Sample IDs: 2452498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	98.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123027

Included Lab Sample IDs: 2452493, 2452494, 2452496, 2452498

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	98.4	P/P	90 - 110
Ammonia-N	99.6	99.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A123039

Included Lab Sample IDs: 2452550

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

Reference Method: EPA 8270E

Run ID: A123125

Included Lab Sample IDs: 2452534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	97.8		P	80 - 120
PCB-1260	102		P	80 - 120

Reference Method: EPA 8270E

Run ID: A123187

Included Lab Sample IDs: 2452534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	107		P	80 - 120
Alpha-BHC	94.4		P	80 - 120
Alpha-Chlordane	114		P	80 - 120
Beta-BHC	86.6		P	80 - 120
Beta-Cyfluthrin	80.4		P	80 - 120
Bifenthrin	110		P	80 - 120
Chlorothalonil	94.3		P	80 - 120
Cis-Nonachlor	95.3		P	80 - 120
Cypermethrin	106		P	80 - 120
Dacthal	116		P	80 - 120
DDD-p,p'	98.8		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	107		P	80 - 120
Delta-BHC	96.1		P	80 - 120
Deltamethrin	83.9		P	80 - 120
Dichlobenil	84.4		P	80 - 120
Dicofol	96.9		P	80 - 120
Dieldrin	92.6		P	80 - 120
Endosulfan I	101		P	80 - 120
Endosulfan II	83.0		P	80 - 120
Endosulfan Sulfate	97.5		P	80 - 120
Endrin	83.7		P	80 - 120
Endrin Aldehyde	97.2		P	80 - 120
Endrin Ketone	79.4*		F	80 - 120
Esfenvalerate	83.5		P	80 - 120
Ethalfuralin	90.8		P	80 - 120
Fenpropathrin	109		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A123187
Included Lab Sample IDs: 2452534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Gamma-BHC	107		P	80 - 120
Gamma-Chlordane	106		P	80 - 120
Heptachlor	123*		F	80 - 120
Heptachlor Epoxide	111		P	80 - 120
Hexachlorobenzene	96.7		P	80 - 120
Kepone	80.2		P	80 - 120
Lambda-Cyhalothrin	88.4		P	80 - 120
Methoprene	0.0*		F	80 - 120
Methoxychlor	85.6		P	80 - 120
MGK-264	94.1		P	80 - 120
Mirex	108		P	80 - 120
Oxychlordane	127*		F	80 - 120
Permethrin	82.7		P	80 - 120
Phenothrin	81.1		P	80 - 120
Piperonyl Butoxide	88.6		P	80 - 120
Prallethrin	98.6		P	80 - 120
Tau-Fluvalinate	91.9		P	80 - 120
Tetramethrin	94.2		P	80 - 120
Trans-Nonachlor	108		P	80 - 120
Triclosan Methyl	120		P	80 - 120
Trifluralin	119		P	80 - 120

Reference Method: EPA 8276
Run ID: A123276
Included Lab Sample IDs: 2452534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	104		P	80 - 120

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			Precision SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	97.9				5.40	
EPA 180.1 Rev. 2.0	Turbidity	103				1.13	
EPA 200.7 Rev. 4.4	Calcium	108	110	109	106		0.826
	Iron	109	110	109	108		1.35
	Magnesium	110	111	109	105		1.02
	Potassium	101	103	102	99.7		0.746
	Sodium	106	108	108	105		0.319
	Strontium	97.9	102	101	99.1		0.764
	Tin	96.8	98.1	99.1	94.5		0.922
	Titanium	101	102	102	101		0.140
	Vanadium	99.5	101	101	101		0.457
	Zinc	97.1	98.4	98.3	98.4		0.120
EPA 200.8 Rev. 5.4	Aluminum	100	99.4	98.1	99.6		1.25
	Antimony	100	99.2	99.8	99.9		0.610
	Arsenic	99.2	98.2	97.7	97.2		0.485
	Barium	101	100	100	98.7		0.104
	Beryllium	89.9	89.5	87.4	90.4		2.34
	Boron	101	104	103	101		1.46
	Cadmium	98.5	97.9	98.2	98.2		0.394
	Chromium	107	97.6	95.1	96.2		2.54
	Cobalt	93.3	91.8	91.6	89.4		0.169
	Copper	98.5	99.0	97.5	98.7		1.52
	Lead	94.6	94.4	93.9	94.6		0.477
	Manganese	100	100	100	91.7		0.118
	Molybdenum	96.7	99.2	97.9	99.3		1.36
	Nickel	100	95.8	95.1	94.7		0.727
	Selenium	99.7	99.1	95.9	95.3		3.34
	Silver	97.8	96.8	96.8	96.2		0.0046
	Thallium	98.6	99.9	98.7	98.4		1.25
EPA 300.0 Rev. 2.1	Chloride	99.3	101	106		2.72	
	Sulfate	98.8	101			3.40	
EPA 350.1 Rev. 2.0	Ammonia-N	95.2	97.4	97.8			0.227
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	95.2	111			8.27
	Kjeldahl Nitrogen	104	111	111			0.0634
	Kjeldahl Nitrogen	97.0	109	102			3.86
EPA 353.2 Rev. 2.0	NO2NO3-N	98.0	94.5	96.5			1.27
	NO2NO3-N	99.5	99.6	102			1.91
EPA 365.1 Rev. 2.0	Total-P	100	103	104			0.484
EPA 8270E	Aldrin	47.0	65.6	64.0			2.45
	Alpha-BHC	72.9	65.8	72.6			9.89
	Alpha-Chlordane	115	50.3	67.2			28.7
	Beta-BHC	96.1	50.9	61.4			18.6
	Beta-Cyfluthrin	55.4	60.3	57.0			5.64
	Bifenthrin	41.7	47.1	39.1			18.7
	Chlorothalonil	64.6	73.3	59.8			20.4
	Cis-Nonachlor	56.1	57.7	89.7			43.4
	Cypermethrin	46.1	40.4	35.2			13.6
	Dacthal	87.4	51.4	68.8			28.9
	DDD-p,p'	58.0	65.7	83.2			23.4
	DDE-p,p'	63.6	66.6	79.4			17.6
	DDT-p,p'	83.7	55.9	57.0			1.36
	Delta-BHC	106	64.1	66.2			3.29
	Deltamethrin	53.7	80.9	69.8			14.7
	Dichlobenil	85.8	46.8	68.0			37.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Dicofol	78.7	78.2	78.3			0.155
	Dieldrin	57.0	65.3	73.2			11.5
	Endosulfan I	91.8	51.3	67.4			27.1
	Endosulfan II	60.5	57.7	69.2			18.1
	Endosulfan Sulfate	75.2	50.8	70.8			32.9
	Endrin	59.6	59.9	74.5			21.7
	Endrin Aldehyde	60.7	42.1	55.6			27.7
	Endrin Ketone	58.4	41.6	60.0			36.2
	Esfenvalerate	65.9	75.1	67.2			11.1
	Ethalfuralin	101	85.1	80.9			5.05
	Fenpropathrin	55.2	51.8	40.4			24.6
	Gamma-BHC	98.1	66.3	74.1			11.0
	Gamma-Chlordane	71.1	76.2	84.1			9.88
	Heptachlor	39.9	45.7	39.0			15.8
	Heptachlor Epoxide	61.8	67.8	65.6			3.27
	Hexachlorobenzene	87.8	60.8	75.2			21.1
	Kepone	177	168	157			7.30
	Lambda-Cyhalothrin	55.5	76.0	88.1			14.8
	Methoprene	78.1	102	85.6			17.5
	Methoxychlor	58.2	60.4	58.3			3.64
	MGK-264	57.7	63.5	59.8			5.99
	Mirex	53.5	76.1	79.8			4.79
	Oxychlordane	44.0	46.4	43.5			6.55
	PCB-1016	68.5	82.7	67.3			20.5
	PCB-1260	92.7	80.7	102			23.1
	Permethrin	51.2	66.1	67.4			1.93
	Phenothrin	50.4	65.9	70.2			6.24
	Piperonyl Butoxide	76.5	80.2	122			37.1
	Prallethrin	64.3	49.5	62.0			22.5
	Tau-Fluvalinate	76.2	80.5	75.5			6.42
	Tetramethrin	78.4	91.4	86.5			5.42
	Trans-Nonachlor	103	61.9	68.6			10.2
	Triclosan Methyl	59.7	46.6	48.4			3.77
	Trifluralin	52.0	55.0	52.1			5.43
EPA 8276	Chlordane	70.7	58.2	72.3			21.6
	Toxaphene	75.0	60.4	75.3			22.0
EPA 8321B	2,4-D	97.8	93.3	94.6			0.800
	2,4,5-T	98.4	85.2	79.2			7.33
	Acesulfame K	95.2	112	95.6			15.6
	Acetaminophen	95.5	78.4	78.3			0.116
	Acetamiprid	92.3	66.5	66.0			0.679
	Afidopyropen	82.1	83.0	76.1			8.69
	AMPA	98.8	96.0	97.6			1.66
	Bentazon	70.0					1.49
	Benzovindiflupyr	85.3	82.6	81.4			1.38
	Carbamazepine	79.1	55.7	54.9			1.51
	Clothianidin	86.7	70.1	70.7			0.898
	Dinotefuran	102	56.0	55.6			0.745
	Diuron	76.1	57.6	57.3			0.535
	Endothall	102	106	103			2.88
	Fenuron	124	57.0	56.8			0.348
	Fluridone	86.3	87.5	81.3			2.28
	Glufosinate	105	96.0	104			7.87
	Glyphosate	103	97.1	96.0			1.14

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Hydrocodone	99.4	58.4	59.5		1.94
	Ibuprofen	64.1	70.6	67.4		4.54
	Imazapyr	89.2	90.0	82.7		5.15
	Imidacloprid	86.9	99.2	97.3		1.70
	Linuron	72.4	64.1	65.3		1.79
	Mandestrobin	84.2	79.3	77.6		2.13
	MCCP	92.9	88.0	85.4		2.48
	Naproxen	76.2	84.9	70.7		18.2
	Primidone	85.2	74.4	75.8		1.85
	Pyraclostrobin	80.9	80.6	77.9		3.35
	Silvex	85.5	101	92.9		8.37
	Sucralose	99.3	105	91.2		13.5
	Thiamethoxam	92.7	63.5	61.9		2.57
	Tolfenpyrad	60.7	52.4	53.7		2.56
	Triclopyr	107	89.2	81.6		8.87
SM 2320 B-2011	Total Alkalinity	98.3			1.09	
SM 2540 C-2015	TDS	97.2			1.17	
SM 2540 D-2015	TSS	92.8				
SM 4500-F- C-2011	Fluoride	102	103	103		0.0
	Fluoride	99.1	101	103		0.947
SM 5310 B-2011	Organic Carbon	94.2	93.5	93.5		0.0478

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2452491, 2452492, 2452495, 2452497
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2452491, 2452492, 2452495, 2452497
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2452550
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2452550
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2452491, 2452492, 2452495, 2452497
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2452491, 2452492, 2452495, 2452497
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2452493, 2452494, 2452496, 2452498
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2452493, 2452494, 2452496, 2452498
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2452493, 2452494, 2452496, 2452498
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2452493, 2452494, 2452496, 2452498
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2452534
EPA 8270E	PCBs in water matrices by GC/MS/MS	2452534
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2452534
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2452544, 2452545, 2452546
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2452491, 2452492, 2452495, 2452497
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2452550
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2452491, 2452492, 2452495, 2452497
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2452491, 2452492, 2452495, 2452497
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2452491, 2452492, 2452495, 2452497
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2452493, 2452494, 2452496, 2452498

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	11/21/2023			11/21/2023 14:38	Chandler E Cox	2452491
	11/21/2023			11/21/2023 14:41	Chandler E Cox	2452497
	11/21/2023			11/21/2023 15:12	Chandler E Cox	2452492
	11/21/2023			11/21/2023 15:13	Chandler E Cox	2452495
EPA 180.1 Rev. 2.0	11/21/2023			11/21/2023 14:22	Anna M. Plaviak	2452491
	11/21/2023			11/21/2023 14:23	Anna M. Plaviak	2452492
	11/21/2023			11/21/2023 14:24	Anna M. Plaviak	2452495
	11/21/2023			11/21/2023 14:25	Anna M. Plaviak	2452497
EPA 200.7 Rev. 4.4	11/21/2023	11/27/2023 13:20	George D Taylor	12/05/2023 16:31	Chase Roberts	2452550
EPA 200.8 Rev. 5.4	11/21/2023	11/27/2023 13:20	George D Taylor	11/28/2023 17:28	Conrad Hartmann	2452550
	11/21/2023	11/27/2023 13:20	George D Taylor	11/29/2023 18:41	Emily M Philpot	2452550
EPA 300.0 Rev. 2.1	11/21/2023			11/29/2023 17:28	James L Waggeberby	2452492
	11/21/2023			11/29/2023 20:59	James L Waggeberby	2452491
	11/21/2023			11/29/2023 21:14	James L Waggeberby	2452495
	11/21/2023			11/29/2023 21:29	James L Waggeberby	2452497
EPA 350.1 Rev. 2.0	11/21/2023			12/05/2023 13:26	Ping Hua	2452493
	11/21/2023			12/05/2023 13:30	Ping Hua	2452494
	11/21/2023			12/05/2023 14:43	Ping Hua	2452498
	11/21/2023			12/05/2023 14:51	Ping Hua	2452496
EPA 351.2 Rev. 2.0	11/21/2023	11/27/2023 13:33	Simonne.V. Calhoun	11/29/2023 12:34	Ping Hua	2452494
	11/21/2023	11/27/2023 13:33	Simonne.V. Calhoun	11/29/2023 12:35	Ping Hua	2452496
	11/21/2023	11/29/2023 14:15	Simonne.V. Calhoun	11/30/2023 10:19	Ping Hua	2452493
	11/21/2023	12/01/2023 12:09	Simonne.V. Calhoun	12/05/2023 11:54	Samantha L Bates	2452498
EPA 353.2 Rev. 2.0	11/21/2023			11/29/2023 14:15	Fadila Guebre	2452496
	11/21/2023			11/29/2023 14:21	Fadila Guebre	2452494
	11/21/2023			11/29/2023 14:22	Fadila Guebre	2452493
	11/21/2023			11/30/2023 14:21	Fadila Guebre	2452498
EPA 365.1 Rev. 2.0	11/21/2023	11/28/2023 10:59	Adam P Silver	11/28/2023 15:00	James L Waggeberby	2452494, 2452496
	11/21/2023	11/28/2023 10:59	Adam P Silver	11/29/2023 10:58	James L Waggeberby	2452498
	11/21/2023	11/28/2023 10:59	Adam P Silver	11/29/2023 10:59	James L Waggeberby	2452493
EPA 8270E	11/21/2023	11/27/2023 08:30	Rasheda Ghaffari	12/03/2023 22:20	Lipi Saha	2452534
	11/21/2023	11/27/2023 08:30	Rasheda Ghaffari	12/10/2023 05:19	Vandana T. Nagar	2452534
EPA 8276	11/21/2023	11/27/2023 08:30	Rasheda Ghaffari	12/15/2023 11:12	Kenedi Mills	2452534
EPA 8321B	11/21/2023	11/21/2023 12:00	Tae K Lee	11/21/2023 14:42	Hana Lee	2452544
	11/21/2023	11/21/2023 12:00	Tae K Lee	11/21/2023 14:55	Hana Lee	2452545
	11/21/2023	11/21/2023 12:00	Tae K Lee	11/21/2023 15:09	Hana Lee	2452546
	11/21/2023	11/21/2023 12:00	Tae K Lee	11/21/2023 22:10	Hana Lee	2452544
	11/21/2023	11/21/2023 12:00	Tae K Lee	11/21/2023 22:24	Hana Lee	2452545
	11/21/2023	11/21/2023 12:00	Tae K Lee	11/21/2023 22:37	Hana Lee	2452546
	11/21/2023	11/27/2023 09:00	Hoor Shaik	11/29/2023 15:01	Juyoung Kim	2452544

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	11/21/2023	11/27/2023 09:00	Hoor Shaik	11/29/2023 15:19	Juyoung Kim	2452545
	11/21/2023	11/27/2023 09:00	Hoor Shaik	11/29/2023 15:54	Juyoung Kim	2452546
SM 2320 B-2011	11/21/2023			11/27/2023 23:35	Adam P Silver	2452491
	11/21/2023			11/27/2023 23:47	Adam P Silver	2452492
	11/21/2023			11/28/2023 00:00	Adam P Silver	2452495
	11/21/2023			11/28/2023 00:45	Adam P Silver	2452497
SM 2340 B-2011	11/21/2023			12/05/2023 16:31	Chase Roberts	2452550
SM 2540 C-2015	11/21/2023			11/21/2023 16:31	Yijie Li	2452491, 2452492, 2452495, 2452497
SM 2540 D-2015	11/21/2023			11/21/2023 16:31	Yijie Li	2452491, 2452492, 2452495, 2452497
SM 4500-F- C-2011	11/21/2023			11/30/2023 05:03	Chandler E Cox	2452491
	11/21/2023			11/30/2023 05:24	Chandler E Cox	2452492
	11/21/2023			11/30/2023 05:29	Chandler E Cox	2452495
	11/21/2023			11/30/2023 06:20	Chandler E Cox	2452497
SM 5310 B-2011	11/21/2023			11/27/2023 18:27	Kenneth H Lee	2452493
	11/21/2023			11/27/2023 19:07	Kenneth H Lee	2452494
	11/21/2023			11/27/2023 19:21	Kenneth H Lee	2452496
	11/21/2023			11/27/2023 19:35	Kenneth H Lee	2452498