

Chemical Analysis Report

NE-DIST-2024-03-08-01

Florida DEP Laboratory
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DOH Accreditation E31780

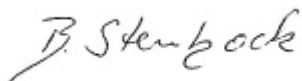
Event Description: **LSJR Main 2024**
Request ID: **RQ-2024-03-04-47**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 29-MAR-2024 14:41



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: WILLOW BR AT RIVERSIDE AVE

Collection Date/Time: 03/07/2024 10:10

Field ID: 20030761

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474263	EPA 8321B	2,4-D	0.051		ug/L	P442545	
		Acesulfame K	0.10	U	ug/L	P442353	
		2,4,5-T	0.0040	U	ug/L	P442545	
		AMPA	0.10	U	ug/L	P442353	
		Acetaminophen	0.0087	I	ug/L	P442545	
		Acetamiprid	0.0020	U	ug/L	P442545	
		Endothall	0.25	U	ug/L	P442353	
		Glufosinate	0.10	U	ug/L	P442353	
		Glyphosate	0.24	I	ug/L	P442353	
		Afidopyropen	0.0020	U	ug/L	P442545	
		Bentazon	0.20		ug/L	P442545	
		Sucralose	0.17		ug/L	P442353	
		Benzovindiflupyr	0.0020	U	ug/L	P442545	
		Carbamazepine	8.0E-04	U	ug/L	P442545	
		Clothianidin	0.0029	I	ug/L	P442545	
		Dinotefuran	0.0020	I	ug/L	P442545	
		Diuron	0.025		ug/L	P442545	
		Fenuron	0.032	U	ug/L	P442545	
		Fluridone	8.0E-04	U	ug/L	P442545	
		Imazapyr	0.068		ug/L	P442545	
		Hydrocodone	0.0020	U	ug/L	P442545	
		Ibuprofen	0.080	U	ug/L	P442545	
		Imidacloprid	0.023		ug/L	P442545	
		Linuron	0.0040	U	ug/L	P442545	
		Mandestrobin	0.0020	U	ug/L	P442545	
		MCPP	0.043		ug/L	P442545	
		Naproxen	0.0080	U	ug/L	P442545	
		Primidone	0.0040	U	ug/L	P442545	
		Pyraclostrobin	0.0020	U	ug/L	P442545	
		Silvex	0.0040	U	ug/L	P442545	
		Thiamethoxam	0.0020	U	ug/L	P442545	
		Tolfenpyrad	0.0020	U	ug/L	P442545	
		Triclopyr	0.0040	U	ug/L	P442545	

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: BIG FISHWEIR CR HERSHEL ST

Collection Date/Time: 03/07/2024 09:50

Field ID: 20030139

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474218	DEP SOP: NU-094-1	Color (true)	89		PCU	P442530	
	EPA 180.1 Rev. 2.0	Turbidity	5.5		NTU	P442533	
	EPA 300.0 Rev. 2.1	Chloride	110		mg Cl/L	P442759	
		Sulfate	31		mg SO4/L	P442761	
	SM 2320 B-2011	Total Alkalinity	101		mg CaCO3/L	P442768	
	SM 2540 C-2015	TDS	366		mg/L	P443051	
	SM 2540 D-2015	TSS	8	I	mg/L	P442970	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P442772	
2474219	EPA 350.1 Rev. 2.0	Ammonia-N	0.098		mg N/L	P442948	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P442572	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.21		mg N/L	P442683	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P442799	
	SM 5310 B-2014	Organic Carbon	13		mg C/L	P442776	
2474264	EPA 200.7 Rev. 4.4	Calcium	43.0		mg/L	P442580	
		Iron	540		ug/L	P442580	
		Magnesium	14.2		mg/L	P442580	
		Potassium	4.4		mg/L	P442580	
		Sodium	81.6		mg/L	P442580	
		Strontium	406		ug/L	P442580	
		Tin	3.0	U	ug/L	P442580	
		Titanium	2.3	I	ug/L	P442580	
	EPA 200.8 Rev. 5.4	Vanadium	2.0	U	ug/L	P442580	
		Zinc	14	I	ug/L	P442580	
		Aluminum	199		ug/L	P442580	
		Antimony	0.27		ug/L	P442580	
		Arsenic	1.50		ug/L	P442580	
		Barium	30.5		ug/L	P442580	
		Beryllium	0.017	I	ug/L	P442580	
		Boron	70.7		ug/L	P442580	
		Cadmium	0.020	U	ug/L	P442580	
		Chromium	0.77	I	ug/L	P442580	
		Cobalt	0.120		ug/L	P442580	
		Copper	2.56		ug/L	P442862	
		Lead	1.28		ug/L	P442580	
		Manganese	22.0		ug/L	P442580	
		Molybdenum	0.81		ug/L	P442580	
		Nickel	0.71	I	ug/L	P442580	
		Selenium	0.20	U	ug/L	P442580	MS
		Silver	0.010	U	ug/L	P442580	
		Thallium	0.10	U	ug/L	P442580	
	SM 2340 B-2011	Hardness	166		mg/L	P442580	

Field ID: 20030139

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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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 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 620 umhos/cm.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: HOGAN CREEK AT 1ST ST

Collection Date/Time: 03/07/2024 11:00

Field ID: 20030692

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474261	EPA 8270E	Aldrin	0.67	U	ng/L	P442593	
		Alpha-BHC	0.10	U	ng/L	P442593	
		Alpha-Chlordane	0.36	I	ng/L	P442593	
		PCB-1016	2.1	U	ng/L	P442593	
		Beta-BHC	0.40	I	ng/L	P442593	
		PCB-1221	2.1	U	ng/L	P442593	
		Beta-Cyfluthrin	1.3	U	ng/L	P442593	
		PCB-1232	2.1	U	ng/L	P442593	
		Bifenthrin	0.52	U	ng/L	P442593	
		PCB-1242	2.1	U	ng/L	P442593	
		PCB-1248	2.1	U	ng/L	P442593	
		Chlorothalonil	3.7	U	ng/L	P442593	
		PCB-1254	2.1	U	ng/L	P442593	
		Cis-Nonachlor	0.21	U	ng/L	P442593	
		PCB-1260	2.1	U	ng/L	P442593	
		Cypermethrin	1.5	U	ng/L	P442593	
		Dacthal	0.15	U	ng/L	P442593	
		DDD-p,p'	0.26	U	ng/L	P442593	
		DDE-p,p'	0.21	U	ng/L	P442593	
		DDT-p,p'	0.83	U	ng/L	P442593	
		Delta-BHC	0.41	U	ng/L	P442593	
		Deltamethrin	1.3	U	ng/L	P442593	
		Dichlobenil	0.26	U	ng/L	P442593	
		Dicofol	1.3	U	ng/L	P442593	
		Dieldrin	2.6		ng/L	P442593	
		Endosulfan I	0.41	U	ng/L	P442593	
		Endosulfan II	0.93	U	ng/L	P442593	
		Endosulfan Sulfate	0.31	U	ng/L	P442593	
		Endrin	0.93	U	ng/L	P442593	
		Endrin Aldehyde	0.77	U	ng/L	P442593	
		Endrin Ketone	0.41	U	ng/L	P442593	
		Esfenvalerate	0.77	U	ng/L	P442593	
		Ethalfuralin	0.15	U	ng/L	P442593	
		Fenpropathrin	0.26	U	ng/L	P442593	
		Gamma-BHC	0.13	U	ng/L	P442593	
		Gamma-Chlordane	0.21	U	ng/L	P442593	
		Heptachlor	0.21	U	ng/L	P442593	
		Heptachlor Epoxide	1.2	I	ng/L	P442593	
		Hexachlorobenzene**	1.0	U	ng/L	P442593	
		Kepone	14	U	ng/L	P442593	
		Lambda-Cyhalothrin	0.77	U	ng/L	P442593	
		Methoprene	0.77	U	ng/L	P442593	
		Methoxychlor	0.31	U	ng/L	P442593	
		MGK-264	0.21	U	ng/L	P442593	

Field ID: 20030692

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474261	EPA 8270E	Mirex	0.36	U	ng/L	P442593	
		Oxychlordane	0.31	U	ng/L	P442593	
		Permethrin	1.7	U	ng/L	P442593	
		Phenothrin	0.93	U	ng/L	P442593	
		Piperonyl Butoxide	1.2		ng/L	P442593	
		Prallethrin	2.1	U	ng/L	P442593	
		Tau-Fluvalinate	0.26	U	ng/L	P442593	
		Tetramethrin	0.77	U	ng/L	P442593	
		Trans-Nonachlor	0.21	U	ng/L	P442593	
		Triclosan Methyl	0.15	U	ng/L	P442593	
		Trifluralin	0.21	U	ng/L	P442593	
	EPA 8276	Chlordane	2.9	I	ng/L	P442593	
		Toxaphene	15	U	ng/L	P442593	

Sample Location: LONG BR AT LIBERTY ST JAX

Collection Date/Time: 03/07/2024 11:15

Field ID: G2NE0165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474266	EPA 200.7 Rev. 4.4	Calcium	48.0		mg/L	P442580	
		Iron	2.07E+03		ug/L	P442580	
		Magnesium	8.74		mg/L	P442580	
		Potassium	1.8		mg/L	P442580	
		Sodium	12.6		mg/L	P442580	
		Strontium	338		ug/L	P442580	
		Tin	3.0	U	ug/L	P442580	
		Titanium	0.87	I	ug/L	P442580	
		Vanadium	2.0	U	ug/L	P442580	
		Zinc	5.0	U	ug/L	P442580	
	EPA 200.8 Rev. 5.4	Aluminum	41		ug/L	P442580	
		Antimony	0.15	I	ug/L	P442580	
		Arsenic	1.16		ug/L	P442580	
		Barium	45.2		ug/L	P442580	
		Beryllium	0.018	I	ug/L	P442580	
		Boron	39.8		ug/L	P442580	
		Cadmium	0.020	U	ug/L	P442580	
		Chromium	0.40	U	ug/L	P442580	
		Cobalt	0.167		ug/L	P442580	
		Copper	1.58		ug/L	P442862	
		Lead	0.28	I	ug/L	P442580	
		Manganese	39.8		ug/L	P442580	
		Molybdenum	2.35		ug/L	P442580	
		Nickel	0.50	U	ug/L	P442580	
		Selenium	0.25	I	ug/L	P442580	MS
		Silver	0.014	I	ug/L	P442580	
		Thallium	0.10	U	ug/L	P442580	
	SM 2340 B-2011	Hardness	156		mg/L	P442580	

Sample Location: DEER CR AT TALLEYRAND AVE

Collection Date/Time: 03/07/2024 11:50

Field ID: 20030792

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474262	EPA 8321B	2,4-D	0.018		ug/L	P442545	
		Acesulfame K	0.10	U	ug/L	P442353	
		2,4,5-T	0.0040	U	ug/L	P442545	
		AMPA	0.17	I	ug/L	P442353	
		Acetaminophen	0.0080	U	ug/L	P442545	
		Acetamiprid	0.0020	U	ug/L	P442545	
		Endothall	0.25	U	ug/L	P442353	
		Glufosinate	0.10	U	ug/L	P442353	
		Glyphosate	0.23	I	ug/L	P442353	
		Afidopyropen	0.0020	U	ug/L	P442545	
		Bentazon	0.0055		ug/L	P442545	
		Sucralose	0.24		ug/L	P442353	
		Benzovindiflupyr	0.0020	U	ug/L	P442545	
		Carbamazepine	9.3E-04	I	ug/L	P442545	
		Clothianidin	0.0020	U	ug/L	P442545	
		Dinotefuran	0.0020	U	ug/L	P442545	
		Diuron	0.0087		ug/L	P442545	
		Fenuron	0.032	U	ug/L	P442545	
		Fluridone	8.0E-04	U	ug/L	P442545	
		Imazapyr	0.093		ug/L	P442545	
		Hydrocodone	0.0020	U	ug/L	P442545	
		Ibuprofen	0.080	U	ug/L	P442545	
		Imidacloprid	0.0020	U	ug/L	P442545	
		Linuron	0.0040	U	ug/L	P442545	
		Mandestrobin	0.0020	U	ug/L	P442545	
		MCPP	0.0020	U	ug/L	P442545	
		Naproxen	0.0080	U	ug/L	P442545	
		Primidone	0.0040	U	ug/L	P442545	
		Pyraclostrobin	0.0020	U	ug/L	P442545	
		Silvex	0.0040	U	ug/L	P442545	
		Thiamethoxam	0.0020	U	ug/L	P442545	
		Tolfenpyrad	0.0020	U	ug/L	P442545	
		Triclopyr	0.0040	U	ug/L	P442545	
2474265	EPA 200.7 Rev. 4.4	Calcium	76.4		mg/L	P442580	
		Iron	1.26E+03		ug/L	P442580	
		Magnesium	22.8		mg/L	P442580	
		Potassium	4.0		mg/L	P442580	
		Sodium	57.0		mg/L	P442580	
		Strontium	895		ug/L	P442580	
		Tin	3.0	U	ug/L	P442580	
		Titanium	1.8	I	ug/L	P442580	
		Vanadium	2.0	U	ug/L	P442580	
		Zinc	8.5	I	ug/L	P442580	
	EPA 200.8 Rev. 5.4	Aluminum	109		ug/L	P442580	

Field ID: 20030792

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2474265	EPA 200.8 Rev. 5.4	Antimony	0.21		ug/L	P442580	
		Arsenic	5.16		ug/L	P442580	
		Barium	48.5		ug/L	P442580	
		Beryllium	0.020	I	ug/L	P442580	
		Boron	81.3		ug/L	P442580	
		Cadmium	0.024	I	ug/L	P442580	
		Chromium	0.96	I	ug/L	P442580	
		Cobalt	0.188		ug/L	P442580	
		Copper	1.51		ug/L	P442862	
		Lead	1.36		ug/L	P442580	
		Manganese	200		ug/L	P442580	
		Molybdenum	1.63		ug/L	P442580	
		Nickel	0.63	I	ug/L	P442580	
		Selenium	0.21	I	ug/L	P442580	MS
		Silver	0.010	U	ug/L	P442580	
		Thallium	0.10	U	ug/L	P442580	
	SM 2340 B-2011	Hardness	284		mg/L	P442580	

Ref. Method and Comment:
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: P442530

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P442533

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P442580

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: P442580

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
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: P442862

Component	Result	Code	Units
Copper	0.40	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442759

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442761

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442948

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442572

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442683

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442799

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

Reference Method: EPA 8270E
Batch ID: P442593

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P442593

Component	Result	Code	Units
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

Reference Method: EPA 8276
Batch ID: P442593

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

Reference Method: EPA 8321B
Batch ID: P442353

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P442353

Component	Result	Code	Units
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: P442545

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: P442768

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

Reference Method: SM 2540 C-2015
Batch ID: P443051

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report
Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P442970

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P442772

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P442776

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: P442530

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.2		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P442533

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P442580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	111		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	103		P	85 - 115
Sodium	102		P	85 - 115
Strontium	100		P	85 - 115
Tin	98.8		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	99.5		P	85 - 115
Zinc	99.1		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.9		P	80 - 120
Antimony	101		P	80 - 120
Arsenic	99.6		P	80 - 120
Barium	101		P	80 - 120
Beryllium	100		P	80 - 120
Boron	103		P	80 - 120
Cadmium	98.8		P	80 - 120
Chromium	98.4		P	80 - 120
Cobalt	93.4		P	80 - 120
Lead	95.8		P	80 - 120
Manganese	101		P	85 - 115
Molybdenum	98.4		P	80 - 120
Nickel	95.8		P	80 - 120
Selenium	102		P	85 - 115
Silver	96.2		P	80 - 120
Thallium	99.0		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442862

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	92.1		P	80 - 120

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442759

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	95.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442761

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	94.3		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442948

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	94.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442572

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442683

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: P442799

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

Reference Method: EPA 8270E
Batch ID: P442593

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	63.5		P	30 - 96.0
Alpha-BHC	84.0		P	70 - 109
Alpha-Chlordane	92.8		P	45 - 107
Beta-BHC	108		P	64 - 138
Beta-Cyfluthrin	87.3		P	17 - 141
Bifenthrin	67.4		P	10 - 113
Chlorothalonil	45.5		P	26 - 180
Cis-Nonachlor	81.7		P	37 - 102
Cypermethrin	94.0		P	20 - 133
Dacthal	96.6		P	69 - 114
DDD-p,p'	83.9		P	42 - 105
DDE-p,p'	90.8		P	42 - 106
DDT-p,p'	80.4		P	42 - 107
Delta-BHC	97.7		P	67 - 144
Deltamethrin	120		P	15 - 149
Dichlobenil	69.7		P	46 - 117

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P442593

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dicofol	75.4		P	34 - 114
Dieldrin	103		P	50 - 108
Endosulfan I	81.6		P	55 - 104
Endosulfan II	82.8		P	51 - 111
Endosulfan Sulfate	102		P	56 - 121
Endrin	87.4		P	10 - 106
Endrin Aldehyde	81.8		P	34 - 114
Endrin Ketone	110		P	63 - 177
Esfenvalerate	97.5		P	29 - 143
Ethalfuralin	65.2		P	46 - 96.0
Fenpropathrin	83.2		P	28 - 115
Gamma-BHC	91.4		P	65 - 121
Gamma-Chlordane	81.7		P	39 - 103
Heptachlor	65.5		P	39 - 94.0
Heptachlor Epoxide	96.0		P	54 - 104
Hexachlorobenzene	76.3		P	36 - 100
Kepone	85.0		P	10 - 225
Lambda-Cyhalothrin	94.2		P	10 - 135
Methoprene	69.6		P	10 - 109
Methoxychlor	88.9		P	52 - 112
MGK-264	86.5		P	44 - 117
Mirex	72.7		P	20 - 90.0
Oxychlordane	71.7		P	44 - 102
PCB-1016	81.1		P	45 - 107
PCB-1260	88.0		P	40 - 118
Permethrin	109		P	18 - 135
Phenothrin	61.2		P	10 - 102
Piperonyl Butoxide	126		P	28 - 156
Prallethrin	78.6		P	28 - 113
Tau-Fluvalinate	72.0		P	10 - 123
Tetramethrin	82.7		P	18 - 158
Trans-Nonachlor	80.9		P	39 - 104
Triclosan Methyl	103		P	54 - 108
Trifluralin	75.6		P	46 - 97.0

Reference Method: EPA 8276
Batch ID: P442593

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	108		P	52 - 117
Toxaphene	112		P	44 - 125

Reference Method: EPA 8321B
Batch ID: P442353

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	102		P	40 - 160
AMPA	91.4		P	40 - 160
Endothall	85.3		P	40 - 160
Glufosinate	89.0		P	40 - 160
Glyphosate	96.5		P	40 - 160
Sucralose	103		P	40 - 160

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P442545

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	40 - 150
2,4,5-T	98.3		P	40 - 150
Acetaminophen	70.6		P	30 - 150
Acetamiprid	71.2		P	40 - 150
Afidopyropen	40.2		P	30 - 150
Bentazon	106		P	30 - 150
Benzovindiflupyr	79.2		P	40 - 150
Carbamazepine	72.9		P	40 - 150
Clothianidin	83.4		P	40 - 150
Dinotefuran	96.7		P	40 - 150
Diuron	71.4		P	40 - 150
Fenuron	87.9		P	40 - 150
Fluridone	83.9		P	40 - 150
Hydrocodone	81.9		P	40 - 150
Ibuprofen	138		P	40 - 150
Imazapyr	83.1		P	40 - 150
Imidacloprid	85.1		P	40 - 150
Linuron	75.8		P	40 - 150
Mandestrobin	80.6		P	40 - 150
MCPP	94.4		P	40 - 150
Naproxen	84.1		P	40 - 150
Primidone	71.1		P	40 - 150
Pyraclostrobin	79.3		P	40 - 150
Silvex	99.3		P	40 - 150
Thiamethoxam	75.2		P	40 - 150
Tolfenpyrad	55.9		P	30 - 150
Triclopyr	111		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P442768

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	102		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P443051

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	106		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P442970

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

Reference Method: SM 4500-F- C-2011
Batch ID: P442772

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.7		P	94 - 106

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2014
Batch ID: P442776

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.2		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P442580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474050	Calcium	101		P	80 - 120
2474050	Iron	108	108	P/P	80 - 120
2474050	Magnesium	101		P	80 - 120
2474050	Potassium	100	99.2	P/P	80 - 120
2474050	Sodium	99.6		P	80 - 120
2474050	Strontium	96.9	95.4	P/P	80 - 120
2474050	Tin	96.9	97.5	P/P	80 - 120
2474050	Titanium	99.4	99.9	P/P	80 - 120
2474050	Vanadium	97.5	98.0	P/P	80 - 120
2474050	Zinc	94.9	95.6	P/P	80 - 120
2474068	Calcium	105		P	80 - 120
2474068	Iron	109		P	80 - 120
2474068	Magnesium	109		P	80 - 120
2474068	Potassium	100		P	80 - 120
2474068	Sodium	101		P	80 - 120
2474068	Strontium	97.1		P	80 - 120
2474068	Tin	96.7		P	80 - 120
2474068	Titanium	95.7		P	80 - 120
2474068	Vanadium	98.7		P	80 - 120
2474068	Zinc	96.9		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474050	Aluminum	101	100	P/P	80 - 120
2474050	Antimony	104	104	P/P	80 - 120
2474050	Arsenic	101	99.2	P/P	80 - 120
2474050	Barium	102	102	P/P	80 - 120
2474050	Beryllium	101	99.3	P/P	80 - 120
2474050	Boron	107	107	P/P	80 - 120
2474050	Cadmium	102	103	P/P	80 - 120
2474050	Chromium	99.6	98.9	P/P	80 - 120
2474050	Cobalt	91.9	91.9	P/P	80 - 120
2474050	Lead	97.8	97.5	P/P	80 - 120
2474050	Manganese	101	98.8	P/P	80 - 120
2474050	Molybdenum	102	102	P/P	80 - 120
2474050	Nickel	93.5	92.9	P/P	80 - 120
2474050	Selenium	76.4	75.3	F/F	80 - 120
2474050	Silver	96.3	97.0	P/P	80 - 120
2474050	Thallium	102	103	P/P	80 - 120
2474068	Aluminum	97.9		P	80 - 120
2474068	Antimony	99.3		P	80 - 120
2474068	Arsenic	98.8		P	80 - 120
2474068	Barium	98.3		P	80 - 120
2474068	Beryllium	97.3		P	80 - 120
2474068	Boron	106		P	80 - 120
2474068	Cadmium	97.3		P	80 - 120
2474068	Chromium	98.4		P	80 - 120
2474068	Cobalt	92.7		P	80 - 120
2474068	Lead	95.1		P	80 - 120
2474068	Manganese	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474068	Molybdenum	98.8		P	80 - 120
2474068	Nickel	96.0		P	80 - 120
2474068	Selenium	94.2		P	80 - 120
2474068	Silver	94.1		P	80 - 120
2474068	Thallium	98.6		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442862

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2475295	Copper	95.3	95.7	P/P	80 - 120
2475506	Copper	96.5		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442759

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2473846	Chloride	91.2		P	90 - 110
2474115	Chloride	95.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442761

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2473846	Sulfate	92.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442948

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474044	Ammonia-N	93.0	94.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474059	Kjeldahl Nitrogen	85.2	92.2	F/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442683

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474059	NO2NO3-N	96.8		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442799

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474219	Total-P	102	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P442593

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474222	PCB-1016	71.7	73.5	P/P	45 - 107
2474222	PCB-1260	76.8	75.2	P/P	40 - 112
2474261	Aldrin	72.3	73.3	P/P	24 - 81.0
2474261	Alpha-BHC	93.1	93.6	P/P	65 - 110
2474261	Alpha-Chlordane	113	98.6	P/P	43 - 119
2474261	Beta-BHC	119	91.8	P/P	54 - 165
2474261	Beta-Cyfluthrin	118	118	P/P	27 - 165
2474261	Bifenthrin	90.6	94.9	P/P	17 - 117
2474261	Chlorothalonil	69.4	73.4	P/P	10 - 255
2474261	Cis-Nonachlor	79.1	77.8	P/P	34 - 98.0
2474261	Cypermethrin	120	123	P/P	25 - 143
2474261	Dacthal	93.6	91.1	P/P	55 - 139
2474261	DDD-p,p'	84.3	83.5	P/P	30 - 109
2474261	DDE-p,p'	80.0	89.0	P/P	35 - 106
2474261	DDT-p,p'	86.7	87.4	P/P	41 - 101
2474261	Delta-BHC	128	107	P/P	58 - 165
2474261	Deltamethrin	187	175	P/P	10 - 194
2474261	Dichlobenil	48.0	43.6	P/P	22 - 114
2474261	Dicofol	81.0	83.2	P/P	17 - 133
2474261	Dieldrin	117	102	P/P	45 - 129
2474261	Endosulfan I	81.8	86.6	P/P	49 - 104
2474261	Endosulfan II	78.8	76.1	P/P	37 - 117
2474261	Endosulfan Sulfate	96.1	75.1	P/P	38 - 128
2474261	Endrin	84.9	86.6	P/P	35 - 116
2474261	Endrin Aldehyde	52.1	40.2	P/P	19 - 108
2474261	Endrin Ketone	120	95.0	P/P	44 - 134
2474261	Esfenvalerate	167	141	P/P	27 - 176
2474261	Ethalfuralin	78.4	87.1	P/P	49 - 100
2474261	Fenpropathrin	94.6	100	P/P	34 - 117
2474261	Gamma-BHC	101	98.0	P/P	59 - 129
2474261	Gamma-Chlordane	104	100	P/P	33 - 107
2474261	Heptachlor	70.9	81.2	P/P	37 - 94.0
2474261	Heptachlor Epoxide	117	102	P/P	38 - 118
2474261	Hexachlorobenzene	80.8	85.1	P/P	35 - 97.0
2474261	Kepone	78.3	69.1	P/P	10 - 221
2474261	Lambda-Cyhalothrin	148	131	P/P	23 - 190
2474261	Methoprene	89.2	94.9	P/P	21 - 109
2474261	Methoxychlor	93.7	96.9	P/P	46 - 118
2474261	MGK-264	89.4	95.9	P/P	39 - 122
2474261	Mirex	79.6	82.1	P/P	25 - 90.0
2474261	Oxychlordane	75.6	82.9	P/P	42 - 100
2474261	Permethrin	154	151	P/P	33 - 181
2474261	Phenothrin	99.3	108	P/P	12 - 125
2474261	Piperonyl Butoxide	159	145	P/P	10 - 178
2474261	Prallethrin	90.5	94.0	P/P	24 - 122
2474261	Tau-Fluvalinate	121	115	P/P	13 - 151
2474261	Tetramethrin	107	103	P/P	16 - 172
2474261	Trans-Nonachlor	89.8	83.0	P/P	39 - 100
2474261	Triclosan Methyl	107	104	P/P	43 - 110
2474261	Trifluralin	80.6	85.4	P/P	45 - 94.0

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8276
Batch ID: P442593

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474222	Chlordane	102	107	P/P	43 - 123
2474222	Toxaphene	112	120	P/P	27 - 156

Reference Method: EPA 8321B
Batch ID: P442353

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2473524	Acesulfame K	104	106	P/P	40 - 160
2473524	AMPA	92.4	93.5	P/P	40 - 160
2473524	Endothall	93.0	91.0	P/P	40 - 160
2473524	Glufosinate	91.5	86.3	P/P	40 - 160
2473524	Glyphosate	95.8	91.4	P/P	40 - 160
2473524	Sucralose	103	100	P/P	40 - 160

Reference Method: EPA 8321B
Batch ID: P442545

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474263	2,4-D	87.9	95.0	P/P	40 - 150
2474263	2,4,5-T	84.5	85.0	P/P	40 - 150
2474263	Acetaminophen	69.3	73.1	P/P	30 - 150
2474263	Acetamiprid	62.1	74.9	P/P	40 - 150
2474263	Afidopyropen	66.5	73.9	P/P	30 - 150
2474263	Benzovindiflupyr	77.4	95.3	P/P	40 - 150
2474263	Carbamazepine	66.3	68.7	P/P	40 - 150
2474263	Clothianidin	86.1	90.0	P/P	40 - 150
2474263	Dinotefuran	105	109	P/P	40 - 150
2474263	Diuron	69.6	70.9	P/P	40 - 150
2474263	Fenuron	78.4	79.1	P/P	40 - 150
2474263	Fluridone	76.4	82.3	P/P	40 - 150
2474263	Hydrocodone	76.3	74.8	P/P	40 - 150
2474263	Ibuprofen	120	93.8	P/P	40 - 150
2474263	Imazapyr	107	119	P/P	40 - 150
2474263	Imidacloprid	96.3	98.4	P/P	40 - 150
2474263	Linuron	71.7	81.5	P/P	40 - 150
2474263	Mandestrobin	87.9	91.6	P/P	40 - 150
2474263	MCPP	78.3	72.3	P/P	40 - 150
2474263	Naproxen	93.3	90.9	P/P	40 - 150
2474263	Primidone	88.3	90.2	P/P	40 - 150
2474263	Pyraclostrobin	84.4	86.4	P/P	40 - 150
2474263	Silvex	101	93.0	P/P	40 - 150
2474263	Thiamethoxam	75.0	78.3	P/P	40 - 150
2474263	Tolfenpyrad	56.7	60.8	P/P	30 - 150
2474263	Triclopyr	95.2	94.7	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P442772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474115	Fluoride	103	101	P/P	94 - 106

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 5310 B-2014
Batch ID: P442776

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2474116	Organic Carbon	98.4	101	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P442530

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474188	Color (true)	1.11	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P442533

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474080	Turbidity	1.82	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P442580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474050	Calcium	0.235	Spike	P	0 - 20
2474050	Iron	0.532	Spike	P	0 - 20
2474050	Magnesium	0.692	Spike	P	0 - 20
2474050	Potassium	0.598	Spike	P	0 - 20
2474050	Sodium	1.43	Spike	P	0 - 20
2474050	Strontium	1.27	Spike	P	0 - 20
2474050	Tin	0.593	Spike	P	0 - 20
2474050	Titanium	0.457	Spike	P	0 - 20
2474050	Vanadium	0.473	Spike	P	0 - 20
2474050	Zinc	0.745	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474050	Aluminum	0.531	Spike	P	0 - 20
2474050	Antimony	0.0444	Spike	P	0 - 20
2474050	Arsenic	1.53	Spike	P	0 - 20
2474050	Barium	0.365	Spike	P	0 - 20
2474050	Beryllium	1.40	Spike	P	0 - 20
2474050	Boron	0.751	Spike	P	0 - 20
2474050	Cadmium	1.61	Spike	P	0 - 20
2474050	Chromium	0.660	Spike	P	0 - 20
2474050	Cobalt	0.0863	Spike	P	0 - 20
2474050	Lead	0.252	Spike	P	0 - 20
2474050	Manganese	2.43	Spike	P	0 - 20
2474050	Molybdenum	0.482	Spike	P	0 - 20
2474050	Nickel	0.572	Spike	P	0 - 20
2474050	Selenium	1.48	Spike	P	0 - 20
2474050	Silver	0.662	Spike	P	0 - 20
2474050	Thallium	0.670	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P442862

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2475295	Copper	0.337	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2473846	Chloride	0.474	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P442761

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2473846	Sulfate	1.16	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P442948

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474044	Ammonia-N	1.41	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P442572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474059	Kjeldahl Nitrogen	6.59	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P442683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474059	NO2NO3-N	0.180	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P442799

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474219	Total-P	0.411	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P442593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474222	PCB-1016	2.38	Spike	P	0 - 25
2474222	PCB-1260	2.19	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P442593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474261	Aldrin	1.35	Spike	P	0 - 41
2474261	Alpha-BHC	0.599	Spike	P	0 - 25
2474261	Alpha-Chlordane	12.0	Spike	P	0 - 32
2474261	Beta-BHC	23.1	Spike	P	0 - 33
2474261	Beta-Cyfluthrin	0.289	Spike	P	0 - 43
2474261	Bifenthrin	4.62	Spike	P	0 - 52
2474261	Chlorothalonil	5.64	Spike	P	0 - 82
2474261	Cis-Nonachlor	1.68	Spike	P	0 - 33
2474261	Cypermethrin	2.57	Spike	P	0 - 51
2474261	Dacthal	2.64	Spike	P	0 - 27
2474261	DDD-p,p'	1.02	Spike	P	0 - 39
2474261	DDE-p,p'	10.6	Spike	P	0 - 31
2474261	DDT-p,p'	0.756	Spike	P	0 - 29
2474261	Delta-BHC	18.2	Spike	P	0 - 35
2474261	Deltamethrin	6.64	Spike	P	0 - 100
2474261	Dichlobenil	9.59	Spike	P	0 - 40
2474261	Dicofol	2.58	Spike	P	0 - 37
2474261	Dieldrin	11.9	Spike	P	0 - 27
2474261	Endosulfan I	5.72	Spike	P	0 - 23
2474261	Endosulfan II	3.48	Spike	P	0 - 34
2474261	Endosulfan Sulfate	24.6	Spike	P	0 - 36
2474261	Endrin	1.96	Spike	P	0 - 45
2474261	Endrin Aldehyde	25.8	Spike	P	0 - 76
2474261	Endrin Ketone	23.1	Spike	P	0 - 43
2474261	Esfenvalerate	16.4	Spike	P	0 - 51
2474261	Ethalfuralin	10.5	Spike	P	0 - 22
2474261	Fenpropathrin	5.68	Spike	P	0 - 49
2474261	Gamma-BHC	2.83	Spike	P	0 - 28
2474261	Gamma-Chlordane	3.87	Spike	P	0 - 40
2474261	Heptachlor	13.4	Spike	P	0 - 29
2474261	Heptachlor Epoxide	10.2	Spike	P	0 - 33
2474261	Hexachlorobenzene	5.14	Spike	P	0 - 36
2474261	Kepone	12.5	Spike	P	0 - 85
2474261	Lambda-Cyhalothrin	11.8	Spike	P	0 - 55
2474261	Methoprene	6.26	Spike	P	0 - 53
2474261	Methoxychlor	3.37	Spike	P	0 - 50
2474261	MGK-264	7.04	Spike	P	0 - 43
2474261	Mirex	3.16	Spike	P	0 - 40
2474261	Oxychlordane	9.18	Spike	P	0 - 31
2474261	Permethrin	2.00	Spike	P	0 - 50
2474261	Phenothrin	8.32	Spike	P	0 - 58
2474261	Piperonyl Butoxide	7.59	Spike	P	0 - 100
2474261	Prallethrin	3.80	Spike	P	0 - 39
2474261	Tau-Fluvalinate	5.22	Spike	P	0 - 54
2474261	Tetramethrin	3.47	Spike	P	0 - 51
2474261	Trans-Nonachlor	7.83	Spike	P	0 - 39
2474261	Triclosan Methyl	3.36	Spike	P	0 - 31
2474261	Trifluralin	5.80	Spike	P	0 - 22

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P442593

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474222	Chlordane	4.66	Spike	P	0 - 28
2474222	Toxaphene	6.88	Spike	P	0 - 27

Reference Method: EPA 8321B
Batch ID: P442353

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2473524	Acesulfame K	2.47	Spike	P	0 - 30
2473524	AMPA	1.24	Spike	P	0 - 30
2473524	Endothall	2.11	Spike	P	0 - 30
2473524	Glufosinate	5.81	Spike	P	0 - 30
2473524	Glyphosate	4.53	Spike	P	0 - 30
2473524	Sucralose	2.16	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P442545

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474263	2,4-D	4.59	Spike	P	0 - 30
2474263	2,4,5-T	0.554	Spike	P	0 - 30
2474263	Acetaminophen	4.66	Spike	P	0 - 30
2474263	Acetamiprid	18.6	Spike	P	0 - 30
2474263	Afidopyropen	10.5	Spike	P	0 - 30
2474263	Bentazon	1.33	Spike	P	0 - 30
2474263	Benzovindiflupyr	20.8	Spike	P	0 - 30
2474263	Carbamazepine	3.59	Spike	P	0 - 30
2474263	Clothianidin	4.21	Spike	P	0 - 30
2474263	Dinotefuran	3.84	Spike	P	0 - 30
2474263	Diuron	1.26	Spike	P	0 - 30
2474263	Fenuron	0.822	Spike	P	0 - 30
2474263	Fluridone	7.45	Spike	P	0 - 30
2474263	Hydrocodone	2.01	Spike	P	0 - 30
2474263	Ibuprofen	24.4	Spike	P	0 - 30
2474263	Imazapyr	6.24	Spike	P	0 - 30
2474263	Imidacloprid	1.66	Spike	P	0 - 30
2474263	Linuron	12.8	Spike	P	0 - 30
2474263	Mandestrobin	4.15	Spike	P	0 - 30
2474263	MCPP	4.63	Spike	P	0 - 30
2474263	Naproxen	2.62	Spike	P	0 - 30
2474263	Primidone	2.17	Spike	P	0 - 30
2474263	Pyraclostrobin	2.41	Spike	P	0 - 30
2474263	Silvex	7.88	Spike	P	0 - 30
2474263	Thiamethoxam	4.32	Spike	P	0 - 30
2474263	Tolfenpyrad	7.05	Spike	P	0 - 30
2474263	Triclopyr	0.567	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: SM 2320 B-2011
Batch ID: P442768

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474115	Total Alkalinity	0.854	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P443051

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474140	TDS	1.08	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P442772

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474115	Fluoride	0.959	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P442776

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2474116	Organic Carbon	1.72	Spike	P	0 - 15

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

Quality Assurance Report

Surrogates

Lab Sample ID: 2474261

Field Sample ID: 20030692

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	78.6	P	37 - 129
EPA 8270E	Decachlorobiphenyl	91.2	P	26 - 115
EPA 8270E	Tetrachloro-m-xylene	67.3	P	30 - 101
EPA 8270E	Tetrachloro-m-xylene	67.2	P	29 - 95.0
EPA 8276	Decachlorobiphenyl	61.9	P	23 - 110
EPA 8276	PCNB	96.0	P	51 - 130

Lab Sample ID: 2474262

Field Sample ID: 20030792

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	96.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	80.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	69.8	P	30 - 160
EPA 8321B	Diuron-d6	79.2	P	30 - 160
EPA 8321B	Endothall-d6	80.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	94.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	99.4	P	30 - 160
EPA 8321B	Primidone-d5	88.4	P	30 - 160
EPA 8321B	Sucralose-d6	98.2	P	30 - 160

Lab Sample ID: 2474263

Field Sample ID: 20030761

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	93.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	78.1	P	30 - 160
EPA 8321B	Carbamazepine-d10	67.3	P	30 - 160
EPA 8321B	Diuron-d6	64.4	P	30 - 160
EPA 8321B	Endothall-d6	82.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	96.3	P	30 - 160
EPA 8321B	Ibuprofen-d3	80.2	P	30 - 160
EPA 8321B	Primidone-d5	78.6	P	30 - 160
EPA 8321B	Sucralose-d6	95.6	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A124642

Included Lab Sample IDs: 2474218

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

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A124645

Included Lab Sample IDs: 2474218

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

Reference Method: EPA 8321B

Run ID: A124658

Included Lab Sample IDs: 2474262, 2474263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	92.8	96.4	P/P	60 - 160
Endothall	76.2	82.8	P/P	60 - 160
Glufosinate	86.1	93.7	P/P	60 - 160
Glyphosate	92.9	96.5	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A124660

Included Lab Sample IDs: 2474262, 2474263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	99.8	100	P/P	60 - 160
Sucralose	95.1	97.9	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A124710

Included Lab Sample IDs: 2474218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.3	98.4	P/P	90 - 110
Sulfate	98.6	97.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A124711

Included Lab Sample IDs: 2474219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A124716

Included Lab Sample IDs: 2474264, 2474265, 2474266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	97.7	P/P	90 - 110
Aluminum	99.6	100	P/P	90 - 110
Antimony	98.3	97.8	P/P	90 - 110
Antimony	99.2	98.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A124716

Included Lab Sample IDs: 2474264, 2474265, 2474266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	98.4	98.6	P/P	90 - 110
Arsenic	98.6	98.4	P/P	90 - 110
Barium	98.8	97.3	P/P	90 - 110
Barium	99.3	98.8	P/P	90 - 110
Beryllium	97.0	99.1	P/P	90 - 110
Beryllium	98.4	97.0	P/P	90 - 110
Boron	102	103	P/P	90 - 110
Boron	103	106	P/P	90 - 110
Cadmium	98.5	99.4	P/P	90 - 110
Cadmium	99.4	98.3	P/P	90 - 110
Chromium	95.6	95.9	P/P	90 - 110
Chromium	96.1	95.6	P/P	90 - 110
Cobalt	92.3	92.8	P/P	90 - 110
Cobalt	92.4	92.3	P/P	90 - 110
Lead	95.3	96.3	P/P	90 - 110
Lead	96.3	95.4	P/P	90 - 110
Manganese	92.1	93.7	P/P	90 - 110
Manganese	94.9	92.1	P/P	90 - 110
Molybdenum	98.5	99.3	P/P	90 - 110
Molybdenum	99.3	98.2	P/P	90 - 110
Nickel	95.3	95.8	P/P	90 - 110
Nickel	95.8	95.7	P/P	90 - 110
Silver	94.8	94.7	P/P	90 - 110
Silver	95.9	94.8	P/P	90 - 110
Thallium	101	102	P/P	90 - 110
Thallium	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A124731

Included Lab Sample IDs: 2474219

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A124738

Included Lab Sample IDs: 2474264, 2474265, 2474266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	95.4	95.1	P/P	90 - 110
Selenium	96.6	95.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A124739

Included Lab Sample IDs: 2474218

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.5	98.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011
Run ID: A124739
Included Lab Sample IDs: 2474218

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

Reference Method: SM 5310 B-2014
Run ID: A124743
Included Lab Sample IDs: 2474219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.2	98.4	P/P	85 - 115

Reference Method: EPA 8321B
Run ID: A124779
Included Lab Sample IDs: 2474262, 2474263

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	109	P/P	50 - 150
2,4,5-T	111	120	P/P	50 - 150
Acetaminophen	107	108	P/P	60 - 160
Acetamiprid	113	111	P/P	50 - 150
Afidopyropen	101	111	P/P	50 - 150
Bentazon	114	111	P/P	50 - 160
Bentazon	120	121	P/P	50 - 160
Benzovindiflupyr	104	94.8	P/P	50 - 150
Carbamazepine	104	98.2	P/P	60 - 150
Clothianidin	108	106	P/P	60 - 150
Dinotefuran	113	113	P/P	50 - 150
Diuron	103	106	P/P	60 - 160
Fenuron	110	108	P/P	60 - 150
Fluridone	106	102	P/P	60 - 160
Hydrocodone	105	108	P/P	60 - 150
Ibuprofen	127	65.2	P/P	50 - 160
Imazapyr	86.6	96.1	P/P	50 - 150
Imidacloprid	107	104	P/P	60 - 150
Linuron	84.3	102	P/P	60 - 150
Mandestrobin	109	99.0	P/P	50 - 150
MCPP	105	113	P/P	50 - 150
Naproxen	129	103	P/P	50 - 160
Primidone	95.3	95.3	P/P	60 - 150
Pyraclostrobin	103	104	P/P	60 - 150
Silvex	92.5	96.4	P/P	50 - 150
Thiamethoxam	105	104	P/P	50 - 150
Tolfenpyrad	102	99.7	P/P	60 - 150
Triclopyr	104	99.7	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A124793
Included Lab Sample IDs: 2474219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	99.8	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A124800

Included Lab Sample IDs: 2474264, 2474265, 2474266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	100	P/P	90 - 110
Calcium	101	101	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Iron	101	100	P/P	90 - 110
Magnesium	101	101	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	100	99.2	P/P	90 - 110
Potassium	100	100	P/P	90 - 110
Sodium	97.8	98.3	P/P	90 - 110
Sodium	98.3	97.4	P/P	90 - 110
Strontium	97.2	97.8	P/P	90 - 110
Strontium	97.5	97.2	P/P	90 - 110
Tin	100	100	P/P	90 - 110
Tin	101	100	P/P	90 - 110
Titanium	99.4	100	P/P	90 - 110
Titanium	99.9	99.4	P/P	90 - 110
Vanadium	98.7	99.4	P/P	90 - 110
Vanadium	99.0	98.7	P/P	90 - 110
Zinc	98.9	98.9	P/P	90 - 110
Zinc	98.9	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A124820

Included Lab Sample IDs: 2474219

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.6	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A124822

Included Lab Sample IDs: 2474264, 2474265, 2474266

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	94.9	92.4	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A124915

Included Lab Sample IDs: 2474261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	95.9		P	80 - 120
PCB-1260	98.7		P	80 - 120

Reference Method: EPA 8270E

Run ID: A124920

Included Lab Sample IDs: 2474261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A124920
Included Lab Sample IDs: 2474261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-BHC	106		P	80 - 120
Beta-Cyfluthrin	105		P	80 - 120
Bifenthrin	101		P	80 - 120
Chlorothalonil	81.5		P	80 - 120
Cis-Nonachlor	103		P	80 - 120
Cypermethrin	103		P	80 - 120
Dacthal	101		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	103		P	80 - 120
DDT-p,p'	96.2		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	99.2		P	80 - 120
Dichlobenil	94.4		P	80 - 120
Dicofol	93.7		P	80 - 120
Dieldrin	99.4		P	80 - 120
Endosulfan I	100		P	80 - 120
Endosulfan II	98.3		P	80 - 120
Endosulfan Sulfate	95.9		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	98.0		P	80 - 120
Endrin Ketone	102		P	80 - 120
Esfenvalerate	95.3		P	80 - 120
Ethalfuralin	100		P	80 - 120
Fenpropathrin	102		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	101		P	80 - 120
Heptachlor	102		P	80 - 120
Heptachlor Epoxide	100		P	80 - 120
Hexachlorobenzene	99.0		P	80 - 120
Kepone	93.3		P	80 - 120
Lambda-Cyhalothrin	103		P	80 - 120
Methoprene	103		P	80 - 120
Methoxychlor	100		P	80 - 120
MGK-264	102		P	80 - 120
Mirex	104		P	80 - 120
Oxychlordane	100		P	80 - 120
Permethrin	102		P	80 - 120
Phenothrin	99.3		P	80 - 120
Piperonyl Butoxide	97.3		P	80 - 120
Prallethrin	99.6		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	99.9		P	80 - 120
Trans-Nonachlor	99.8		P	80 - 120
Triclosan Methyl	101		P	80 - 120
Trifluralin	101		P	80 - 120

Reference Method: EPA 8276
Run ID: A124945
Included Lab Sample IDs: 2474261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report
Calibration Verification

Reference Method: EPA 8276
Run ID: A124945
Included Lab Sample IDs: 2474261

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	95.8		P	80 - 120
Toxaphene	95.3		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)	99.2				1.11	
EPA 180.1 Rev. 2.0	Turbidity	103				1.82	
EPA 200.7 Rev. 4.4	Calcium	104	101	105			0.235
	Iron	111	108	108	109		0.532
	Magnesium	104	101	109			0.692
	Potassium	103	100	99.2	100		0.598
	Sodium	102	99.6	101			1.43
	Strontium	100	96.9	95.4	97.1		1.27
	Tin	98.8	96.9	97.5	96.7		0.593
	Titanium	102	99.4	99.9	95.7		0.457
	Vanadium	99.5	97.5	98.0	98.7		0.473
	Zinc	99.1	94.9	95.6	96.9		0.745
EPA 200.8 Rev. 5.4	Aluminum	97.9	101	100	97.9		0.531
	Antimony	101	104	104	99.3		0.0444
	Arsenic	99.6	101	99.2	98.8		1.53
	Barium	101	102	102	98.3		0.365
	Beryllium	100	101	99.3	97.3		1.40
	Boron	103	107	107	106		0.751
	Cadmium	98.8	102	103	97.3		1.61
	Chromium	98.4	99.6	98.9	98.4		0.660
	Cobalt	93.4	91.9	91.9	92.7		0.0863
	Copper	92.1	95.3	95.7	96.5		0.337
	Lead	95.8	97.8	97.5	95.1		0.252
	Manganese	101	101	98.8	101		2.43
	Molybdenum	98.4	102	102	98.8		0.482
	Nickel	95.8	93.5	92.9	96.0		0.572
	Selenium	102	76.4	75.3	94.2		1.48
	Silver	96.2	96.3	97.0	94.1		0.662
	Thallium	99.0	102	103	98.6		0.670
EPA 300.0 Rev. 2.1	Chloride	95.5	91.2	95.9		0.474	
	Sulfate	94.3	92.7			1.16	
EPA 350.1 Rev. 2.0	Ammonia-N	94.8	93.0	94.4			1.41
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	85.2	92.2			6.59
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	96.8				0.180
EPA 365.1 Rev. 2.0	Total-P	101	102	102			0.411
EPA 8270E	Aldrin	63.5	72.3	73.3			1.35
	Alpha-BHC	84.0	93.1	93.6			0.599
	Alpha-Chlordane	92.8	113	98.6			12.0
	Beta-BHC	108	119	91.8			23.1
	Beta-Cyfluthrin	87.3	118	118			0.289
	Bifenthrin	67.4	90.6	94.9			4.62
	Chlorothalonil	45.5	69.4	73.4			5.64
	Cis-Nonachlor	81.7	79.1	77.8			1.68
	Cypermethrin	94.0	120	123			2.57
	Dacthal	96.6	93.6	91.1			2.64
	DDD-p,p'	83.9	84.3	83.5			1.02
	DDE-p,p'	90.8	80.0	89.0			10.6
	DDT-p,p'	80.4	86.7	87.4			0.756
	Delta-BHC	97.7	128	107			18.2
	Deltamethrin	120	187	175			6.64
	Dichlobenil	69.7	48.0	43.6			9.59
	Dicofol	75.4	81.0	83.2			2.58
	Dieldrin	103	117	102			11.9
	Endosulfan I	81.6	81.8	86.6			5.72

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	Endosulfan II	82.8	78.8	76.1		3.48
	Endosulfan Sulfate	102	96.1	75.1		24.6
	Endrin	87.4	84.9	86.6		1.96
	Endrin Aldehyde	81.8	52.1	40.2		25.8
	Endrin Ketone	110	120	95.0		23.1
	Esfenvalerate	97.5	167	141		16.4
	Ethalfuralin	65.2	78.4	87.1		10.5
	Fenpropathrin	83.2	94.6	100		5.68
	Gamma-BHC	91.4	101	98.0		2.83
	Gamma-Chlordane	81.7	104	100		3.87
	Heptachlor	65.5	70.9	81.2		13.4
	Heptachlor Epoxide	96.0	117	102		10.2
	Hexachlorobenzene	76.3	80.8	85.1		5.14
	Kepone	85.0	78.3	69.1		12.5
	Lambda-Cyhalothrin	94.2	148	131		11.8
	Methoprene	69.6	89.2	94.9		6.26
	Methoxychlor	88.9	93.7	96.9		3.37
	MGK-264	86.5	89.4	95.9		7.04
	Mirex	72.7	79.6	82.1		3.16
	Oxychlordane	71.7	75.6	82.9		9.18
	PCB-1016	81.1	71.7	73.5		2.38
	PCB-1260	88.0	76.8	75.2		2.19
	Permethrin	109	154	151		2.00
	Phenothrin	61.2	99.3	108		8.32
	Piperonyl Butoxide	126	159	145		7.59
	Prallethrin	78.6	90.5	94.0		3.80
	Tau-Fluvalinate	72.0	121	115		5.22
	Tetramethrin	82.7	107	103		3.47
	Trans-Nonachlor	80.9	89.8	83.0		7.83
	Triclosan Methyl	103	107	104		3.36
	Trifluralin	75.6	80.6	85.4		5.80
EPA 8276	Chlordane	108	102	107		4.66
	Toxaphene	112	112	120		6.88
EPA 8321B	2,4-D	108	87.9	95.0		4.59
	2,4,5-T	98.3	84.5	85.0		0.554
	Acesulfame K	102	104	106		2.47
	Acetaminophen	70.6	73.1	69.3		4.66
	Acetamiprid	71.2	74.9	62.1		18.6
	Afidopyropen	40.2	73.9	66.5		10.5
	AMPA	91.4	92.4	93.5		1.24
	Bentazon	106				1.33
	Benzovindiflupyr	79.2	77.4	95.3		20.8
	Carbamazepine	72.9	68.7	66.3		3.59
	Clothianidin	83.4	90.0	86.1		4.21
	Dinotefuran	96.7	109	105		3.84
	Diuron	71.4	70.9	69.6		1.26
	Endothall	85.3	93.0	91.0		2.11
	Fenuron	87.9	79.1	78.4		0.822
	Fluridone	83.9	82.3	76.4		7.45
	Glufosinate	89.0	91.5	86.3		5.81
	Glyphosate	96.5	95.8	91.4		4.53
	Hydrocodone	81.9	74.8	76.3		2.01
	Ibuprofen	138	120	93.8		24.4
	Imazapyr	83.1	107	119		6.24

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Imidacloprid	85.1	98.4	96.3		1.66
	Linuron	75.8	81.5	71.7		12.8
	Mandestrobin	80.6	91.6	87.9		4.15
	MCP	94.4	78.3	72.3		4.63
	Naproxen	84.1	93.3	90.9		2.62
	Primidone	71.1	90.2	88.3		2.17
	Pyraclostrobin	79.3	84.4	86.4		2.41
	Silvex	99.3	101	93.0		7.88
	Sucralose	103	103	100		2.16
	Thiamethoxam	75.2	78.3	75.0		4.32
	Tolfenpyrad	55.9	56.7	60.8		7.05
	Triclopyr	111	95.2	94.7		0.567
SM 2320 B-2011	Total Alkalinity	102			0.854	
SM 2540 C-2015	TDS	106			1.08	
SM 2540 D-2015	TSS	96.8				
SM 4500-F- C-2011	Fluoride	99.7	103	101		0.959
SM 5310 B-2014	Organic Carbon	99.2	98.4	101		1.72

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2474218
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2474218
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2474264, 2474265, 2474266
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2474264, 2474265, 2474266
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2474218
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2474218
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2474219
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2474219
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2474219
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2474219
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2474261
EPA 8270E	PCBs in water matrices by GC/MS/MS	2474261
EPA 8276	Chlordane and Toxaphene in water matrices by GC/MS with Negative Chemical Ionization	2474261
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2474262, 2474263
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2474218
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2474264, 2474265, 2474266
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2474218
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2474218
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2474218
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2474219

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	03/08/2024			03/08/2024 15:35	Jessica K Wilks	2474218
EPA 180.1 Rev. 2.0	03/08/2024			03/08/2024 13:58	Khloe J Berg	2474218
EPA 200.7 Rev. 4.4	03/08/2024	03/11/2024 12:00	George D Taylor	03/15/2024 17:30	Conrad Hartmann	2474264
	03/08/2024	03/11/2024 12:00	George D Taylor	03/15/2024 18:01	Conrad Hartmann	2474265
	03/08/2024	03/11/2024 12:00	George D Taylor	03/15/2024 18:08	Conrad Hartmann	2474266
EPA 200.8 Rev. 5.4	03/08/2024	03/11/2024 12:00	George D Taylor	03/12/2024 18:24	Emily M Philpot	2474264
	03/08/2024	03/11/2024 12:00	George D Taylor	03/12/2024 18:33	Emily M Philpot	2474265
	03/08/2024	03/11/2024 12:00	George D Taylor	03/12/2024 19:26	Emily M Philpot	2474266
	03/08/2024	03/11/2024 12:00	George D Taylor	03/13/2024 15:42	Emily M Philpot	2474264
	03/08/2024	03/11/2024 12:00	George D Taylor	03/13/2024 15:49	Emily M Philpot	2474265
	03/08/2024	03/11/2024 12:00	George D Taylor	03/13/2024 16:30	Emily M Philpot	2474266
	03/08/2024	03/15/2024 12:40	George D Taylor	03/18/2024 20:22	Emily M Philpot	2474264
	03/08/2024	03/15/2024 12:40	George D Taylor	03/18/2024 20:31	Emily M Philpot	2474265
	03/08/2024	03/15/2024 12:40	George D Taylor	03/18/2024 20:41	Emily M Philpot	2474266
EPA 300.0 Rev. 2.1	03/08/2024			03/13/2024 23:07	James L Waggeberby	2474218
EPA 350.1 Rev. 2.0	03/08/2024			03/18/2024 13:39	Khloe J Berg	2474219
EPA 351.2 Rev. 2.0	03/08/2024	03/12/2024 10:09	Simonne.V. Calhoun	03/13/2024 14:35	Samantha L Bates	2474219
EPA 353.2 Rev. 2.0	03/08/2024			03/12/2024 15:14	Fadila Guebre	2474219
EPA 365.1 Rev. 2.0	03/08/2024	03/14/2024 13:51	Josephine W Gitau	03/15/2024 17:26	James L Waggeberby	2474219
EPA 8270E	03/08/2024	03/14/2024 08:00	Rasheda Ghaffari	03/20/2024 01:29	Lipi Saha	2474261
	03/08/2024	03/14/2024 08:00	Rasheda Ghaffari	03/21/2024 20:20	Kenedi Mills	2474261
EPA 8276	03/08/2024	03/14/2024 08:00	Rasheda Ghaffari	03/22/2024 12:01	Arthur Maknenko	2474261
EPA 8321B	03/08/2024	03/08/2024 12:00	Samatha Luckman	03/08/2024 21:45	Samatha Luckman	2474262
	03/08/2024	03/08/2024 12:00	Samatha Luckman	03/08/2024 21:58	Samatha Luckman	2474263
	03/08/2024	03/08/2024 12:00	Samatha Luckman	03/09/2024 09:34	Samatha Luckman	2474262
	03/08/2024	03/08/2024 12:00	Samatha Luckman	03/09/2024 09:48	Samatha Luckman	2474263
	03/08/2024	03/12/2024 09:00	Hoor Shaik	03/14/2024 21:48	Juyoung Kim	2474263
	03/08/2024	03/12/2024 09:00	Hoor Shaik	03/14/2024 23:18	Juyoung Kim	2474262
	03/08/2024	03/12/2024 09:00	Hoor Shaik	03/15/2024 13:11	Juyoung Kim	2474263
SM 2320 B-2011	03/08/2024			03/14/2024 02:07	Dale L. Simmons	2474218
SM 2340 B-2011	03/08/2024			03/15/2024 17:30	Conrad Hartmann	2474264
	03/08/2024			03/15/2024 18:01	Conrad Hartmann	2474265
	03/08/2024			03/15/2024 18:08	Conrad Hartmann	2474266
SM 2540 C-2015	03/08/2024			03/12/2024 15:04	Yijie Li	2474218
SM 2540 D-2015	03/08/2024			03/12/2024 15:04	Yijie Li	2474218
SM 4500-F- C-2011	03/08/2024			03/14/2024 02:07	Dale L. Simmons	2474218
SM 5310 B-2014	03/08/2024			03/12/2024 22:53	Khloe J Berg	2474219