

Chemical Analysis Report

SE-DIST-2023-02-08-01

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

Event Description: **SMP - Stuart**
Request ID: **RQ-2023-02-06-29**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Colin Wright, Program Administrator

Date Certified: 03-MAR-2023 13:49

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

Case Narrative

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

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

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

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

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

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

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

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

Precision is reported as relative percent difference unless otherwise noted.

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

QC Codes used in this report may include:

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

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

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

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

Sample Location: Bessy Creek @ Murphy

Collection Date/Time: 02/07/2023 09:50

Field ID: G2SE0017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385828	EPA 8270E	Aldrin	0.66	U	ng/L	P425547	LCS, MS
		Alpha-BHC	0.10	UJ	ng/L	P425547	
		Alpha-Chlordane	0.20	U	ng/L	P425547	
		PCB-1016	2.0	U	ng/L	P425547	
		Beta-BHC	0.10	U	ng/L	P425547	
		PCB-1221	2.0	U	ng/L	P425547	
		Beta-Cyfluthrin	2.1E+04		ng/L	P425547	
		PCB-1232	2.0	U	ng/L	P425547	
		Bifenthrin	0.51	U	ng/L	P425547	
		PCB-1242	2.0	U	ng/L	P425547	
		PCB-1248	2.0	U	ng/L	P425547	
		Chlorothalonil	3.7	U	ng/L	P425547	
		PCB-1254	2.0	U	ng/L	P425547	
		Cis-Nonachlor	0.20	U	ng/L	P425547	
		PCB-1260	2.0	U	ng/L	P425547	MS
		Cypermethrin	1.5	U	ng/L	P425547	
		Dacthal	0.15	U	ng/L	P425547	
		DDD-p,p'	0.26	U	ng/L	P425547	
		DDE-p,p'	0.20	U	ng/L	P425547	
		DDT-p,p'	0.26	U	ng/L	P425547	
		Delta-BHC	0.41	U	ng/L	P425547	
		Deltamethrin	1.3	U	ng/L	P425547	
		Dichlobenil	0.26	U	ng/L	P425547	
		Dicofol	1.3	U	ng/L	P425547	
		Dieldrin	0.41	U	ng/L	P425547	MS
		Endosulfan I	0.41	U	ng/L	P425547	
		Endosulfan II	0.41	U	ng/L	P425547	
		Endosulfan Sulfate	0.64	I	ng/L	P425547	
		Endrin	0.41	U	ng/L	P425547	LCS
		Endrin Aldehyde	0.77	U	ng/L	P425547	
		Endrin Ketone	0.41	U	ng/L	P425547	
		Esfenvalerate	0.77	U	ng/L	P425547	
		Ethalfuralin	0.15	U	ng/L	P425547	
		Fenpropathrin	0.26	U	ng/L	P425547	
		Gamma-BHC	0.13	UJ	ng/L	P425547	
		Gamma-Chlordane	0.20	U	ng/L	P425547	
		Heptachlor	0.20	U	ng/L	P425547	
		Heptachlor Epoxide	0.26	U	ng/L	P425547	
		Hexachlorobenzene**	1.0	U	ng/L	P425547	
		Kepone	5.1	U	ng/L	P425547	
		Lambda-Cyhalothrin	0.77	U	ng/L	P425547	
		Methoprene	0.77	U	ng/L	P425547	
		Methoxychlor	0.31	U	ng/L	P425547	
		MGK-264	0.20	U	ng/L	P425547	

Field ID: G2SE0017

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385828	EPA 8270E	Mirex	0.36	U	ng/L	P425547	
		Oxychlordane	0.31	U	ng/L	P425547	
		Permethrin	1.6	U	ng/L	P425547	
		Phenothrin	0.92	U	ng/L	P425547	
		Piperonyl Butoxide	0.31	I	ng/L	P425547	
		Prallethrin	2.0	U	ng/L	P425547	
		Tau-Fluvalinate	0.26	U	ng/L	P425547	
		Tetramethrin	0.77	U	ng/L	P425547	
		Trans-Nonachlor	0.20	U	ng/L	P425547	
		Triclosan Methyl	0.15	U	ng/L	P425547	
		Trifluralin	0.20	U	ng/L	P425547	
		Chlordane	2.0	U	ng/L	P425547	
		Toxaphene	15	U	ng/L	P425547	
2385831	EPA 200.7 Rev. 4.4	Calcium	131		mg/L	P425797	
		Chromium	1.4	I	ug/L	P425797	
		Iron	490		ug/L	P425797	
		Magnesium	192		mg/L	P425797	
		Potassium	61		mg/L	P425797	
		Sodium	1.61E+03		mg/L	P425797	
		Strontium	1.77E+03		ug/L	P425797	
		Tin	60	U	ug/L	P425797	
		Titanium	0.75	U	ug/L	P425797	
		Vanadium	2.0	U	ug/L	P425797	
		Zinc	6.6	I	ug/L	P425797	
	EPA 200.8 Rev. 5.4	Aluminum	84		ug/L	P426231	
		Antimony	0.12	I	ug/L	P426231	
		Arsenic	2.69		ug/L	P426231	
		Barium	21.5		ug/L	P426231	
		Beryllium	0.011	I	ug/L	P426231	
		Boron	611		ug/L	P426231	
		Cadmium	0.020	U	ug/L	P426231	
		Cobalt	0.087		ug/L	P426231	
		Copper	1.55		ug/L	P426231	
		Lead	0.20	U	ug/L	P426231	
		Manganese	15.2		ug/L	P426231	
		Molybdenum	2.84		ug/L	P426231	
		Nickel	0.50	U	ug/L	P426231	
		Selenium	0.28	I	ug/L	P426231	
		Silver	0.046		ug/L	P426231	
		Thallium	0.10	U	ug/L	P426231	

Ref. Method and Comment:

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

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

Sample Location: Mapps Creek tidal at Mapp Rd.

Collection Date/Time: 02/07/2023 10:25

Field ID: G2SE0076

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385832	EPA 200.7 Rev. 4.4	Calcium	78.9		mg/L	P425591	
		Chromium	1.2	I	ug/L	P425591	
		Iron	790		ug/L	P425591	
		Magnesium	22.4		mg/L	P425591	
		Potassium	8.0		mg/L	P425591	
		Sodium	166		mg/L	P425591	
		Strontium	677		ug/L	P425591	
		Tin	3.0	U	ug/L	P425591	
		Titanium	2.6	I	ug/L	P425591	
		Vanadium	2.0	U	ug/L	P425591	
		Zinc	5.0	U	ug/L	P425591	
	EPA 200.8 Rev. 5.4	Aluminum	210		ug/L	P425591	
		Antimony	0.067	I	ug/L	P425591	
		Arsenic	1.41		ug/L	P425591	
		Barium	24.2		ug/L	P425591	
		Beryllium	0.019	I	ug/L	P425591	
		Boron	101		ug/L	P425591	
		Cadmium	0.020	U	ug/L	P425591	
		Cobalt	0.121		ug/L	P425591	
		Copper	1.19		ug/L	P425591	
		Lead	0.28	I	ug/L	P425591	
		Manganese	18.6		ug/L	P425591	
		Molybdenum	1.03		ug/L	P425591	
		Nickel	0.50	U	ug/L	P425591	
		Selenium	0.21	I	ug/L	P425591	
		Silver	0.010	U	ug/L	P425591	
		Thallium	0.10	U	ug/L	P425591	
	SM 2340 B-2011	Hardness	289		mg/L	P425591	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: St. Lucie Canal near I-95

Collection Date/Time: 02/07/2023 10:55

Field ID: G2SE0077

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385833	EPA 200.7 Rev. 4.4	Calcium	60.0		mg/L	P425591	
		Chromium	1.9	I	ug/L	P425591	
		Iron	1.03E+03		ug/L	P425591	
		Magnesium	12.6		mg/L	P425591	
		Potassium	6.1		mg/L	P425591	
		Sodium	55.8		mg/L	P425591	
		Strontium	754		ug/L	P425591	
		Tin	3.0	U	ug/L	P425591	
		Titanium	6.2		ug/L	P425591	
		Vanadium	2.4	I	ug/L	P425591	
		Zinc	5.0	U	ug/L	P425591	
	EPA 200.8 Rev. 5.4	Aluminum	525		ug/L	P425591	
		Antimony	0.11	I	ug/L	P425591	
		Arsenic	1.48		ug/L	P425591	
		Barium	27.1		ug/L	P425591	
		Beryllium	0.041		ug/L	P425591	
		Boron	64.6		ug/L	P425591	
		Cadmium	0.020	U	ug/L	P425591	
		Cobalt	0.211		ug/L	P425591	
		Copper	2.50		ug/L	P425591	
		Lead	0.61		ug/L	P425591	
		Manganese	20.8		ug/L	P425591	
		Molybdenum	1.35		ug/L	P425591	
		Nickel	0.96	I	ug/L	P425591	
		Selenium	0.29	I	ug/L	P425591	
		Silver	0.010	U	ug/L	P425591	
		Thallium	0.10	U	ug/L	P425591	
	SM 2340 B-2011	Hardness	202		mg/L	P425591	

Ref. Method and Comment:

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: Roebuck Creek @ Locks

Collection Date/Time: 02/07/2023 11:10

Field ID: G2SE0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385829	EPA 8321B	2,4-D	0.0040	I	ug/L	P425592	
		Acesulfame K	0.22	I	ug/L	P425414	
		2,4,5-T	0.0040	U	ug/L	P425592	
		AMPA	0.97		ug/L	P425414	
		Acetaminophen	0.0080	U	ug/L	P425592	
		Acetamiprid	0.0020	U	ug/L	P425592	
		Endothall	0.25	U	ug/L	P425414	
		Glufosinate	0.10	U	ug/L	P425414	
		Glyphosate	0.70		ug/L	P425414	
		Afidopyropen	0.0020	U	ug/L	P425592	
		Bentazon	0.068		ug/L	P425592	
		Sucralose	11		ug/L	P425414	
		Benzovindiflupyr	0.0020	U	ug/L	P425592	
		Carbamazepine	0.0084		ug/L	P425592	
		Clothianidin	0.018		ug/L	P425592	
		Dinotefuran	0.0020	U	ug/L	P425592	
		Diuron	0.0020	U	ug/L	P425592	
		Fenuron	0.032	U	ug/L	P425592	
		Fluridone	9.9E-04	I	ug/L	P425592	
		Imazapyr	0.16		ug/L	P425592	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.080	U	ug/L	P425592	
		Imidacloprid	0.021		ug/L	P425592	
		Linuron	0.0040	U	ug/L	P425592	
		Mandestrobin	0.0020	U	ug/L	P425592	
		MCPP	0.0024	I	ug/L	P425592	
		Naproxen	0.0080	U	ug/L	P425592	RPD
		Primidone	0.025		ug/L	P425592	
		Pyraclostrobin	0.0020	U	ug/L	P425592	
		Silvex	0.0040	U	ug/L	P425592	
		Thiamethoxam	0.0020	U	ug/L	P425592	
		Tolfenpyrad	0.0020	U	ug/L	P425592	
		Triclopyr	0.0040	U	ug/L	P425592	

Sample Location: Krueger Creek near Commissioners Park

Collection Date/Time: 02/07/2023 12:30

Field ID: G2SE0069

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385810	DEP SOP: NU-094-1	Color (true)	29		PCU	P425557	
	EPA 180.1 Rev. 2.0	Turbidity	6.3		NTU	P425559	
	EPA 300.0 Rev. 2.1	Chloride	9.7E+03		mg Cl/L	P426093	
		Sulfate	1.4E+03		mg SO4/L	P426096	
	SM 2320 B-2011	Total Alkalinity	137		mg CaCO3/L	P425908	
	SM 2540 C-2015	TDS	1.66E+04		mg/L	P426112	
	SM 2540 D-2015	TSS	13		mg/L	P426007	
	SM 4500-F- C-2011	Fluoride	0.74		mg F/L	P425910	
2385811	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P426088	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P425572	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P425722	
	EPA 365.1 Rev. 2.0	Total-P	0.082		mg P/L	P425643	
	SM 5310 B-2011	Organic Carbon	9.0		mg C/L	P425802	
2385827	EPA 8270E	Aldrin	0.66	U	ng/L	P425547	
		Alpha-BHC	0.10	UJ	ng/L	P425547	LCS, MS
		Alpha-Chlordane	0.20	U	ng/L	P425547	
		PCB-1016	2.0	U	ng/L	P425547	
		Beta-BHC	0.10	U	ng/L	P425547	
		PCB-1221	2.0	U	ng/L	P425547	
		Beta-Cyfluthrin	1.3	U	ng/L	P425547	
		PCB-1232	2.0	U	ng/L	P425547	
		Bifenthrin	0.51	U	ng/L	P425547	
		PCB-1242	2.0	U	ng/L	P425547	
		PCB-1248	2.0	U	ng/L	P425547	
		Chlorothalonil	3.7	U	ng/L	P425547	
		PCB-1254	2.0	U	ng/L	P425547	
		Cis-Nonachlor	0.20	U	ng/L	P425547	
		PCB-1260	2.0	U	ng/L	P425547	
		Cypermethrin	1.5	U	ng/L	P425547	
		Dacthal	0.15	U	ng/L	P425547	
		DDD-p,p'	0.26	U	ng/L	P425547	
		DDE-p,p'	0.20	U	ng/L	P425547	
		DDT-p,p'	0.26	U	ng/L	P425547	MS
		Delta-BHC	0.41	U	ng/L	P425547	
		Deltamethrin	1.3	U	ng/L	P425547	
		Dichlobenil	0.26	U	ng/L	P425547	
		Dicofol	1.3	U	ng/L	P425547	
		Diieldrin	0.41	U	ng/L	P425547	
		Endosulfan I	0.41	U	ng/L	P425547	MS
		Endosulfan II	0.41	U	ng/L	P425547	
		Endosulfan Sulfate	0.31	U	ng/L	P425547	
		Endrin	0.41	U	ng/L	P425547	
		Endrin Aldehyde	0.77	U	ng/L	P425547	
		Endrin Ketone	0.41	U	ng/L	P425547	

Field ID: G2SE0069

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385827	EPA 8270E	Esfenvalerate	0.77	U	ng/L	P425547	LCS
		Ethalfuralin	0.15	U	ng/L	P425547	
		Fenpropathrin	0.26	U	ng/L	P425547	
		Gamma-BHC	0.13	UJ	ng/L	P425547	
		Gamma-Chlordane	0.20	U	ng/L	P425547	
		Heptachlor	0.20	U	ng/L	P425547	
		Heptachlor Epoxide	0.26	U	ng/L	P425547	
		Hexachlorobenzene**	1.0	U	ng/L	P425547	
		Kepone	5.1	U	ng/L	P425547	
		Lambda-Cyhalothrin	0.77	U	ng/L	P425547	
		Methoprene	0.77	U	ng/L	P425547	
		Methoxychlor	0.31	U	ng/L	P425547	
		MGK-264	0.20	U	ng/L	P425547	
		Mirex	0.36	U	ng/L	P425547	
		Oxychlordane	0.31	U	ng/L	P425547	
		Permethrin	1.6	U	ng/L	P425547	
		Phenothrin	0.92	U	ng/L	P425547	
		Piperonyl Butoxide	0.15	U	ng/L	P425547	
		Prallethrin	2.0	U	ng/L	P425547	
		Tau-Fluvalinate	0.26	U	ng/L	P425547	
		Tetramethrin	0.77	U	ng/L	P425547	
		Trans-Nonachlor	0.20	U	ng/L	P425547	
		Triclosan Methyl	0.15	U	ng/L	P425547	
		Trifluralin	0.20	U	ng/L	P425547	
	EPA 8276	Chlordane	2.0	U	ng/L	P425547	
		Toxaphene	15	U	ng/L	P425547	
2385830	EPA 200.7 Rev. 4.4	Calcium	237		mg/L	P425797	
		Chromium	4.0	I	ug/L	P425797	
		Iron	240	I	ug/L	P425797	
		Magnesium	643		mg/L	P425797	
		Potassium	191		mg/L	P425797	
		Sodium	5.20E+03		mg/L	P425797	
		Strontium	4.41E+03		ug/L	P425797	
		Tin	9.0	U	ug/L	P425797	
		Titanium	5.3	I	ug/L	P425797	
		Vanadium	6.0	U	ug/L	P425797	
		Zinc	15	U	ug/L	P425797	
		EPA 200.8 Rev. 5.4	Aluminum	187		ug/L	P426238
	Antimony		0.20	U	ug/L	P426238	
	Arsenic		2.93		ug/L	P426238	
	Barium		17.6		ug/L	P426238	
	Beryllium		0.040	U	ug/L	P426238	
	Boron		2.04E+03		ug/L	P426238	
	Cadmium		0.080	U	ug/L	P426238	
	Cobalt		0.15	I	ug/L	P426238	

Field ID: G2SE0069

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385830	EPA 200.8 Rev. 5.4	Copper	3.4		ug/L	P426238	
		Lead	2.0	U	ug/L	P426238	
		Manganese	8.5		ug/L	P426238	
		Molybdenum	6.6		ug/L	P426238	
		Nickel	2.0	U	ug/L	P426238	
		Selenium	0.80	U	ug/L	P426238	
		Silver	0.040	U	ug/L	P426238	
		Thallium	1.0	U	ug/L	P426238	
	SM 2340 B-2011	Hardness	3.24E+03		mg/L	P425797	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium and sodium are unavailable because of high analyte concentration in the QC sample.

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P425557

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425559

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425591

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Chromium	1.0	U	ug/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425797

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Chromium	1.0	U	ug/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: P425591

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
Cobalt	0.020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P425591

Component	Result	Code	Units
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 200.8 Rev. 5.4

Batch ID: P426231

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
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 200.8 Rev. 5.4

Batch ID: P426238

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
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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426093

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426096

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426088

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425572

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425722

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425643

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

Reference Method: EPA 8270E
Batch ID: P425547

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-BHC	0.10	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Bifenthrin	0.50	U	ng/L
Chlorothalonil	3.6	U	ng/L
Chlorothalonil	3.6	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425547

Component	Result	Code	Units
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425547

Component	Result	Code	Units
Methoprene	0.75	U	ng/L
Methoprene	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.35	U	ng/L
Mirex	0.35	U	ng/L
Oxychlordane	0.30	U	ng/L
Oxychlordane	0.30	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1016	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1221	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1232	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1242	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1248	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1254	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
PCB-1260	2.0	U	ng/L
Permethrin	1.6	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276

Batch ID: P425547

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B

Batch ID: P425414

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: P425592

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: P425908

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

Reference Method: SM 2540 C-2015

Batch ID: P426112

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-2015
Batch ID: P426007

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P425910

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P425802

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: P425557

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425559

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.7		P	85 - 115
Chromium	100		P	85 - 115
Iron	105		P	85 - 115
Magnesium	99.6		P	85 - 115
Potassium	103		P	85 - 115
Sodium	103		P	85 - 115
Strontium	104		P	85 - 115
Tin	101		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	103		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425797

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Chromium	105		P	85 - 115
Iron	106		P	85 - 115
Magnesium	103		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Strontium	102		P	85 - 115
Tin	105		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	104		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P425591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	104		P	85 - 115
Barium	105		P	85 - 115
Beryllium	95.6		P	85 - 115
Boron	107		P	85 - 115
Cadmium	105		P	85 - 115
Cobalt	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P425591

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	103		P	85 - 115
Lead	97.5		P	85 - 115
Manganese	103		P	85 - 115
Molybdenum	104		P	85 - 115
Nickel	103		P	85 - 115
Selenium	102		P	85 - 115
Silver	102		P	85 - 115
Thallium	100		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426231

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.3		P	85 - 115
Antimony	98.6		P	85 - 115
Arsenic	95.3		P	85 - 115
Barium	98.6		P	85 - 115
Beryllium	92.6		P	85 - 115
Boron	99.7		P	85 - 115
Cadmium	98.4		P	85 - 115
Cobalt	94.1		P	85 - 115
Copper	93.5		P	85 - 115
Lead	95.8		P	85 - 115
Manganese	97.1		P	85 - 115
Molybdenum	95.9		P	85 - 115
Nickel	94.7		P	85 - 115
Selenium	94.5		P	85 - 115
Silver	97.5		P	85 - 115
Thallium	97.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426238

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	97.7		P	85 - 115
Antimony	97.1		P	85 - 115
Arsenic	96.8		P	85 - 115
Barium	98.6		P	85 - 115
Beryllium	90.8		P	85 - 115
Boron	103		P	85 - 115
Cadmium	97.0		P	85 - 115
Cobalt	99.5		P	85 - 115
Copper	95.2		P	85 - 115
Lead	96.2		P	85 - 115
Manganese	95.8		P	85 - 115
Molybdenum	97.2		P	85 - 115
Nickel	96.5		P	85 - 115
Selenium	96.0		P	85 - 115
Silver	102		P	85 - 115
Thallium	98.8		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426093

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426096

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426088

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425572

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425722

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425643

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

Reference Method: EPA 8270E
Batch ID: P425547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	64.0		P	10 - 92.0
Alpha-BHC	62.7		F	75 - 107
Alpha-Chlordane	74.3		P	50 - 108
Beta-BHC	88.2		P	36 - 138
Beta-Cyfluthrin	69.4		P	20 - 161
Bifenthrin	41.9		P	10 - 119
Chlorothalonil	40.6		P	26 - 186
Cis-Nonachlor	65.8		P	42 - 119
Cypermethrin	63.3		P	22 - 150
Dacthal	82.0		P	72 - 119
DDD-p,p'	53.8		P	45 - 107
DDE-p,p'	53.4		P	48 - 106
DDT-p,p'	62.5		P	48 - 110
Delta-BHC	79.1		P	54 - 140
Deltamethrin	52.1		P	22 - 189
Dichlobenil	63.8		P	36 - 117

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P425547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dicofol	56.4		P	46 - 155
Dieldrin	56.8		P	54 - 110
Endosulfan I	59.5		P	59 - 105
Endosulfan II	58.8		P	51 - 118
Endosulfan Sulfate	80.6		P	57 - 121
Endrin	70.1		P	10 - 120
Endrin Aldehyde	54.0		P	34 - 118
Endrin Ketone	76.1		P	69 - 177
Esfenvalerate	45.1		P	23 - 168
Ethalfuralin	53.3		P	49 - 99.0
Fenpropathrin	48.1		P	34 - 117
Gamma-BHC	68.9		F	72 - 117
Gamma-Chlordane	64.1		P	43 - 106
Heptachlor	60.0		P	41 - 98.0
Heptachlor Epoxide	73.4		P	57 - 106
Hexachlorobenzene	66.3		P	36 - 99.0
Kepone	32.0		P	16 - 215
Lambda-Cyhalothrin	43.3		P	21 - 177
Methoprene	52.4		P	10 - 119
Methoxychlor	65.9		P	60 - 112
MGK-264	54.9		P	26 - 122
Mirex	49.6		P	10 - 169
Oxychlordane	54.5		P	43 - 105
PCB-1016	84.9		P	48 - 112
PCB-1260	88.0		P	44 - 118
Permethrin	82.3		P	24 - 148
Phenothrin	48.9		P	10 - 106
Piperonyl Butoxide	74.3		P	10 - 139
Prallethrin	57.1		P	17 - 109
Tau-Fluvalinate	34.4		P	13 - 131
Tetramethrin	63.1		P	10 - 132
Trans-Nonachlor	52.3		P	44 - 106
Triclosan Methyl	82.1		P	59 - 109
Trifluralin	60.9		P	44 - 101

Reference Method: EPA 8276
Batch ID: P425547

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	107		P	61 - 116
Toxaphene	117		P	48 - 124

Reference Method: EPA 8321B
Batch ID: P425414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	134		P	40 - 150
AMPA	95.3		P	40 - 150
Endothall	98.7		P	40 - 150
Glufosinate	112		P	40 - 150
Glyphosate	92.5		P	40 - 150
Sucralose	137		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P425592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	85.8		P	40 - 150
2,4,5-T	77.3		P	40 - 150
Acetaminophen	83.3		P	30 - 150
Acetamiprid	82.1		P	40 - 150
Afidopyropen	61.5		P	30 - 150
Bentazon	91.0		P	30 - 150
Benzovindiflupyr	84.8		P	40 - 150
Carbamazepine	90.7		P	40 - 150
Clothianidin	94.4		P	40 - 150
Dinotefuran	98.8		P	40 - 150
Diuron	75.7		P	40 - 150
Fenuron	96.1		P	40 - 150
Fluridone	80.2		P	40 - 150
Hydrocodone	86.0		P	40 - 150
Ibuprofen	56.8		P	40 - 150
Imazapyr	83.3		P	40 - 150
Imidacloprid	84.3		P	40 - 150
Linuron	76.7		P	40 - 150
Mandestrobin	97.8		P	40 - 150
MCPP	97.5		P	40 - 150
Naproxen	63.2		P	40 - 150
Primidone	89.3		P	40 - 150
Pyraclostrobin	78.3		P	40 - 150
Silvex	72.1		P	40 - 150
Thiamethoxam	82.5		P	40 - 150
Tolfenpyrad	44.6		P	30 - 150
Triclopyr	77.2		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P425908

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.3		P	94 - 106

Reference Method: SM 2540 C-2015

Batch ID: P426112

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	95.3		P	90 - 110

Reference Method: SM 2540 D-2015

Batch ID: P426007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.0		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P425910

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.0		P	96 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P425802

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.0		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P425591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385859	Calcium	101		P	80 - 120
2385859	Chromium	96.7	98.4	P/P	80 - 120
2385859	Iron	103	103	P/P	80 - 120
2385859	Magnesium	103		P	80 - 120
2385859	Potassium	100	101	P/P	80 - 120
2385859	Sodium	103		P	80 - 120
2385859	Strontium	102	105	P/P	80 - 120
2385859	Tin	98.6	99.1	P/P	80 - 120
2385859	Titanium	98.7	100	P/P	80 - 120
2385859	Vanadium	99.4	101	P/P	80 - 120
2385859	Zinc	101	103	P/P	80 - 120
2385934	Chromium	99.0		P	80 - 120
2385934	Iron	103		P	80 - 120
2385934	Magnesium	101		P	80 - 120
2385934	Potassium	110		P	80 - 120
2385934	Sodium	106		P	80 - 120
2385934	Strontium	104		P	80 - 120
2385934	Tin	98.8		P	80 - 120
2385934	Titanium	103		P	80 - 120
2385934	Zinc	101		P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P425797

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385831	Chromium	98.5	98.3	P/P	70 - 130
2385831	Iron	101	100	P/P	70 - 130
2385831	Strontium	99.7	100	P/P	70 - 130
2385831	Tin	125	126	P/P	70 - 130
2385831	Titanium	101	101	P/P	70 - 130
2385831	Vanadium	103	104	P/P	70 - 130
2385831	Zinc	99.0	97.8	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P425591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385859	Aluminum	101	102	P/P	80 - 120
2385859	Antimony	103	103	P/P	80 - 120
2385859	Arsenic	103	102	P/P	80 - 120
2385859	Barium	105	104	P/P	80 - 120
2385859	Beryllium	93.8	94.5	P/P	80 - 120
2385859	Boron	107	105	P/P	80 - 120
2385859	Cadmium	105	103	P/P	80 - 120
2385859	Cobalt	99.1	98.8	P/P	80 - 120
2385859	Copper	102	102	P/P	80 - 120
2385859	Lead	98.8	98.8	P/P	80 - 120
2385859	Manganese	102	102	P/P	80 - 120
2385859	Molybdenum	104	104	P/P	80 - 120
2385859	Nickel	100	99.6	P/P	80 - 120
2385859	Selenium	102	100	P/P	80 - 120
2385859	Silver	100	98.6	P/P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P425591

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385859	Thallium	103	102	P/P	80 - 120
2385934	Aluminum	97.8		P	80 - 120
2385934	Antimony	105		P	80 - 120
2385934	Arsenic	107		P	80 - 120
2385934	Barium	105		P	80 - 120
2385934	Beryllium	88.6		P	80 - 120
2385934	Boron	102		P	80 - 120
2385934	Cadmium	106		P	80 - 120
2385934	Cobalt	102		P	80 - 120
2385934	Copper	100		P	80 - 120
2385934	Lead	98.3		P	80 - 120
2385934	Manganese	104		P	80 - 120
2385934	Molybdenum	110		P	80 - 120
2385934	Nickel	105		P	80 - 120
2385934	Selenium	103		P	80 - 120
2385934	Silver	99.7		P	80 - 120
2385934	Thallium	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386816	Aluminum	98.5	98.3	P/P	80 - 120
2386816	Antimony	98.4	99.0	P/P	80 - 120
2386816	Arsenic	96.2	96.9	P/P	80 - 120
2386816	Barium	100	101	P/P	80 - 120
2386816	Beryllium	89.9	93.6	P/P	80 - 120
2386816	Boron	103	102	P/P	80 - 120
2386816	Cadmium	99.2	99.8	P/P	80 - 120
2386816	Cobalt	94.5	95.0	P/P	80 - 120
2386816	Copper	96.6	96.7	P/P	80 - 120
2386816	Lead	97.0	97.2	P/P	80 - 120
2386816	Manganese	99.5	101	P/P	80 - 120
2386816	Molybdenum	95.7	97.1	P/P	80 - 120
2386816	Nickel	97.3	97.7	P/P	80 - 120
2386816	Selenium	94.7	94.9	P/P	80 - 120
2386816	Silver	98.3	98.3	P/P	80 - 120
2386816	Thallium	101	103	P/P	80 - 120
2387854	Aluminum	98.3		P	80 - 120
2387854	Antimony	100		P	80 - 120
2387854	Arsenic	99.0		P	80 - 120
2387854	Barium	99.6		P	80 - 120
2387854	Beryllium	94.2		P	80 - 120
2387854	Boron	101		P	80 - 120
2387854	Cadmium	97.6		P	80 - 120
2387854	Cobalt	96.7		P	80 - 120
2387854	Copper	95.8		P	80 - 120
2387854	Lead	98.7		P	80 - 120
2387854	Manganese	99.7		P	80 - 120
2387854	Molybdenum	99.3		P	80 - 120
2387854	Nickel	95.5		P	80 - 120
2387854	Selenium	96.5		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426231

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387854	Silver	98.7		P	80 - 120
2387854	Thallium	104		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426238

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387076	Aluminum	96.9	100	P/P	70 - 130
2387076	Antimony	99.0	98.5	P/P	70 - 130
2387076	Arsenic	104	105	P/P	70 - 130
2387076	Barium	97.9	98.7	P/P	70 - 130
2387076	Beryllium	99.4	101	P/P	70 - 130
2387076	Boron	96.1	102	P/P	70 - 130
2387076	Cadmium	95.3	94.3	P/P	70 - 130
2387076	Cobalt	106	107	P/P	70 - 130
2387076	Copper	98.5	99.6	P/P	70 - 130
2387076	Lead	97.9	96.8	P/P	70 - 130
2387076	Manganese	90.8	91.7	P/P	70 - 130
2387076	Molybdenum	105	107	P/P	70 - 130
2387076	Nickel	102	104	P/P	70 - 130
2387076	Selenium	97.7	99.1	P/P	70 - 130
2387076	Silver	95.4	95.6	P/P	70 - 130
2387076	Thallium	99.1	98.1	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426093

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385924	Chloride	93.5		P	90 - 110
2385928	Chloride	96.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426096

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385924	Sulfate	94.6		P	90 - 110
2385928	Sulfate	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426088

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385811	Ammonia-N	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385598	Kjeldahl Nitrogen	108	105	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P425722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385604	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P425643

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385618	Total-P	96.2	95.0	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P425547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385140	Aldrin	74.7	61.5	P/P	20 - 82.0
2385140	Alpha-BHC	74.1	70.2	P/F	71 - 109
2385140	Alpha-Chlordane	75.6	62.8	P/P	42 - 106
2385140	Beta-BHC	102	79.9	P/P	69 - 180
2385140	Beta-Cyfluthrin	112	113	P/P	18 - 175
2385140	Bifenthrin	34.4	38.0	P/P	21 - 128
2385140	Chlorothalonil	183	157	P/P	10 - 300
2385140	Cis-Nonachlor	49.6	49.7	P/P	34 - 106
2385140	Cypermethrin	89.7	85.3	P/P	22 - 158
2385140	Dacthal	66.5	63.7	P/P	54 - 116
2385140	DDD-p,p'	39.3	36.6	P/P	34 - 107
2385140	DDE-p,p'	35.0	35.1	P/P	33 - 110
2385140	DDT-p,p'	48.9	60.4	F/P	50 - 122
2385140	Delta-BHC	103	91.9	P/P	77 - 193
2385140	Deltamethrin	82.3	79.9	P/P	10 - 195
2385140	Dichlobenil	39.7	42.5	P/P	25 - 113
2385140	Dicofol	57.2	61.8	P/P	38 - 247
2385140	Dieldrin	62.3	68.6	P/P	45 - 118
2385140	Endosulfan I	51.2	47.0	P/F	51 - 106
2385140	Endosulfan II	39.0	37.3	P/P	37 - 122
2385140	Endosulfan Sulfate	91.9	102	P/P	43 - 132
2385140	Endrin	50.5	47.3	P/P	29 - 101
2385140	Endrin Aldehyde	47.0	41.8	P/P	19 - 110
2385140	Endrin Ketone	66.7	69.3	P/P	60 - 140
2385140	Esfenvalerate	74.6	72.9	P/P	26 - 199
2385140	Ethalfuralin	57.1	51.9	P/P	45 - 99.0
2385140	Fenpropathrin	47.3	52.8	P/P	35 - 120
2385140	Gamma-BHC	75.0	71.2	P/P	63 - 128
2385140	Gamma-Chlordane	53.8	44.4	P/P	40 - 104
2385140	Heptachlor	55.8	48.2	P/P	36 - 97.0
2385140	Heptachlor Epoxide	70.8	61.5	P/P	49 - 184
2385140	Hexachlorobenzene	61.9	56.4	P/P	39 - 96.0
2385140	Kepone	25.5	21.6	P/P	10 - 217
2385140	Lambda-Cyhalothrin	61.0	64.6	P/P	21 - 193
2385140	Methoprene	64.8	54.1	P/P	20 - 106
2385140	Methoxychlor	69.9	81.1	P/P	53 - 118
2385140	MGK-264	45.5	52.3	P/P	40 - 118
2385140	Mirex	37.4	42.6	P/P	26 - 92.0
2385140	Oxychlordane	51.9	44.0	P/P	44 - 99.0
2385140	Permethrin	105	111	P/P	33 - 182

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P425547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385140	Phenothrin	60.9	59.5	P/P	10 - 129
2385140	Piperonyl Butoxide	73.3	78.6	P/P	10 - 211
2385140	Prallethrin	52.7	46.5	P/P	24 - 113
2385140	Tau-Fluvalinate	69.8	67.0	P/P	14 - 149
2385140	Tetramethrin	64.3	66.9	P/P	17 - 151
2385140	Trans-Nonachlor	55.3	52.8	P/P	42 - 102
2385140	Triclosan Methyl	78.1	64.4	P/P	48 - 108
2385140	Trifluralin	53.1	52.9	P/P	47 - 96.0
2385998	PCB-1016	87.9	85.5	P/P	46 - 111
2385998	PCB-1260	84.0	87.4	P/P	45 - 114

Reference Method: EPA 8276

Batch ID: P425547

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385998	Chlordane	104	106	P/P	53 - 126
2385998	Toxaphene	126	123	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P425414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385040	Acesulfame K	91.0	86.9	P/P	40 - 150
2385040	AMPA	91.5	95.2	P/P	40 - 150
2385040	Endothall	101	107	P/P	40 - 150
2385040	Glufosinate	110	91.9	P/P	40 - 150
2385040	Glyphosate	104	100	P/P	40 - 150
2385040	Sucralose	134	134	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P425592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385435	2,4-D	127	98.5	P/P	40 - 150
2385435	2,4,5-T	111	106	P/P	40 - 150
2385435	Acetaminophen	107	96.4	P/P	30 - 150
2385435	Acetamiprid	96.2	106	P/P	40 - 150
2385435	Afidopyropen	65.1	73.9	P/P	30 - 150
2385435	Bentazon	91.0	88.0	P/P	30 - 150
2385435	Benzovindiflupyr	98.2	92.0	P/P	40 - 150
2385435	Carbamazepine	86.9	84.5	P/P	40 - 150
2385435	Clothianidin	125	116	P/P	40 - 150
2385435	Dinotefuran	122	116	P/P	40 - 150
2385435	Diuron	71.9	65.6	P/P	40 - 150
2385435	Fenuron	87.7	85.7	P/P	40 - 150
2385435	Fluridone	83.6	71.6	P/P	40 - 150
2385435	Hydrocodone	112	102	P/P	40 - 150
2385435	Ibuprofen	79.3	81.3	P/P	40 - 150
2385435	Imazapyr	122	113	P/P	40 - 150
2385435	Imidacloprid	149	131	P/P	40 - 150
2385435	Linuron	96.3	73.0	P/P	40 - 150
2385435	Mandestrobin	111	105	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P425592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385435	MCP	123	116	P/P	40 - 150
2385435	Naproxen	126	78.6	P/P	40 - 150
2385435	Primidone	114	104	P/P	40 - 150
2385435	Pyraclostrobin	94.3	86.2	P/P	40 - 150
2385435	Silvex	86.5	83.6	P/P	40 - 150
2385435	Thiamethoxam	118	111	P/P	40 - 150
2385435	Tolfenpyrad	57.2	49.7	P/P	30 - 150
2385435	Triclopyr	88.3	82.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P425910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385654	Fluoride	98.5	97.8	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P425802

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385882	Organic Carbon	92.3	91.0	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P425557

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385788	Color (true)	1.32	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425559

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385501	Turbidity	1.28	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385859	Calcium	1.67	Spike	P	0 - 20
2385859	Chromium	1.74	Spike	P	0 - 20
2385859	Iron	0.289	Spike	P	0 - 20
2385859	Magnesium	0.521	Spike	P	0 - 20
2385859	Potassium	0.711	Spike	P	0 - 20
2385859	Sodium	1.36	Spike	P	0 - 20
2385859	Strontium	2.86	Spike	P	0 - 20
2385859	Tin	0.485	Spike	P	0 - 20
2385859	Titanium	1.59	Spike	P	0 - 20
2385859	Vanadium	1.54	Spike	P	0 - 20
2385859	Zinc	2.28	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425797

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385831	Calcium	0.379	Spike	P	0 - 20
2385831	Chromium	0.225	Spike	P	0 - 20
2385831	Iron	0.667	Spike	P	0 - 20
2385831	Magnesium	15.7	Spike	P	0 - 20
2385831	Potassium	12.6	Spike	P	0 - 20
2385831	Sodium	13.5	Spike	P	0 - 20
2385831	Strontium	0.393	Spike	P	0 - 20
2385831	Tin	1.37	Spike	P	0 - 20
2385831	Titanium	0.766	Spike	P	0 - 20
2385831	Vanadium	0.123	Spike	P	0 - 20
2385831	Zinc	1.13	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P425591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385859	Aluminum	1.02	Spike	P	0 - 20
2385859	Antimony	0.250	Spike	P	0 - 20
2385859	Arsenic	0.640	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P425591

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385859	Barium	0.932	Spike	P	0 - 20
2385859	Beryllium	0.691	Spike	P	0 - 20
2385859	Boron	1.63	Spike	P	0 - 20
2385859	Cadmium	1.07	Spike	P	0 - 20
2385859	Cobalt	0.294	Spike	P	0 - 20
2385859	Copper	0.0452	Spike	P	0 - 20
2385859	Lead	0.0453	Spike	P	0 - 20
2385859	Manganese	0.216	Spike	P	0 - 20
2385859	Molybdenum	0.0313	Spike	P	0 - 20
2385859	Nickel	0.419	Spike	P	0 - 20
2385859	Selenium	1.62	Spike	P	0 - 20
2385859	Silver	1.66	Spike	P	0 - 20
2385859	Thallium	0.277	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426231

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386816	Aluminum	0.172	Spike	P	0 - 20
2386816	Antimony	0.567	Spike	P	0 - 20
2386816	Arsenic	0.738	Spike	P	0 - 20
2386816	Barium	0.500	Spike	P	0 - 20
2386816	Beryllium	3.56	Spike	P	0 - 20
2386816	Boron	0.506	Spike	P	0 - 20
2386816	Cadmium	0.603	Spike	P	0 - 20
2386816	Cobalt	0.519	Spike	P	0 - 20
2386816	Copper	0.114	Spike	P	0 - 20
2386816	Lead	0.205	Spike	P	0 - 20
2386816	Manganese	0.516	Spike	P	0 - 20
2386816	Molybdenum	1.45	Spike	P	0 - 20
2386816	Nickel	0.418	Spike	P	0 - 20
2386816	Selenium	0.170	Spike	P	0 - 20
2386816	Silver	0.0528	Spike	P	0 - 20
2386816	Thallium	1.20	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P426238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387076	Aluminum	3.13	Spike	P	0 - 20
2387076	Antimony	0.445	Spike	P	0 - 20
2387076	Arsenic	0.724	Spike	P	0 - 20
2387076	Barium	0.711	Spike	P	0 - 20
2387076	Beryllium	1.52	Spike	P	0 - 20
2387076	Boron	1.64	Spike	P	0 - 20
2387076	Cadmium	1.09	Spike	P	0 - 20
2387076	Cobalt	0.681	Spike	P	0 - 20
2387076	Copper	1.11	Spike	P	0 - 20
2387076	Lead	1.14	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P426238

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387076	Manganese	0.861	Spike	P	0 - 20
2387076	Molybdenum	1.71	Spike	P	0 - 20
2387076	Nickel	2.03	Spike	P	0 - 20
2387076	Selenium	1.45	Spike	P	0 - 20
2387076	Silver	0.280	Spike	P	0 - 20
2387076	Thallium	0.980	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426093

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385924	Chloride	3.43	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426096

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385924	Sulfate	3.25	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426088

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385811	Ammonia-N	1.53	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385598	Kjeldahl Nitrogen	2.20	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385604	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425643

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385618	Total-P	1.19	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P425547

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385140	Aldrin	19.3	Spike	P	0 - 41
2385140	Alpha-BHC	5.46	Spike	P	0 - 25
2385140	Alpha-Chlordane	18.4	Spike	P	0 - 33
2385140	Beta-BHC	24.6	Spike	P	0 - 36
2385140	Beta-Cyfluthrin	1.05	Spike	P	0 - 42
2385140	Bifenthrin	6.91	Spike	P	0 - 53
2385140	Chlorothalonil	15.1	Spike	P	0 - 71
2385140	Cis-Nonachlor	0.107	Spike	P	0 - 29
2385140	Cypermethrin	5.13	Spike	P	0 - 40
2385140	Dacthal	4.21	Spike	P	0 - 26
2385140	DDD-p,p'	7.10	Spike	P	0 - 39
2385140	DDE-p,p'	0.406	Spike	P	0 - 33
2385140	DDT-p,p'	21.1	Spike	P	0 - 40
2385140	Delta-BHC	11.7	Spike	P	0 - 37
2385140	Deltamethrin	2.97	Spike	P	0 - 100
2385140	Dichlobenil	6.85	Spike	P	0 - 40
2385140	Dicofol	7.82	Spike	P	0 - 31
2385140	Dieldrin	9.62	Spike	P	0 - 27
2385140	Endosulfan I	8.57	Spike	P	0 - 23
2385140	Endosulfan II	4.51	Spike	P	0 - 28
2385140	Endosulfan Sulfate	10.9	Spike	P	0 - 38
2385140	Endrin	6.43	Spike	P	0 - 63
2385140	Endrin Aldehyde	11.8	Spike	P	0 - 60
2385140	Endrin Ketone	3.85	Spike	P	0 - 37
2385140	Esfenvalerate	2.31	Spike	P	0 - 52
2385140	Ethalfuralin	9.53	Spike	P	0 - 23
2385140	Fenpropathrin	11.0	Spike	P	0 - 32
2385140	Gamma-BHC	5.25	Spike	P	0 - 17
2385140	Gamma-Chlordane	19.0	Spike	P	0 - 40
2385140	Heptachlor	14.7	Spike	P	0 - 29
2385140	Heptachlor Epoxide	14.0	Spike	P	0 - 25
2385140	Hexachlorobenzene	9.41	Spike	P	0 - 36
2385140	Kepone	16.7	Spike	P	0 - 93
2385140	Lambda-Cyhalothrin	5.62	Spike	P	0 - 55
2385140	Methoprene	18.0	Spike	P	0 - 53
2385140	Methoxychlor	14.9	Spike	P	0 - 29
2385140	MGK-264	13.7	Spike	P	0 - 35
2385140	Mirex	13.0	Spike	P	0 - 46
2385140	Oxychlordane	16.4	Spike	P	0 - 29
2385140	Permethrin	5.35	Spike	P	0 - 44
2385140	Phenothrin	2.29	Spike	P	0 - 56
2385140	Piperonyl Butoxide	6.92	Spike	P	0 - 100
2385140	Prallethrin	12.5	Spike	P	0 - 42
2385140	Tau-Fluvalinate	4.15	Spike	P	0 - 54
2385140	Tetramethrin	3.88	Spike	P	0 - 51
2385140	Trans-Nonachlor	4.73	Spike	P	0 - 37
2385140	Triclosan Methyl	19.2	Spike	P	0 - 31
2385140	Trifluralin	0.305	Spike	P	0 - 30
2385998	PCB-1016	2.77	Spike	P	0 - 32
2385998	PCB-1260	3.94	Spike	P	0 - 31

Quality Assurance Report Precision

Reference Method: EPA 8276

Batch ID: P425547

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385998	Chlordane	1.67	Spike	P	0 - 25
2385998	Toxaphene	2.05	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P425414

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385040	Acesulfame K	4.72	Spike	P	0 - 30
2385040	AMPA	3.73	Spike	P	0 - 30
2385040	Endothall	5.53	Spike	P	0 - 30
2385040	Glufosinate	17.5	Spike	P	0 - 30
2385040	Glyphosate	3.57	Spike	P	0 - 30
2385040	Sucralose	0.655	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P425592

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385435	2,4-D	18.6	Spike	P	0 - 30
2385435	2,4,5-T	5.22	Spike	P	0 - 30
2385435	Acetaminophen	10.5	Spike	P	0 - 30
2385435	Acetamiprid	9.76	Spike	P	0 - 30
2385435	Afidopyropen	12.6	Spike	P	0 - 30
2385435	Bentazon	3.34	Spike	P	0 - 30
2385435	Benzovindiflupyr	6.57	Spike	P	0 - 30
2385435	Carbamazepine	2.86	Spike	P	0 - 30
2385435	Clothianidin	7.49	Spike	P	0 - 30
2385435	Dinotefuran	5.58	Spike	P	0 - 30
2385435	Diuron	9.24	Spike	P	0 - 30
2385435	Fenuron	2.26	Spike	P	0 - 30
2385435	Fluridone	15.6	Spike	P	0 - 30
2385435	Hydrocodone	9.17	Spike	P	0 - 30
2385435	Ibuprofen	2.45	Spike	P	0 - 30
2385435	Imazapyr	6.55	Spike	P	0 - 30
2385435	Imidacloprid	12.9	Spike	P	0 - 30
2385435	Linuron	27.5	Spike	P	0 - 30
2385435	Mandestrobin	5.39	Spike	P	0 - 30
2385435	MCPP	6.06	Spike	P	0 - 30
2385435	Naproxen	46.1	Spike	F	0 - 30
2385435	Primidone	9.12	Spike	P	0 - 30
2385435	Pyraclostrobin	8.98	Spike	P	0 - 30
2385435	Silvex	3.48	Spike	P	0 - 30
2385435	Thiamethoxam	6.64	Spike	P	0 - 30
2385435	Tolfenpyrad	14.1	Spike	P	0 - 30
2385435	Triclopyr	7.10	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P425908

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385654	Total Alkalinity	1.09	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P426112

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386387	TDS	4.80	Sample	P	0 - 10

Reference Method: SM 2540 D-2015
Batch ID: P426007

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385879	TSS	4.76	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P425910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385654	Fluoride	0.463	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P425802

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385882	Organic Carbon	1.30	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2385827

Field Sample ID: G2SE0069

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	83.6	P	29 - 130
EPA 8270E	Decachlorobiphenyl	53.3	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	67.2	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	54.4	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	62.0	P	30 - 101
EPA 8276	PCNB	82.3	P	48 - 121

Lab Sample ID: 2385828

Field Sample ID: G2SE0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	77.5	P	29 - 130
EPA 8270E	Decachlorobiphenyl	118	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	66.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	58.4	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	53.0	P	30 - 101
EPA 8276	PCNB	82.2	P	48 - 121

Lab Sample ID: 2385829

Field Sample ID: G2SE0029

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	98.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	94.7	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.1	P	30 - 160
EPA 8321B	Diuron-d6	58.8	P	30 - 160
EPA 8321B	Endothall-d6	88.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.5	P	30 - 160
EPA 8321B	Primidone-d5	91.6	P	30 - 160
EPA 8321B	Sucralose-d6	134	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A117332

Included Lab Sample IDs: 2385810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117333

Included Lab Sample IDs: 2385810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	99.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A117380

Included Lab Sample IDs: 2385829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	125	120	P/P	60 - 160
Sucralose	131	132	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117382

Included Lab Sample IDs: 2385829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	90.2	90.6	P/P	60 - 160
Endothall	70.1	95.5	P/P	60 - 160
Glufosinate	84.4	87.9	P/P	60 - 160
Glyphosate	93.6	96.1	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117402

Included Lab Sample IDs: 2385811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A117405

Included Lab Sample IDs: 2385829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	103	103	P/P	50 - 150
2,4,5-T	116	107	P/P	50 - 150
Acetaminophen	100	102	P/P	60 - 160
Acetamiprid	103	104	P/P	50 - 150
Afidopyropen	82.2	90.2	P/P	50 - 150
Bentazon	65.1	88.5	P/P	50 - 160
Benzovindiflupyr	110	106	P/P	50 - 150
Carbamazepine	116	111	P/P	60 - 150
Clothianidin	105	102	P/P	60 - 150
Dinotefuran	104	101	P/P	50 - 150
Diuron	105	113	P/P	60 - 160
Fenuron	94.3	94.7	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A117405
Included Lab Sample IDs: 2385829

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	84.9	110	P/P	60 - 160
Hydrocodone	97.7	105	P/P	60 - 150
Ibuprofen	86.0	104	P/P	50 - 160
Imazapyr	92.1	94.9	P/P	50 - 150
Imidacloprid	88.0	91.0	P/P	60 - 150
Linuron	104	97.7	P/P	60 - 150
Mandestrobin	112	106	P/P	50 - 150
MCPP	119	110	P/P	50 - 150
Naproxen	108	84.0	P/P	50 - 160
Primidone	97.1	99.2	P/P	60 - 150
Pyraclostrobin	112	109	P/P	60 - 150
Silvex	114	104	P/P	50 - 150
Thiamethoxam	92.3	93.3	P/P	50 - 150
Tolfenpyrad	106	104	P/P	60 - 150
Triclopyr	96.7	93.1	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A117408
Included Lab Sample IDs: 2385811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	97.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A117410
Included Lab Sample IDs: 2385811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	96.0	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A117420
Included Lab Sample IDs: 2385832, 2385833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.0	98.2	P/P	90 - 110
Chromium	102	102	P/P	90 - 110
Iron	101	99.9	P/P	90 - 110
Magnesium	100	99.0	P/P	90 - 110
Potassium	101	100	P/P	90 - 110
Sodium	103	101	P/P	90 - 110
Strontium	106	106	P/P	90 - 110
Tin	104	101	P/P	90 - 110
Titanium	102	101	P/P	90 - 110
Vanadium	101	100	P/P	90 - 110
Zinc	107	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117421

Included Lab Sample IDs: 2385832, 2385833

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	101	P/P	90 - 110
Antimony	104	103	P/P	90 - 110
Arsenic	103	103	P/P	90 - 110
Barium	104	102	P/P	90 - 110
Beryllium	99.5	91.9	P/P	90 - 110
Boron	105	105	P/P	90 - 110
Cadmium	103	103	P/P	90 - 110
Cobalt	99.0	98.4	P/P	90 - 110
Copper	102	103	P/P	90 - 110
Lead	99.3	101	P/P	90 - 110
Manganese	104	101	P/P	90 - 110
Molybdenum	103	103	P/P	90 - 110
Nickel	101	101	P/P	90 - 110
Selenium	101	102	P/P	90 - 110
Silver	102	102	P/P	90 - 110
Thallium	101	101	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117426

Included Lab Sample IDs: 2385810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.0	97.9	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117428

Included Lab Sample IDs: 2385827, 2385828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	98.9		P	80 - 120
PCB-1260	108		P	80 - 120

Reference Method: SM 5310 B-2011

Run ID: A117442

Included Lab Sample IDs: 2385811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.6	97.2	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117472

Included Lab Sample IDs: 2385810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.6	99.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 4500-F- C-2011

Run ID: A117472

Included Lab Sample IDs: 2385810

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117494

Included Lab Sample IDs: 2385830, 2385831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	106	P/P	90 - 110
Calcium	106	105	P/P	90 - 110
Chromium	105	106	P/P	90 - 110
Chromium	106	105	P/P	90 - 110
Iron	104	107	P/P	90 - 110
Iron	107	109	P/P	90 - 110
Magnesium	105	107	P/P	90 - 110
Magnesium	107	109	P/P	90 - 110
Potassium	102	106	P/P	90 - 110
Potassium	106	108	P/P	90 - 110
Sodium	101	107	P/P	90 - 110
Sodium	107	106	P/P	90 - 110
Strontium	103	104	P/P	90 - 110
Strontium	104	102	P/P	90 - 110
Tin	105	104	P/P	90 - 110
Tin	105	105	P/P	90 - 110
Titanium	102	103	P/P	90 - 110
Titanium	103	101	P/P	90 - 110
Vanadium	103	104	P/P	90 - 110
Vanadium	104	103	P/P	90 - 110
Zinc	104	109	P/P	90 - 110
Zinc	109	107	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117509

Included Lab Sample IDs: 2385827, 2385828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	111		P	80 - 120
Alpha-BHC	84.3		P	80 - 120
Alpha-Chlordane	99.9		P	80 - 120
Beta-BHC	101		P	80 - 120
Beta-Cyfluthrin	109		P	80 - 120
Bifenthrin	91.9		P	80 - 120
Chlorothalonil	89.8		P	80 - 120
Cis-Nonachlor	95.9		P	80 - 120
Cypermethrin	115		P	80 - 120
Dacthal	108		P	80 - 120
DDD-p,p'	88.5		P	80 - 120
DDE-p,p'	107		P	80 - 120
DDT-p,p'	103		P	80 - 120
Delta-BHC	95.2		P	80 - 120
Deltamethrin	88.7		P	80 - 120
Dichlobenil	98.5		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E

Run ID: A117509

Included Lab Sample IDs: 2385827, 2385828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Dicofol	93.9		P	80 - 120
Dieldrin	111		P	80 - 120
Endosulfan I	113		P	80 - 120
Endosulfan II	113		P	80 - 120
Endosulfan Sulfate	101		P	80 - 120
Endrin	102		P	80 - 120
Endrin Aldehyde	102		P	80 - 120
Endrin Ketone	103		P	80 - 120
Esfenvalerate	87.3		P	80 - 120
Ethalfuralin	110		P	80 - 120
Fenpropathrin	86.4		P	80 - 120
Gamma-BHC	98.7		P	80 - 120
Gamma-Chlordane	98.0		P	80 - 120
Heptachlor	96.2		P	80 - 120
Heptachlor Epoxide	93.1		P	80 - 120
Hexachlorobenzene	108		P	80 - 120
Kepone	91.6		P	80 - 120
Lambda-Cyhalothrin	96.4		P	80 - 120
Methoprene	90.5		P	80 - 120
Methoxychlor	93.0		P	80 - 120
MGK-264	91.9		P	80 - 120
Mirex	103		P	80 - 120
Oxychlordane	92.7		P	80 - 120
Permethrin	91.8		P	80 - 120
Phenothrin	83.8		P	80 - 120
Piperonyl Butoxide	84.8		P	80 - 120
Prallethrin	82.1		P	80 - 120
Tau-Fluvalinate	84.4		P	80 - 120
Tetramethrin	85.3		P	80 - 120
Trans-Nonachlor	103		P	80 - 120
Triclosan Methyl	104		P	80 - 120
Trifluralin	99.0		P	80 - 120

Reference Method: EPA 8276

Run ID: A117513

Included Lab Sample IDs: 2385827, 2385828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	104		P	80 - 120
Chlordane	98.9		P	80 - 120
Toxaphene	112		P	80 - 120
Toxaphene	96.6		P	80 - 120

Reference Method: EPA 8270E

Run ID: A117533

Included Lab Sample IDs: 2385828

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-Cyfluthrin	102		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117540

Included Lab Sample IDs: 2385811

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	98.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117669

Included Lab Sample IDs: 2385831

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	96.4	96.4	P/P	90 - 110
Antimony	97.8	97.2	P/P	90 - 110
Arsenic	95.3	94.1	P/P	90 - 110
Barium	95.9	96.2	P/P	90 - 110
Beryllium	94.2	92.4	P/P	90 - 110
Boron	98.3	94.7	P/P	90 - 110
Cadmium	97.5	96.4	P/P	90 - 110
Cobalt	93.3	91.6	P/P	90 - 110
Copper	92.6	91.7	P/P	90 - 110
Lead	96.3	94.9	P/P	90 - 110
Manganese	100	96.3	P/P	90 - 110
Molybdenum	95.3	94.2	P/P	90 - 110
Nickel	92.9	92.5	P/P	90 - 110
Selenium	95.9	94.9	P/P	90 - 110
Silver	97.0	96.3	P/P	90 - 110
Thallium	99.9	98.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117672

Included Lab Sample IDs: 2385830

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	95.0	93.9	P/P	90 - 110
Antimony	93.3	94.2	P/P	90 - 110
Arsenic	95.9	94.7	P/P	90 - 110
Barium	93.8	95.0	P/P	90 - 110
Beryllium	96.0	95.3	P/P	90 - 110
Boron	96.2	96.0	P/P	90 - 110
Cadmium	93.2	93.7	P/P	90 - 110
Cobalt	96.3	95.5	P/P	90 - 110
Copper	93.6	93.0	P/P	90 - 110
Lead	94.8	93.9	P/P	90 - 110
Manganese	91.8	91.9	P/P	90 - 110
Molybdenum	93.6	94.3	P/P	90 - 110
Nickel	94.9	93.7	P/P	90 - 110
Selenium	94.4	93.8	P/P	90 - 110
Silver	95.1	95.4	P/P	90 - 110
Thallium	95.2	94.2	P/P	90 - 110

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	103					1.32	
EPA 180.1 Rev. 2.0	Turbidity	100					1.28	
EPA 200.7 Rev. 4.4	Calcium	99.7		101				1.67
	Calcium	104						0.379
	Chromium	100	96.7	98.4	99.0			1.74
	Chromium	105	98.5	98.3				0.225
	Iron	105	103	103	103			0.289
	Iron	106	101	100				0.667
	Magnesium	99.6	103	101				0.521
	Magnesium	103						15.7
	Potassium	103	100	101	110			0.711
	Potassium	102						12.6
	Sodium	103	103	106				1.36
	Sodium	102						13.5
	Strontium	104	102	105	104			2.86
	Strontium	102	99.7	100				0.393
	Tin	101	98.6	99.1	98.8			0.485
	Tin	105	125	126				1.37
	Titanium	102	98.7	100	103			1.59
	Titanium	103	101	101				0.766
	Vanadium	100	99.4	101				1.54
	Vanadium	104	103	104				0.123
	Zinc	103	101	103	101			2.28
	Zinc	107	99.0	97.8				1.13
EPA 200.8 Rev. 5.4	Aluminum	104	101	102	97.8			1.02
	Aluminum	96.3	98.5	98.3	98.3			0.172
	Aluminum	97.7	96.9	100				3.13
	Antimony	104	103	103	105			0.250
	Antimony	98.6	98.4	99.0	100			0.567
	Antimony	97.1	99.0	98.5				0.445
	Arsenic	104	103	102	107			0.640
	Arsenic	95.3	96.2	96.9	99.0			0.738
	Arsenic	96.8	104	105				0.724
	Barium	105	105	104	105			0.932
	Barium	98.6	100	101	99.6			0.500
	Barium	98.6	97.9	98.7				0.711
	Beryllium	95.6	93.8	94.5	88.6			0.691
	Beryllium	92.6	89.9	93.6	94.2			3.56
	Beryllium	90.8	99.4	101				1.52
	Boron	107	107	105	102			1.63
	Boron	99.7	103	102	101			0.506
	Boron	103	96.1	102				1.64
	Cadmium	105	105	103	106			1.07
	Cadmium	98.4	99.2	99.8	97.6			0.603
	Cadmium	97.0	95.3	94.3				1.09
	Cobalt	101	99.1	98.8	102			0.294
	Cobalt	94.1	94.5	95.0	96.7			0.519
	Cobalt	99.5	106	107				0.681
	Copper	103	102	102	100			0.0452
	Copper	93.5	96.6	96.7	95.8			0.114
	Copper	95.2	98.5	99.6				1.11
	Lead	97.5	98.8	98.8	98.3			0.0453
	Lead	95.8	97.0	97.2	98.7			0.205
	Lead	96.2	97.9	96.8				1.14

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 200.8 Rev. 5.4	Manganese	103	102	102	104			0.216
	Manganese	97.1	99.7	99.5	101			0.516
	Manganese	95.8	90.8	91.7				0.861
	Molybdenum	104	104	104	110			0.0313
	Molybdenum	95.9	95.7	97.1	99.3			1.45
	Molybdenum	97.2	105	107				1.71
	Nickel	103	100	99.6	105			0.419
	Nickel	94.7	97.3	97.7	95.5			0.418
	Nickel	96.5	102	104				2.03
	Selenium	102	102	100	103			1.62
	Selenium	94.5	94.7	94.9	96.5			0.170
	Selenium	96.0	97.7	99.1				1.45
	Silver	102	100	98.6	99.7			1.66
	Silver	97.5	98.3	98.3	98.7			0.0528
	Silver	102	95.4	95.6				0.280
	Thallium	100	103	102	104			0.277
	Thallium	97.9	101	103	104			1.20
	Thallium	98.8	99.1	98.1				0.980
EPA 300.0 Rev. 2.1	Chloride	99.2	93.5	96.8			3.43	
	Sulfate	102	94.6	99.4			3.25	
EPA 350.1 Rev. 2.0	Ammonia-N	99.0	101	103				1.53
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104	108	105				2.20
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104	104				0.0
EPA 365.1 Rev. 2.0	Total-P	101	96.2	95.0				1.19
EPA 8270E	Aldrin	64.0	61.5	74.7				19.3
	Alpha-BHC	62.7	70.2	74.1				5.46
	Alpha-Chlordane	74.3	62.8	75.6				18.4
	Beta-BHC	88.2	79.9	102				24.6
	Beta-Cyfluthrin	69.4	113	112				1.05
	Bifenthrin	41.9	38.0	34.4				6.91
	Chlorothalonil	40.6	157	183				15.1
	Cis-Nonachlor	65.8	49.7	49.6				0.107
	Cypermethrin	63.3	85.3	89.7				5.13
	Dacthal	82.0	63.7	66.5				4.21
	DDD-p,p'	53.8	36.6	39.3				7.10
	DDE-p,p'	53.4	35.1	35.0				0.406
	DDT-p,p'	62.5	60.4	48.9				21.1
	Delta-BHC	79.1	91.9	103				11.7
	Deltamethrin	52.1	79.9	82.3				2.97
	Dichlobenil	63.8	42.5	39.7				6.85
	Dicofol	56.4	61.8	57.2				7.82
	Dieldrin	56.8	62.3	68.6				9.62
	Endosulfan I	59.5	47.0	51.2				8.57
	Endosulfan II	58.8	37.3	39.0				4.51
	Endosulfan Sulfate	80.6	91.9	102				10.9
	Endrin	70.1	47.3	50.5				6.43
	Endrin Aldehyde	54.0	41.8	47.0				11.8
	Endrin Ketone	76.1	66.7	69.3				3.85
	Esfenvalerate	45.1	72.9	74.6				2.31
	Ethalfuralin	53.3	51.9	57.1				9.53
	Fenpropathrin	48.1	52.8	47.3				11.0
	Gamma-BHC	68.9	71.2	75.0				5.25
	Gamma-Chlordane	64.1	44.4	53.8				19.0
	Heptachlor	60.0	48.2	55.8				14.7

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Heptachlor Epoxide	73.4	61.5	70.8			14.0
	Hexachlorobenzene	66.3	56.4	61.9			9.41
	Kepone	32.0	21.6	25.5			16.7
	Lambda-Cyhalothrin	43.3	64.6	61.0			5.62
	Methoprene	52.4	54.1	64.8			18.0
	Methoxychlor	65.9	69.9	81.1			14.9
	MGK-264	54.9	52.3	45.5			13.7
	Mirex	49.6	42.6	37.4			13.0
	Oxychlordane	54.5	51.9	44.0			16.4
	PCB-1016	84.9	87.9	85.5			2.77
	PCB-1260	88.0	84.0	87.4			3.94
	Permethrin	82.3	105	111			5.35
	Phenothrin	48.9	60.9	59.5			2.29
	Piperonyl Butoxide	74.3	73.3	78.6			6.92
	Prallethrin	57.1	52.7	46.5			12.5
	Tau-Fluvalinate	34.4	69.8	67.0			4.15
	Tetramethrin	63.1	64.3	66.9			3.88
	Trans-Nonachlor	52.3	55.3	52.8			4.73
	Triclosan Methyl	82.1	78.1	64.4			19.2
	Trifluralin	60.9	53.1	52.9			0.305
EPA 8276	Chlordane	107	104	106			1.67
	Toxaphene	117	126	123			2.05
EPA 8321B	2,4-D	85.8	127	98.5			18.6
	2,4,5-T	77.3	111	106			5.22
	Acesulfame K	134	91.0	86.9			4.72
	Acetaminophen	83.3	107	96.4			10.5
	Acetamiprid	82.1	96.2	106			9.76
	Afidopyropen	61.5	65.1	73.9			12.6
	AMPA	95.3	91.5	95.2			3.73
	Bentazon	91.0	91.0	88.0			3.34
	Benzovindiflupyr	84.8	98.2	92.0			6.57
	Carbamazepine	90.7	86.9	84.5			2.86
	Clothianidin	94.4	125	116			7.49
	Dinotefuran	98.8	122	116			5.58
	Diuron	75.7	71.9	65.6			9.24
	Endothall	98.7	101	107			5.53
	Fenuron	96.1	87.7	85.7			2.26
	Fluridone	80.2	83.6	71.6			15.6
	Glufosinate	112	110	91.9			17.5
	Glyphosate	92.5	104	100			3.57
	Hydrocodone	86.0	112	102			9.17
	Ibuprofen	56.8	79.3	81.3			2.45
	Imazapyr	83.3	122	113			6.55
	Imidacloprid	84.3	149	131			12.9
	Linuron	76.7	96.3	73.0			27.5
	Mandestrobin	97.8	111	105			5.39
	MCPPP	97.5	123	116			6.06
	Naproxen	63.2	126	78.6			46.1
	Primidone	89.3	114	104			9.12
	Pyraclostrobin	78.3	94.3	86.2			8.98
	Silvex	72.1	86.5	83.6			3.48
	Sucralose	137	134	134			0.655
	Thiamethoxam	82.5	118	111			6.64
	Tolfenpyrad	44.6	57.2	49.7			14.1

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Triclopyr	77.2	88.3	82.2		7.10
SM 2320 B-2011	Total Alkalinity	99.3			1.09	
SM 2540 C-2015	TDS	95.3			4.80	
SM 2540 D-2015	TSS	94.0			4.76	
SM 4500-F- C-2011	Fluoride	99.0	98.5	97.8		0.463
SM 5310 B-2011	Organic Carbon	98.0	92.3	91.0		1.30

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2385810
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2385810
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2385830, 2385831, 2385832, 2385833
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2385830, 2385831, 2385832, 2385833
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2385810
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2385810
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2385811
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2385811
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2385811
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2385811
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2385827, 2385828
EPA 8270E	PCBs in water matrices by GC/MS/MS	2385827, 2385828
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2385827, 2385828
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2385829
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2385810
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2385830, 2385832, 2385833
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2385810
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2385810
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2385810
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2385811

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	02/08/2023			02/08/2023 14:54	Alexis Price	2385810
EPA 180.1 Rev. 2.0	02/08/2023			02/08/2023 14:10	Khloe J Berg	2385810
EPA 200.7 Rev. 4.4	02/08/2023	02/09/2023 12:20	George D Taylor	02/13/2023 22:00	McKinley C Carter	2385832
	02/08/2023	02/09/2023 12:20	George D Taylor	02/13/2023 22:16	McKinley C Carter	2385833
	02/08/2023	02/15/2023 12:50	George D Taylor	02/16/2023 17:16	McKinley C Carter	2385830
	02/08/2023	02/15/2023 12:50	George D Taylor	02/16/2023 17:24	McKinley C Carter	2385830
	02/08/2023	02/15/2023 12:50	George D Taylor	02/16/2023 17:59	McKinley C Carter	2385831
	02/08/2023	02/15/2023 12:50	George D Taylor	02/16/2023 18:29	McKinley C Carter	2385831
EPA 200.8 Rev. 5.4	02/08/2023	02/09/2023 12:20	George D Taylor	02/13/2023 23:51	Megan Whitefoot	2385832
	02/08/2023	02/09/2023 12:20	George D Taylor	02/14/2023 00:01	Megan Whitefoot	2385833
	02/08/2023	02/22/2023 13:20	George D Taylor	02/24/2023 21:32	Conrad Hartmann	2385831
	02/08/2023	02/22/2023 14:00	George D Taylor	02/24/2023 16:56	Emily M Philpot	2385830
	02/08/2023	02/22/2023 14:00	George D Taylor	02/24/2023 20:22	Emily M Philpot	2385830
EPA 300.0 Rev. 2.1	02/08/2023			02/17/2023 06:51	Anna M. Plaviak	2385810
EPA 350.1 Rev. 2.0	02/08/2023			02/20/2023 11:37	Khloe J Berg	2385811
EPA 351.2 Rev. 2.0	02/08/2023	02/09/2023 09:02	Samantha L Bates	02/13/2023 14:31	Samantha L Bates	2385811
EPA 353.2 Rev. 2.0	02/08/2023			02/13/2023 11:11	Beverly Y. Sanders	2385811
EPA 365.1 Rev. 2.0	02/08/2023	02/10/2023 16:32	Adam P Silver	02/13/2023 13:38	James L Waggeberby	2385811
EPA 8270E	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/13/2023 21:03	Vandana T. Nagar	2385827
	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/13/2023 21:33	Vandana T. Nagar	2385828
	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/14/2023 06:21	Julie Wi	2385827
	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/14/2023 06:53	Julie Wi	2385828
	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/17/2023 22:41	Vandana T. Nagar	2385828
EPA 8276	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/15/2023 11:27	Lipi Saha	2385827
	02/08/2023	02/10/2023 08:30	Rasheda Ghaffari	02/15/2023 13:18	Lipi Saha	2385828
EPA 8321B	02/08/2023	02/08/2023 16:00	Manjita Shrestha	02/08/2023 22:37	Manjita Shrestha	2385829
	02/08/2023	02/08/2023 16:00	Manjita Shrestha	02/08/2023 23:47	Manjita Shrestha	2385829
	02/08/2023	02/08/2023 16:00	Manjita Shrestha	02/09/2023 07:02	Manjita Shrestha	2385829
	02/08/2023	02/10/2023 10:00	June Rhew	02/11/2023 01:45	Juyoung Kim	2385829
	02/08/2023	02/10/2023 10:00	June Rhew	02/13/2023 11:11	Juyoung Kim	2385829
SM 2320 B-2011	02/08/2023			02/15/2023 21:42	Dale L. Simmons	2385810
SM 2340 B-2011	02/08/2023			02/13/2023 22:00	McKinley C Carter	2385832
	02/08/2023			02/13/2023 22:16	McKinley C Carter	2385833
	02/08/2023			02/16/2023 17:24	McKinley C Carter	2385830
SM 2540 C-2015	02/08/2023			02/10/2023 16:01	Yijie Li	2385810
SM 2540 D-2015	02/08/2023			02/10/2023 16:01	Yijie Li	2385810
SM 4500-F- C-2011	02/08/2023			02/15/2023 19:30	Dale L. Simmons	2385810
SM 5310 B-2011	02/08/2023			02/14/2023 23:48	Elise M. Gillis	2385811