

Chemical Analysis Report

NW-DIST-2022-11-15-02

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

Event Description: **Navarre Run**
Request ID: **RQ-2022-10-31-17**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 W Government Street
Suite 208
Pensacola, FL 32502-5794
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 12-DEC-2022 10:30



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: Williams Creek upstream of Hwy 98

Collection Date/Time: 11/14/2022 11:20

Field ID: G4NW0531

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369520	DEP SOP: NU-094-1	Color (true)	14		PCU	P422347	
	EPA 180.1 Rev. 2.0	Turbidity	3.1		NTU	P422351	
	EPA 300.0 Rev. 2.1	Chloride	9.6E+03		mg Cl/L	P422829	
		Sulfate	1.4E+03		mg SO4/L	P422833	
	SM 2320 B-2011	Total Alkalinity	67		mg CaCO3/L	P422622	
	SM 2540 C-2015	TDS	1.62E+04		mg/L	P422853	
	SM 2540 D-2015	TSS	3	IA	mg/L	P422708	
2369521	SM 4500-F- C-2011	Fluoride	0.64		mg F/L	P422965	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P423040	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.32	I	mg N/L	P422540	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P422492	
	EPA 365.1 Rev. 2.0	Total-P	0.088		mg P/L	P422442	
2369534	SM 5310 B-2011	Organic Carbon	3.4	I	mg C/L	P422790	
	EPA 200.7 Rev. 4.4	Calcium	249		mg/L	P422594	
		Iron	120	I	ug/L	P422594	
		Magnesium	760		mg/L	P422594	
		Manganese	13		ug/L	P422594	
		Potassium	233		mg/L	P422594	
		Sodium	6.34E+03		mg/L	P422594	
		Strontium	4.84E+03		ug/L	P422594	
		Tin	150	U	ug/L	P422594	
		Titanium	2.2	U	ug/L	P422594	
		Vanadium	6.0	U	ug/L	P422594	
		Zinc	15	U	ug/L	P422594	
	EPA 200.8 Rev. 5.4	Aluminum	88		ug/L	P422594	
		Antimony	0.20	U	ug/L	P422594	
		Arsenic	1.26		ug/L	P422594	
		Barium	13.6		ug/L	P422594	
		Beryllium	0.040	U	ug/L	P422594	
		Boron	2.41E+03		ug/L	P422594	
		Cadmium	0.080	U	ug/L	P422594	
		Chromium	4.0	U	ug/L	P422594	
		Cobalt	0.36		ug/L	P422594	
		Copper	1.6	U	ug/L	P423148	
		Lead	0.80	U	ug/L	P423148	
		Molybdenum	7.6		ug/L	P422594	
		Nickel	2.0	U	ug/L	P422594	
		Selenium	0.80	U	ug/L	P422594	
		Silver	0.040	U	ug/L	P422594	
		Thallium	0.40	U	ug/L	P422594	
	SM 2340 B-2011	Hardness	3.75E+03		mg/L	P422594	

Field ID: G4NW0531

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for calcium, magnesium, potassium, sodium and strontium are unavailable because of high analyte concentration in the QC sample.
SM 2340 B-2011: Batch matrix spike recoveries for calcium, magnesium, potassium, sodium and strontium are unavailable because of high analyte concentration in the QC sample.

Sample Location: Tom King Creek

Collection Date/Time: 11/14/2022 10:25

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369514	DEP SOP: NU-094-1	Color (true)	37	A	PCU	P422347	
	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P422351	
	EPA 300.0 Rev. 2.1	Chloride	27		mg Cl/L	P422829	
		Sulfate	9.5		mg SO4/L	P422833	
	SM 2320 B-2011	Total Alkalinity	11		mg CaCO3/L	P422640	
	SM 2540 C-2015	TDS	77		mg/L	P422852	
	SM 2540 D-2015	TSS	3	I	mg/L	P422705	
2369516	SM 4500-F- C-2011	Fluoride	0.025	U	mg F/L	P422644	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P422989	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23		mg N/L	P422450	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.1		mg N/L	P422492	
	EPA 365.1 Rev. 2.0	Total-P	0.035		mg P/L	P422444	
2369531	EPA 8270E	SM 5310 B-2011	Organic Carbon	3.0	mg C/L	P422753	
		Aldrin	0.68	U	ng/L	P422354	
		Alpha-BHC	0.10	U	ng/L	P422354	
		Alpha-Chlordane	0.21	U	ng/L	P422354	
		PCB-1016	2.1	U	ng/L	P422354	
		Beta-BHC	0.10	U	ng/L	P422354	
		PCB-1221	2.1	U	ng/L	P422354	
		Beta-Cyfluthrin	1.3	U	ng/L	P422354	
		PCB-1232	2.1	U	ng/L	P422354	
		Bifenthrin	0.52	U	ng/L	P422354	
		PCB-1242	2.1	U	ng/L	P422354	
		Carbophenothion	0.94	U	ng/L	P422354	
		PCB-1248	2.1	U	ng/L	P422354	
		Chlorothalonil	1.3	U	ng/L	P422354	
		PCB-1254	2.1	U	ng/L	P422354	
		Cis-Nonachlor	0.21	U	ng/L	P422354	
		PCB-1260	2.1	U	ng/L	P422354	
		Cypermethrin	1.6	U	ng/L	P422354	
		Dacthal	0.16	U	ng/L	P422354	
		DDD-p,p'	0.26	U	ng/L	P422354	
		DDE-p,p'	0.21	U	ng/L	P422354	
		DDT-p,p'	0.26	U	ng/L	P422354	
		Delta-BHC	0.74	I	ng/L	P422354	MS
		Deltamethrin	1.3	U	ng/L	P422354	
		Dichlobenil	0.26	U	ng/L	P422354	
		Dicofol	1.3	U	ng/L	P422354	
		Dieldrin	0.42	U	ng/L	P422354	
		Endosulfan I	0.42	U	ng/L	P422354	
		Endosulfan II	0.42	U	ng/L	P422354	
		Endosulfan Sulfate	0.31	U	ng/L	P422354	
		Endrin	0.42	U	ng/L	P422354	
		Endrin Aldehyde	0.78	U	ng/L	P422354	

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369531	EPA 8270E	Endrin Ketone	0.42	UJ	ng/L	P422354	CCV
		Esfenvalerate	0.78	U	ng/L	P422354	
		Ethalfuralin	0.16	U	ng/L	P422354	
		Fenpropathrin	0.26	U	ng/L	P422354	
		Gamma-BHC	0.13	U	ng/L	P422354	
		Gamma-Chlordane	0.21	U	ng/L	P422354	
		Heptachlor	0.21	U	ng/L	P422354	
		Heptachlor Epoxide	0.26	U	ng/L	P422354	
		Hexachlorobenzene**	1.0	U	ng/L	P422354	
		Kepone	5.2	UJ	ng/L	P422354	CCV
		Lambda-Cyhalothrin	0.78	U	ng/L	P422354	
		Methoprene	0.78	U	ng/L	P422354	
		Methoxychlor	0.31	U	ng/L	P422354	
		MGK-264	0.21	U	ng/L	P422354	
		Mirex	0.37	U	ng/L	P422354	
		Oxychlordane	0.31	U	ng/L	P422354	
		Permethrin	1.7	U	ng/L	P422354	
		Phenothrin	0.94	U	ng/L	P422354	
		Piperonyl Butoxide	0.16	U	ng/L	P422354	
		Prallethrin	2.1	U	ng/L	P422354	
		Tau-Fluvalinate	0.26	U	ng/L	P422354	
		Tetramethrin	0.78	U	ng/L	P422354	
		Trans-Nonachlor	0.21	U	ng/L	P422354	
		Triclosan Methyl	0.16	U	ng/L	P422354	
		Trifluralin	0.21	U	ng/L	P422354	
	EPA 8276	Chlordane	2.1	U	ng/L	P422354	
	Toxaphene	16	U	ng/L	P422354		
2369532	EPA 8321B	2,4-D	0.0020	U	ug/L	P422538	
		Acesulfame K	0.15	I	ug/L	P422312	
		2,4,5-T	0.0040	U	ug/L	P422538	
		AMPA	0.10	U	ug/L	P422312	
		Acetaminophen	0.0080	U	ug/L	P422538	
		Endothall	0.25	U	ug/L	P422312	
		Acetamiprid	0.0020	U	ug/L	P422538	MS
		Glufosinate	0.10	U	ug/L	P422312	
		Glyphosate	0.10	UJ	ug/L	P422312	MS
		Afidopyropen	0.0020	U	ug/L	P422538	
		Bentazon	0.0019	I	ug/L	P422538	
		Sucralose	6.9		ug/L	P422312	
		Benzovindiflupyr	0.0020	U	ug/L	P422538	
		Carbamazepine	0.0014	I	ug/L	P422538	
		Clothianidin	0.019		ug/L	P422538	MS
		Dinotefuran	0.0023	I	ug/L	P422538	
		Diuron	0.0020	U	ug/L	P422538	
		Fenuron	0.032	U	ug/L	P422538	

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369532	EPA 8321B	Fluridone	8.0E-04	U	ug/L	P422538	
		Imazapyr	0.0051	I	ug/L	P422538	
		Hydrocodone	0.0020	U	ug/L	P422538	
		Ibuprofen	0.20	U	ug/L	P422538	
		Imidacloprid	0.041		ug/L	P422538	
		Linuron	0.0040	U	ug/L	P422538	
		Mandestrobin	0.0020	U	ug/L	P422538	
		MCP	0.0040	U	ug/L	P422538	
		Naproxen	0.0080	U	ug/L	P422538	
		Primidone	0.0076	I	ug/L	P422538	
		Pyraclostrobin	0.0020	U	ug/L	P422538	
		Silvex	0.0040	U	ug/L	P422538	
		Thiamethoxam	0.0020	U	ug/L	P422538	
		Tolfenpyrad	0.0020	U	ug/L	P422538	
		Triclopyr	0.0040	U	ug/L	P422538	

Ref. Method and Comment:

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

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

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

EPA 8321B: MS accuracy for sucralose could not be assessed due to high concentration of parameter in the spiked sample. Refer to the Lab Analysis Report for an explanation of QC Codes.

**Sample Location: Discharge from Tiger Point Golf Course at
 Maplewood Drive**

Collection Date/Time: 11/14/2022 09:50

Field ID: G4NW0211

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369518	EPA 180.1 Rev. 2.0	Turbidity	3.2		NTU	P422352	
	SM 2320 B-2011	Total Alkalinity	27		mg CaCO3/L	P422640	
	SM 2540 D-2015	TSS	20		mg/L	P422705	
	SM 4500-F- C-2011	Fluoride	0.032	I	mg F/L	P422644	
2369519	EPA 350.1 Rev. 2.0	Ammonia-N	0.66		mg N/L	P422989	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.3		mg N/L	P422450	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.008	I	mg N/L	P422492	
	EPA 365.1 Rev. 2.0	Total-P	0.25		mg P/L	P422444	
	SM 5310 B-2011	Organic Carbon	14		mg C/L	P422753	
2369533	EPA 200.7 Rev. 4.4	Calcium	7.06		mg/L	P422403	
		Iron	300		ug/L	P422403	
		Magnesium	2.83		mg/L	P422403	
		Potassium	3.4		mg/L	P422403	
		Sodium	16.4		mg/L	P422403	
		Strontium	27.5		ug/L	P422403	
		Tin	3.0	U	ug/L	P422403	
		Titanium	1.7	I	ug/L	P422403	
		Vanadium	2.0	U	ug/L	P422403	
		Zinc	5.0	U	ug/L	P422403	
	EPA 200.8 Rev. 5.4	Aluminum	328		ug/L	P422403	
		Antimony	0.050	U	ug/L	P422403	
		Arsenic	3.07		ug/L	P422403	
		Barium	5.28		ug/L	P422403	
		Beryllium	0.014	I	ug/L	P422403	
		Boron	70.4		ug/L	P422403	
		Cadmium	0.020	U	ug/L	P422403	
		Chromium	0.78	I	ug/L	P422403	
		Cobalt	0.067	I	ug/L	P422729	
		Copper	0.40	U	ug/L	P422403	
		Lead	0.20	U	ug/L	P422403	
		Manganese	10.6		ug/L	P422403	
		Molybdenum	0.15	U	ug/L	P422403	
		Nickel	0.75	I	ug/L	P422403	
		Selenium	0.20	U	ug/L	P422403	
		Silver	0.010	U	ug/L	P422403	
		Thallium	0.10	U	ug/L	P422403	
	SM 2340 B-2011	Hardness	29.3		mg/L	P422403	

Ref. Method and Comment:

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

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

Sample Location: FB

Collection Date/Time: 11/14/2022 10:30

Field ID: FB_11142022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369545	EPA 8321B	2,4-D	0.0020	U	ug/L	P422538	
		Acesulfame K	0.10	U	ug/L	P422312	
		2,4,5-T	0.0040	U	ug/L	P422538	
		AMPA	0.10	U	ug/L	P422312	
		Acetaminophen	0.0080	U	ug/L	P422538	
		Endothall	0.25	U	ug/L	P422312	
		Acetamiprid	0.0020	U	ug/L	P422538	MS
		Glufosinate	0.10	U	ug/L	P422312	
		Glyphosate	0.10	U	ug/L	P422312	MS
		Afidopyropen	0.0020	U	ug/L	P422538	
		Bentazon	8.0E-04	U	ug/L	P422538	
		Sucralose	0.010	U	ug/L	P422312	
		Benzovindiflupyr	0.0020	U	ug/L	P422538	
		Carbamazepine	8.0E-04	U	ug/L	P422538	
		Clothianidin	0.0020	U	ug/L	P422538	MS
		Dinotefuran	0.0020	U	ug/L	P422538	
		Diuron	0.0020	U	ug/L	P422538	
		Fenuron	0.032	U	ug/L	P422538	
		Fluridone	8.0E-04	U	ug/L	P422538	
		Imazapyr	0.0040	U	ug/L	P422538	
		Hydrocodone	0.0020	U	ug/L	P422538	
		Ibuprofen	0.20	U	ug/L	P422538	
		Imidacloprid	0.0020	U	ug/L	P422538	
		Linuron	0.0040	U	ug/L	P422538	
		Mandestrobin	0.0020	U	ug/L	P422538	
		MCPP	0.0040	U	ug/L	P422538	
		Naproxen	0.0080	U	ug/L	P422538	
		Primidone	0.0040	U	ug/L	P422538	
		Pyraclostrobin	0.0020	U	ug/L	P422538	
		Silvex	0.0040	U	ug/L	P422538	
		Thiamethoxam	0.0020	U	ug/L	P422538	
		Tolfenpyrad	0.0020	U	ug/L	P422538	
		Triclopyr	0.0040	U	ug/L	P422538	
2369546	EPA 200.7 Rev. 4.4	Calcium	0.075	U	mg/L	P422403	
		Iron	30	U	ug/L	P422403	
		Magnesium	0.040	U	mg/L	P422403	
		Strontium	2.0	U	ug/L	P422403	
		Tin	3.0	U	ug/L	P422403	
		Titanium	0.75	U	ug/L	P422403	
		Vanadium	2.0	U	ug/L	P422403	
		Zinc	5.0	U	ug/L	P422403	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P422403	
		Antimony	0.050	U	ug/L	P422403	
		Arsenic	0.050	U	ug/L	P422403	

Field ID: FB_11142022

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2369546	EPA 200.8 Rev. 5.4	Beryllium	0.010	U	ug/L	P422403	
		Cadmium	0.020	U	ug/L	P422403	
		Chromium	0.40	U	ug/L	P422403	
		Cobalt	0.020	U	ug/L	P422403	
		Copper	0.40	U	ug/L	P422403	
		Lead	0.20	U	ug/L	P422403	
		Manganese	0.10	U	ug/L	P422403	
		Molybdenum	0.15	U	ug/L	P422403	
		Nickel	0.50	U	ug/L	P422403	
		Selenium	0.20	U	ug/L	P422403	
		Silver	0.010	U	ug/L	P422403	
		Thallium	0.10	U	ug/L	P422403	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.
EPA 8321B: MS accuracy for sucralose 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: P422347

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422351

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422352

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P422403

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P422594

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/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: P422403

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P422403

Component	Result	Code	Units
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	0.067	I	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.12	I	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: P422594

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
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: P422729

Component	Result	Code	Units
Cobalt	0.020	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423148

Component	Result	Code	Units
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422829

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422833

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422989

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422450

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422492

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422442

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422444

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

Reference Method: EPA 8270E
Batch ID: P422354

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P422354

Component	Result	Code	Units
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
Carbophenothion	0.90	U	ng/L
Carbophenothion	0.90	U	ng/L
Chlorothalonil	1.2	U	ng/L
Chlorothalonil	1.2	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.25	U	ng/L
Dichlobenil	0.25	U	ng/L
Dicofol	1.2	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Fenpropathrin	0.25	U	ng/L

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P422354

Component	Result	Code	Units
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
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

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Method Blank Results

Reference Method: EPA 8270E

Batch ID: P422354

Component	Result	Code	Units
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: P422354

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

Reference Method: EPA 8321B

Batch ID: P422312

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: P422538

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	0.20	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0040	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P422538

Component	Result	Code	Units
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: P422622

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

Reference Method: SM 2320 B-2011
Batch ID: P422640

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

Reference Method: SM 2540 C-2015
Batch ID: P422852

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P422853

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P422705

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P422708

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422644

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

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Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P422753

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

Reference Method: SM 5310 B-2011
Batch ID: P422790

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: P422347

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422351

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.4		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422352

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P422403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	99.4		P	85 - 115
Iron	101		P	85 - 115
Magnesium	99.4		P	85 - 115
Potassium	98.2		P	85 - 115
Sodium	101		P	85 - 115
Strontium	102		P	85 - 115
Tin	100		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	99.0		P	85 - 115

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P422594

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	109		P	85 - 115
Magnesium	97.6		P	85 - 115
Manganese	105		P	85 - 115
Potassium	97.3		P	85 - 115
Sodium	98.4		P	85 - 115
Strontium	107		P	85 - 115
Tin	104		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P422403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	101		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422403

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	85 - 115
Beryllium	95.8		P	85 - 115
Boron	105		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	101		P	85 - 115
Cobalt	98.5		P	85 - 115
Copper	96.3		P	85 - 115
Lead	94.5		P	85 - 115
Manganese	105		P	85 - 115
Molybdenum	98.2		P	85 - 115
Nickel	97.8		P	85 - 115
Selenium	100		P	85 - 115
Silver	99.1		P	85 - 115
Thallium	97.6		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422594

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	98.1		P	85 - 115
Antimony	97.7		P	85 - 115
Arsenic	107		P	85 - 115
Barium	99.2		P	85 - 115
Beryllium	89.2		P	85 - 115
Boron	107		P	85 - 115
Cadmium	96.5		P	85 - 115
Chromium	93.8		P	85 - 115
Cobalt	94.6		P	85 - 115
Molybdenum	96.4		P	85 - 115
Nickel	95.2		P	85 - 115
Selenium	105		P	85 - 115
Silver	95.4		P	85 - 115
Thallium	103		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422729

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Cobalt	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P423148

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	91.7		P	85 - 115
Lead	97.1		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P422829

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422833

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	98.7		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422989

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422450

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	94.5		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422492

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: P422442

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422444

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

Reference Method: EPA 8270E
Batch ID: P422354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	62.7		P	10 - 92.0
Alpha-BHC	86.0		P	75 - 107
Alpha-Chlordane	96.4		P	50 - 108
Beta-BHC	95.2		P	36 - 138

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Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P422354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Beta-Cyfluthrin	81.0		P	20 - 161
Bifenthrin	65.3		P	10 - 119
Carbophenothion	60.8		P	19 - 94.0
Chlorothalonil	92.6		P	26 - 186
Cis-Nonachlor	77.2		P	42 - 119
Cypermethrin	85.1		P	22 - 150
Dacthal	87.6		P	72 - 119
DDD-p,p'	89.5		P	45 - 107
DDE-p,p'	85.3		P	48 - 106
DDT-p,p'	76.6		P	48 - 110
Delta-BHC	91.2		P	54 - 140
Deltamethrin	40.5		P	22 - 189
Dichlobenil	101		P	36 - 117
Dicofol	87.0		P	46 - 155
Dieldrin	86.8		P	54 - 110
Endosulfan I	82.9		P	59 - 105
Endosulfan II	81.9		P	51 - 118
Endosulfan Sulfate	90.4		P	57 - 121
Endrin	80.0		P	10 - 120
Endrin Aldehyde	79.6		P	34 - 118
Endrin Ketone	127		P	69 - 177
Esfenvalerate	76.5		P	23 - 168
Ethalfuralin	75.4		P	49 - 99.0
Fenpropathrin	86.1		P	34 - 117
Gamma-BHC	78.4		P	72 - 117
Gamma-Chlordane	90.9		P	43 - 106
Heptachlor	67.7		P	41 - 98.0
Heptachlor Epoxide	80.7		P	57 - 106
Hexachlorobenzene	76.5		P	36 - 99.0
Kepone	64.1		P	16 - 215
Lambda-Cyhalothrin	73.0		P	21 - 177
Methoprene	79.6		P	10 - 119
Methoxychlor	75.7		P	60 - 112
MGK-264	79.4		P	26 - 122
Mirex	66.1		P	10 - 169
Oxychlordane	77.3		P	43 - 105
PCB-1016	73.8		P	48 - 112
PCB-1260	82.6		P	44 - 118
Permethrin	81.0		P	24 - 148
Phenothrin	64.1		P	10 - 106
Piperonyl Butoxide	96.1		P	10 - 139
Prallethrin	82.3		P	17 - 109
Tau-Fluvalinate	73.3		P	13 - 131
Tetramethrin	93.6		P	10 - 132
Trans-Nonachlor	81.8		P	44 - 106
Triclosan Methyl	86.7		P	59 - 109
Trifluralin	77.2		P	44 - 101

Reference Method: EPA 8276

Batch ID: P422354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8276

Batch ID: P422354

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	74.3		P	61 - 116
Toxaphene	81.0		P	48 - 124

Reference Method: EPA 8321B

Batch ID: P422312

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	124		P	40 - 150
AMPA	117		P	40 - 150
Endothall	97.3		P	40 - 150
Glufosinate	113		P	40 - 150
Glyphosate	114		P	40 - 150
Sucralose	101		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P422538

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	81.0		P	40 - 150
Acetaminophen	84.5		P	30 - 150
Acetamiprid	81.1		P	40 - 150
Afidopyropen	58.9		P	30 - 150
Bentazon	78.2		P	30 - 150
Benzovindiflupyr	77.2		P	40 - 150
Carbamazepine	78.0		P	40 - 150
Clothianidin	88.4		P	40 - 150
Dinotefuran	87.5		P	40 - 150
Diuron	72.0		P	40 - 150
Fenuron	101		P	40 - 150
Fluridone	88.2		P	40 - 150
Hydrocodone	92.3		P	40 - 150
Ibuprofen	81.4		P	40 - 150
Imazapyr	80.6		P	40 - 150
Imidacloprid	96.6		P	40 - 150
Linuron	69.4		P	40 - 150
Mandestrobin	85.6		P	40 - 150
MCPP	99.7		P	40 - 150
Naproxen	78.4		P	40 - 150
Primidone	92.2		P	40 - 150
Pyraclostrobin	72.1		P	40 - 150
Silvex	84.0		P	40 - 150
Thiamethoxam	92.8		P	40 - 150
Tolfenpyrad	37.7		P	30 - 150
Triclopyr	86.1		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P422622

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.2		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P422640

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.8		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P422852

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

Reference Method: SM 2540 C-2015
Batch ID: P422853

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.4		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P422705

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.5		P	85 - 106

Reference Method: SM 2540 D-2015
Batch ID: P422708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.1		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P422644

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

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422753

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.0		P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422790

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P422403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369125	Calcium	97.1		P	80 - 120
2369125	Iron	98.0	97.9	P/P	80 - 120
2369125	Magnesium	95.0	94.4	P/P	80 - 120
2369125	Potassium	95.7		P	80 - 120
2369125	Sodium	98.8		P	80 - 120
2369125	Strontium	102	100	P/P	80 - 120
2369125	Tin	103	101	P/P	80 - 120
2369125	Titanium	104	103	P/P	80 - 120
2369125	Vanadium	101	99.5	P/P	80 - 120
2369125	Zinc	99.0	97.8	P/P	80 - 120

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P422594

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369427	Iron	108	103	P/P	80 - 120
2369427	Manganese	103	101	P/P	80 - 120
2369427	Tin	99.8	95.7	P/P	80 - 120
2369427	Titanium	103	101	P/P	80 - 120
2369427	Vanadium	104	104	P/P	80 - 120
2369427	Zinc	102	100	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422403

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369125	Aluminum	101	102	P/P	80 - 120
2369125	Antimony	105	107	P/P	80 - 120
2369125	Arsenic	104	104	P/P	80 - 120
2369125	Barium	106	106	P/P	80 - 120
2369125	Beryllium	95.3	94.5	P/P	80 - 120
2369125	Boron	109	113	P/P	80 - 120
2369125	Cadmium	103	102	P/P	80 - 120
2369125	Chromium	104	105	P/P	80 - 120
2369125	Cobalt	101	103	P/P	80 - 120
2369125	Copper	99.6	101	P/P	80 - 120
2369125	Lead	97.4	98.6	P/P	80 - 120
2369125	Molybdenum	102	103	P/P	80 - 120
2369125	Nickel	101	102	P/P	80 - 120
2369125	Selenium	101	102	P/P	80 - 120
2369125	Silver	101	103	P/P	80 - 120
2369125	Thallium	101	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422594

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369427	Aluminum	97.7	96.2	P/P	70 - 130
2369427	Antimony	99.7	99.2	P/P	70 - 130
2369427	Arsenic	118	118	P/P	70 - 130
2369427	Barium	102	97.9	P/P	70 - 130
2369427	Beryllium	104	99.1	P/P	70 - 130

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P422594

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369427	Boron	123	124	P/P	70 - 130
2369427	Cadmium	94.8	94.1	P/P	70 - 130
2369427	Chromium	95.1	94.3	P/P	70 - 130
2369427	Cobalt	108	105	P/P	70 - 130
2369427	Molybdenum	107	104	P/P	70 - 130
2369427	Nickel	94.1	93.2	P/P	70 - 130
2369427	Selenium	108	110	P/P	70 - 130
2369427	Silver	88.9	88.6	P/P	70 - 130
2369427	Thallium	107	107	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P422729

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370267	Cobalt	98.1		P	80 - 120
2370498	Cobalt	99.4	102	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423148

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371856	Copper	103	105	P/P	70 - 130
2371856	Lead	104	102	P/P	70 - 130

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422829

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369118	Chloride	97.0		P	90 - 110
2369236	Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369118	Sulfate	94.4		P	90 - 110
2369236	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422989

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369516	Ammonia-N	98.6	98.2	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369474	Ammonia-N	101	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369086	Kjeldahl Nitrogen	100	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	94.4	96.2	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422492

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369519	NO2NO3-N	104	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422442

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369472	Total-P	99.0	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422444

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369516	Total-P	106	105	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P422354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369386	Aldrin	53.6	56.8	P/P	20 - 82.0
2369386	Alpha-BHC	71.8	75.4	P/P	71 - 109
2369386	Alpha-Chlordane	69.2	62.3	P/P	42 - 106
2369386	Beta-BHC	82.5	79.7	P/P	69 - 180
2369386	Beta-Cyfluthrin	57.5	63.9	P/P	18 - 175
2369386	Bifenthrin	46.4	54.5	P/P	21 - 128
2369386	Carbophenothion	53.1	56.7	P/P	10 - 126
2369386	Chlorothalonil	74.8	85.8	P/P	10 - 300
2369386	Cis-Nonachlor	55.6	59.7	P/P	34 - 106
2369386	Cypermethrin	56.6	66.9	P/P	22 - 158
2369386	Dacthal	70.4	76.2	P/P	54 - 116
2369386	DDD-p,p'	67.7	70.8	P/P	34 - 107
2369386	DDE-p,p'	66.3	71.0	P/P	33 - 110
2369386	DDT-p,p'	57.7	63.8	P/P	50 - 122
2369386	Delta-BHC	75.0	79.8	F/P	77 - 193
2369386	Deltamethrin	46.4	28.1	P/P	10 - 195
2369386	Dichlobenil	91.4	85.0	P/P	25 - 113
2369386	Dicofol	66.3	69.9	P/P	38 - 247
2369386	Dieldrin	72.4	75.6	P/P	45 - 118
2369386	Endosulfan I	68.5	66.1	P/P	51 - 106
2369386	Endosulfan II	67.1	70.9	P/P	37 - 122
2369386	Endosulfan Sulfate	73.9	74.6	P/P	43 - 132

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P422354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369386	Endrin	69.0	70.2	P/P	29 - 101
2369386	Endrin Aldehyde	63.9	71.8	P/P	19 - 110
2369386	Endrin Ketone	102	111	P/P	60 - 140
2369386	Esfenvalerate	51.6	64.7	P/P	26 - 199
2369386	Ethalfuralin	59.1	62.4	P/P	45 - 99.0
2369386	Fenpropathrin	62.4	64.6	P/P	35 - 120
2369386	Gamma-BHC	68.6	80.8	P/P	63 - 128
2369386	Gamma-Chlordane	71.2	61.9	P/P	40 - 104
2369386	Heptachlor	56.9	62.6	P/P	36 - 97.0
2369386	Heptachlor Epoxide	71.0	73.6	P/P	49 - 184
2369386	Hexachlorobenzene	59.5	60.2	P/P	39 - 96.0
2369386	Kepone	55.3	56.8	P/P	10 - 217
2369386	Lambda-Cyhalothrin	51.5	62.9	P/P	21 - 193
2369386	Methoprene	56.2	63.0	P/P	20 - 106
2369386	Methoxychlor	60.2	64.5	P/P	53 - 118
2369386	MGK-264	67.2	74.5	P/P	40 - 118
2369386	Mirex	50.2	57.1	P/P	26 - 92.0
2369386	Oxychlordane	65.7	72.7	P/P	44 - 99.0
2369386	Permethrin	58.7	67.7	P/P	33 - 182
2369386	Phenothrin	48.6	58.3	P/P	10 - 129
2369386	Piperonyl Butoxide	71.4	78.8	P/P	10 - 211
2369386	Prallethrin	65.9	69.5	P/P	24 - 113
2369386	Tau-Fluvalinate	49.6	60.6	P/P	14 - 149
2369386	Tetramethrin	69.0	80.4	P/P	17 - 151
2369386	Trans-Nonachlor	63.6	64.4	P/P	42 - 102
2369386	Triclosan Methyl	68.6	63.6	P/P	48 - 108
2369386	Trifluralin	59.1	63.4	P/P	47 - 96.0
2369877	PCB-1016	72.9	74.0	P/P	46 - 111
2369877	PCB-1260	69.6	72.7	P/P	45 - 114

Reference Method: EPA 8276

Batch ID: P422354

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369877	Chlordane	81.5	84.9	P/P	53 - 126
2369877	Toxaphene	112	92.9	P/P	56 - 211

Reference Method: EPA 8321B

Batch ID: P422312

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369532	Acesulfame K	135	139	P/P	40 - 150
2369532	AMPA	100	103	P/P	40 - 150
2369532	Endothall	99.2	101	P/P	40 - 150
2369532	Glufosinate	128	116	P/P	40 - 150
2369532	Glyphosate	156	143	F/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P422538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369273	2,4-D	105	100	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P422538

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369273	2,4,5-T	73.2	62.7	P/P	40 - 150
2369273	Acetaminophen	86.0	87.0	P/P	30 - 150
2369273	Acetamiprid	25.2	25.4	F/F	40 - 150
2369273	Afidopyropen	71.7	71.4	P/P	30 - 150
2369273	Benzovindiflupyr	73.4	77.2	P/P	40 - 150
2369273	Clothianidin	18.3	10.5	F/F	40 - 150
2369273	Diuron	46.2	44.5	P/P	40 - 150
2369273	Fenuron	82.6	77.6	P/P	40 - 150
2369273	Fluridone	75.4	74.9	P/P	40 - 150
2369273	Hydrocodone	106	106	P/P	40 - 150
2369273	Ibuprofen	74.2	78.1	P/P	40 - 150
2369273	Imazapyr	126	124	P/P	40 - 150
2369273	Linuron	76.1	76.9	P/P	40 - 150
2369273	Mandestrobin	81.0	80.7	P/P	40 - 150
2369273	MCP	79.6	73.3	P/P	40 - 150
2369273	Naproxen	78.0	84.4	P/P	40 - 150
2369273	Pyraclostrobin	80.1	81.0	P/P	40 - 150
2369273	Silvex	94.9	84.1	P/P	40 - 150
2369273	Thiamethoxam	122	122	P/P	40 - 150
2369273	Tolfenpyrad	54.3	56.4	P/P	30 - 150
2369273	Triclopyr	67.5	68.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P422644

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369236	Fluoride	102	101	P/P	94 - 104

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369410	Fluoride	100	102	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422753

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2369756	Organic Carbon	96.4	96.4	P/P	85 - 115

Reference Method: SM 5310 B-2011
Batch ID: P422790

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370843	Organic Carbon	96.2	97.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P422347

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369514	Color (true)	1.07	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422351

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369210	Turbidity	9.02	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P422352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369473	Turbidity	3.49	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P422403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369125	Calcium	2.30	Spike	P	0 - 20
2369125	Iron	0.118	Spike	P	0 - 20
2369125	Magnesium	0.355	Spike	P	0 - 20
2369125	Potassium	1.41	Spike	P	0 - 20
2369125	Sodium	1.69	Spike	P	0 - 20
2369125	Strontium	1.66	Spike	P	0 - 20
2369125	Tin	2.04	Spike	P	0 - 20
2369125	Titanium	1.73	Spike	P	0 - 20
2369125	Vanadium	1.83	Spike	P	0 - 20
2369125	Zinc	1.26	Spike	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P422594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369427	Calcium	2.95	Spike	P	0 - 20
2369427	Iron	4.28	Spike	P	0 - 20
2369427	Magnesium	3.06	Spike	P	0 - 20
2369427	Manganese	1.96	Spike	P	0 - 20
2369427	Potassium	6.93	Spike	P	0 - 20
2369427	Sodium	6.63	Spike	P	0 - 20
2369427	Strontium	2.94	Spike	P	0 - 20
2369427	Tin	4.20	Spike	P	0 - 20
2369427	Titanium	1.57	Spike	P	0 - 20
2369427	Vanadium	0.623	Spike	P	0 - 20
2369427	Zinc	1.69	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422403

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369125	Aluminum	0.369	Spike	P	0 - 20
2369125	Antimony	1.37	Spike	P	0 - 20
2369125	Arsenic	0.167	Spike	P	0 - 20
2369125	Barium	0.112	Spike	P	0 - 20
2369125	Beryllium	0.826	Spike	P	0 - 20
2369125	Boron	1.83	Spike	P	0 - 20
2369125	Cadmium	0.153	Spike	P	0 - 20
2369125	Chromium	1.26	Spike	P	0 - 20
2369125	Cobalt	1.84	Spike	P	0 - 20
2369125	Copper	1.72	Spike	P	0 - 20
2369125	Lead	1.23	Spike	P	0 - 20
2369125	Manganese	1.54	Spike	P	0 - 20
2369125	Molybdenum	1.29	Spike	P	0 - 20
2369125	Nickel	0.928	Spike	P	0 - 20
2369125	Selenium	1.20	Spike	P	0 - 20
2369125	Silver	2.02	Spike	P	0 - 20
2369125	Thallium	3.71	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422594

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369427	Aluminum	1.35	Spike	P	0 - 20
2369427	Antimony	0.546	Spike	P	0 - 20
2369427	Arsenic	0.453	Spike	P	0 - 20
2369427	Barium	3.45	Spike	P	0 - 20
2369427	Beryllium	4.75	Spike	P	0 - 20
2369427	Boron	0.141	Spike	P	0 - 20
2369427	Cadmium	0.753	Spike	P	0 - 20
2369427	Chromium	0.774	Spike	P	0 - 20
2369427	Cobalt	2.60	Spike	P	0 - 20
2369427	Molybdenum	2.26	Spike	P	0 - 20
2369427	Nickel	0.853	Spike	P	0 - 20
2369427	Selenium	1.22	Spike	P	0 - 20
2369427	Silver	0.354	Spike	P	0 - 20
2369427	Thallium	0.376	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P422729

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370498	Cobalt	2.75	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P423148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371856	Copper	2.06	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P423148

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371856	Lead	1.65	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422829

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369118	Chloride	0.152	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369118	Sulfate	0.0331	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422989

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369516	Ammonia-N	0.351	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P423040

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369474	Ammonia-N	1.09	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369086	Kjeldahl Nitrogen	1.50	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P422540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369521	Kjeldahl Nitrogen	1.68	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422492

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369519	NO2NO3-N	1.40	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P422442

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369472	Total-P	2.22	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P422444

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369516	Total-P	0.309	Spike	P	0 - 20

Reference Method: EPA 8270E
 Batch ID: P422354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369386	Aldrin	5.79	Spike	P	0 - 41
2369386	Alpha-BHC	4.78	Spike	P	0 - 25
2369386	Alpha-Chlordane	10.5	Spike	P	0 - 33
2369386	Beta-BHC	3.48	Spike	P	0 - 36
2369386	Beta-Cyfluthrin	10.6	Spike	P	0 - 42
2369386	Bifenthrin	16.1	Spike	P	0 - 53
2369386	Carbophenothion	6.62	Spike	P	0 - 30
2369386	Chlorothalonil	13.7	Spike	P	0 - 71
2369386	Cis-Nonachlor	7.12	Spike	P	0 - 29
2369386	Cypermethrin	16.6	Spike	P	0 - 40
2369386	Dacthal	7.89	Spike	P	0 - 26
2369386	DDD-p,p'	4.52	Spike	P	0 - 39
2369386	DDE-p,p'	6.85	Spike	P	0 - 33
2369386	DDT-p,p'	9.96	Spike	P	0 - 40
2369386	Delta-BHC	6.26	Spike	P	0 - 37
2369386	Deltamethrin	49.2	Spike	P	0 - 100
2369386	Dichlobenil	7.29	Spike	P	0 - 40
2369386	Dicofol	5.22	Spike	P	0 - 31
2369386	Dieldrin	4.32	Spike	P	0 - 27
2369386	Endosulfan I	3.57	Spike	P	0 - 23
2369386	Endosulfan II	5.61	Spike	P	0 - 28
2369386	Endosulfan Sulfate	0.938	Spike	P	0 - 38
2369386	Endrin	1.85	Spike	P	0 - 63
2369386	Endrin Aldehyde	11.6	Spike	P	0 - 60
2369386	Endrin Ketone	8.78	Spike	P	0 - 37
2369386	Esfenvalerate	22.5	Spike	P	0 - 52
2369386	Ethalfuralin	5.42	Spike	P	0 - 23
2369386	Fenpropathrin	3.48	Spike	P	0 - 32
2369386	Gamma-BHC	16.3	Spike	P	0 - 17
2369386	Gamma-Chlordane	13.9	Spike	P	0 - 40
2369386	Heptachlor	9.43	Spike	P	0 - 29
2369386	Heptachlor Epoxide	3.57	Spike	P	0 - 25
2369386	Hexachlorobenzene	1.21	Spike	P	0 - 36
2369386	Kepone	2.65	Spike	P	0 - 93
2369386	Lambda-Cyhalothrin	20.0	Spike	P	0 - 55
2369386	Methoprene	11.5	Spike	P	0 - 53
2369386	Methoxychlor	6.82	Spike	P	0 - 29

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P422354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369386	MGK-264	10.2	Spike	P	0 - 35
2369386	Mirex	13.0	Spike	P	0 - 46
2369386	Oxychlordane	10.1	Spike	P	0 - 29
2369386	Permethrin	14.3	Spike	P	0 - 44
2369386	Phenothrin	18.2	Spike	P	0 - 56
2369386	Piperonyl Butoxide	9.88	Spike	P	0 - 100
2369386	Prallethrin	5.28	Spike	P	0 - 42
2369386	Tau-Fluvalinate	19.9	Spike	P	0 - 54
2369386	Tetramethrin	15.3	Spike	P	0 - 51
2369386	Trans-Nonachlor	1.35	Spike	P	0 - 37
2369386	Triclosan Methyl	7.59	Spike	P	0 - 31
2369386	Trifluralin	6.89	Spike	P	0 - 30
2369877	PCB-1016	1.48	Spike	P	0 - 32
2369877	PCB-1260	4.29	Spike	P	0 - 31

Reference Method: EPA 8276

Batch ID: P422354

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369877	Chlordane	4.09	Spike	P	0 - 25
2369877	Toxaphene	18.8	Spike	P	0 - 26

Reference Method: EPA 8321B

Batch ID: P422312

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369532	Acesulfame K	3.32	Spike	P	0 - 30
2369532	AMPA	2.85	Spike	P	0 - 30
2369532	Endothall	1.69	Spike	P	0 - 30
2369532	Glufosinate	10.1	Spike	P	0 - 30
2369532	Glyphosate	8.22	Spike	P	0 - 30
2369532	Sucralose	6.61	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P422538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369273	2,4-D	3.22	Spike	P	0 - 30
2369273	2,4,5-T	15.5	Spike	P	0 - 30
2369273	Acetaminophen	1.17	Spike	P	0 - 30
2369273	Acetamiprid	0.268	Spike	P	0 - 30
2369273	Afidopyropen	0.392	Spike	P	0 - 30
2369273	Bentazon	5.65	Spike	P	0 - 30
2369273	Benzovindiflupyr	5.05	Spike	P	0 - 30
2369273	Carbamazepine	4.33	Spike	P	0 - 30
2369273	Clothianidin	7.07	Spike	P	0 - 30
2369273	Dinotefuran	3.04	Spike	P	0 - 30
2369273	Diuron	3.34	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P422538

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369273	Fenuron	6.21	Spike	P	0 - 30
2369273	Fluridone	0.650	Spike	P	0 - 30
2369273	Hydrocodone	0.0742	Spike	P	0 - 30
2369273	Ibuprofen	5.11	Spike	P	0 - 30
2369273	Imazapyr	1.28	Spike	P	0 - 30
2369273	Imidacloprid	2.04	Spike	P	0 - 30
2369273	Linuron	1.02	Spike	P	0 - 30
2369273	Mandestrobin	0.314	Spike	P	0 - 30
2369273	MCCP	4.86	Spike	P	0 - 30
2369273	Naproxen	7.87	Spike	P	0 - 30
2369273	Primidone	3.57	Spike	P	0 - 30
2369273	Pyraclostrobin	1.14	Spike	P	0 - 30
2369273	Silvex	12.0	Spike	P	0 - 30
2369273	Thiamethoxam	0.177	Spike	P	0 - 30
2369273	Tolfenpyrad	3.84	Spike	P	0 - 30
2369273	Triclopyr	1.05	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P422622

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369410	Total Alkalinity	0.356	Sample	P	0 - 3.8

Reference Method: SM 2320 B-2011
Batch ID: P422640

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369236	Total Alkalinity	0.521	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015
Batch ID: P422852

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369236	TDS	6.84	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P422853

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369887	TDS	3.31	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P422644

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369236	Fluoride	0.490	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P422965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369410	Fluoride	0.986	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P422753

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2369756	Organic Carbon	0.0448	Spike	P	0 - 20

Reference Method: SM 5310 B-2011
Batch ID: P422790

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370843	Organic Carbon	0.945	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2369531

Field Sample ID: G4NW0193

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	101	P	29 - 130
EPA 8270E	Decachlorobiphenyl	87.0	P	30 - 118
EPA 8270E	Tetrachloro-m-xylene	81.8	P	29 - 104
EPA 8270E	Tetrachloro-m-xylene	73.3	P	30 - 97.0
EPA 8276	Decachlorobiphenyl	53.1	P	30 - 101
EPA 8276	PCNB	102	P	48 - 121

Lab Sample ID: 2369532

Field Sample ID: G4NW0193

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	108	P	30 - 160
EPA 8321B	Acetaminophen-d4	104	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.2	P	30 - 160
EPA 8321B	Diuron-d6	69.4	P	30 - 160
EPA 8321B	Endothall-d6	93.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	131	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.3	P	30 - 160
EPA 8321B	Primidone-d5	99.7	P	30 - 160
EPA 8321B	Sucralose-d6	120	P	30 - 160

Lab Sample ID: 2369545

Field Sample ID: FB_11142022

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	86.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	96.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.8	P	30 - 160
EPA 8321B	Diuron-d6	86.2	P	30 - 160
EPA 8321B	Endothall-d6	87.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	98.5	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.9	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	119	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A115938

Included Lab Sample IDs: 2369514, 2369520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.3	99.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115942

Included Lab Sample IDs: 2369514, 2369518, 2369520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.0	98.0	P/P	95 - 105
Turbidity	98.0	98.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A115978

Included Lab Sample IDs: 2369532, 2369545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	120	126	P/P	60 - 160
Acesulfame K	126	119	P/P	60 - 160
Sucralose	101	98.7	P/P	60 - 160
Sucralose	99.3	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A115981

Included Lab Sample IDs: 2369532, 2369545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	94.1	P/P	60 - 160
AMPA	111	102	P/P	60 - 160
Endothall	101	97.4	P/P	60 - 160
Endothall	97.4	61.4	P/P	60 - 160
Glufosinate	112	93.4	P/P	60 - 160
Glufosinate	93.4	74.8	P/P	60 - 160
Glyphosate	108	99.8	P/P	60 - 160
Glyphosate	115	108	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A115990

Included Lab Sample IDs: 2369516, 2369519, 2369521

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116017

Included Lab Sample IDs: 2369533, 2369546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.1	96.8	P/P	90 - 110
Antimony	100	101	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Barium	101	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116017

Included Lab Sample IDs: 2369533, 2369546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	98.5	99.5	P/P	90 - 110
Boron	107	103	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Chromium	101	101	P/P	90 - 110
Cobalt	98.8	99.0	P/P	90 - 110
Copper	98.3	97.5	P/P	90 - 110
Lead	94.2	95.3	P/P	90 - 110
Manganese	105	104	P/P	90 - 110
Molybdenum	98.6	99.6	P/P	90 - 110
Nickel	98.3	98.4	P/P	90 - 110
Selenium	101	101	P/P	90 - 110
Silver	98.0	98.4	P/P	90 - 110
Thallium	99.9	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116022

Included Lab Sample IDs: 2369519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	97.1	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A116040

Included Lab Sample IDs: 2369516, 2369521

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

Reference Method: SM 2320 B-2011

Run ID: A116055

Included Lab Sample IDs: 2369520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	93.3	96.4	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A116057

Included Lab Sample IDs: 2369514, 2369518

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	94.8	98.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116057

Included Lab Sample IDs: 2369514, 2369518

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A116081

Included Lab Sample IDs: 2369532, 2369545

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	97.0	97.3	P/P	50 - 150
2,4,5-T	102	112	P/P	50 - 150
Acetaminophen	98.1	102	P/P	60 - 160
Acetamiprid	106	104	P/P	50 - 150
Afidopyropen	96.3	95.8	P/P	50 - 150
Bentazon	97.3	96.9	P/P	50 - 160
Benzovindiflupyr	104	98.1	P/P	50 - 150
Carbamazepine	105	98.9	P/P	60 - 150
Clothianidin	112	105	P/P	60 - 150
Dinotefuran	103	111	P/P	50 - 150
Diuron	103	104	P/P	60 - 160
Fenuron	103	107	P/P	60 - 150
Fluridone	103	99.9	P/P	60 - 160
Hydrocodone	104	99.5	P/P	60 - 150
Ibuprofen	141	107	P/P	50 - 160
Imazapyr	97.5	102	P/P	50 - 150
Imidacloprid	97.4	106	P/P	60 - 150
Linuron	99.8	103	P/P	60 - 150
Mandestrobin	106	108	P/P	50 - 150
MCPP	103	106	P/P	50 - 150
Naproxen	103	127	P/P	50 - 160
Primidone	106	100	P/P	60 - 150
Pyraclostrobin	105	104	P/P	60 - 150
Silvex	100	104	P/P	50 - 150
Thiamethoxam	99.6	100	P/P	50 - 150
Tolfenpyrad	99.7	104	P/P	60 - 150
Triclopyr	114	114	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116085

Included Lab Sample IDs: 2369521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.4	91.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A116108

Included Lab Sample IDs: 2369514, 2369520

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.2	102	P/P	90 - 110
Sulfate	98.8	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A116122

Included Lab Sample IDs: 2369531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	100		P	80 - 120
Alpha-BHC	91.8		P	80 - 120
Alpha-Chlordane	86.8		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A116122
 Included Lab Sample IDs: 2369531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beta-BHC	96.5		P	80 - 120
Beta-Cyfluthrin	94.3		P	80 - 120
Bifenthrin	92.8		P	80 - 120
Carbophenothion	111		P	80 - 120
Chlorothalonil	88.7		P	80 - 120
Cis-Nonachlor	92.8		P	80 - 120
Cypermethrin	94.6		P	80 - 120
Dacthal	97.2		P	80 - 120
DDD-p,p'	102		P	80 - 120
DDE-p,p'	104		P	80 - 120
DDT-p,p'	95.5		P	80 - 120
Delta-BHC	85.5		P	80 - 120
Deltamethrin	83.9		P	80 - 120
Dichlobenil	102		P	80 - 120
Dicofol	97.6		P	80 - 120
Dieldrin	102		P	80 - 120
Endosulfan I	97.6		P	80 - 120
Endosulfan II	95.5		P	80 - 120
Endosulfan Sulfate	99.7		P	80 - 120
Endrin	97.3		P	80 - 120
Endrin Aldehyde	105		P	80 - 120
Endrin Ketone	144*		F	80 - 120
Esfenvalerate	89.9		P	80 - 120
Ethalfuralin	90.3		P	80 - 120
Fenpropathrin	96.9		P	80 - 120
Gamma-BHC	104		P	80 - 120
Gamma-Chlordane	88.5		P	80 - 120
Heptachlor	91.6		P	80 - 120
Heptachlor Epoxide	101		P	80 - 120
Hexachlorobenzene	98.3		P	80 - 120
Kepone	76.4*		F	80 - 120
Lambda-Cyhalothrin	93.0		P	80 - 120
Methoprene	92.2		P	80 - 120
Methoxychlor	89.0		P	80 - 120
MGK-264	92.6		P	80 - 120
Mirex	101		P	80 - 120
Oxychlordane	93.8		P	80 - 120
Permethrin	91.1		P	80 - 120
Phenothrin	91.9		P	80 - 120
Piperonyl Butoxide	97.9		P	80 - 120
Prallethrin	90.1		P	80 - 120
Tau-Fluvalinate	93.5		P	80 - 120
Tetramethrin	94.5		P	80 - 120
Trans-Nonachlor	98.2		P	80 - 120
Triclosan Methyl	103		P	80 - 120
Trifluralin	95.0		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A116127

Included Lab Sample IDs: 2369516, 2369519

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

Reference Method: EPA 8270E

Run ID: A116136

Included Lab Sample IDs: 2369531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
PCB-1016	91.1		P	80 - 120
PCB-1260	102		P	80 - 120

Reference Method: SM 5310 B-2011

Run ID: A116142

Included Lab Sample IDs: 2369521

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	102	95.2	P/P	90 - 110

Reference Method: EPA 8276

Run ID: A116150

Included Lab Sample IDs: 2369531

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	102		P	80 - 120
Toxaphene	107		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A116154

Included Lab Sample IDs: 2369516, 2369519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.6	95.9	P/P	90 - 110
Kjeldahl Nitrogen	95.9	92.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A116172

Included Lab Sample IDs: 2369533, 2369546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	97.0	P/P	90 - 110
Calcium	99.0	101	P/P	95 - 105
Iron	99.5	97.1	P/P	90 - 110
Iron	100	99.5	P/P	95 - 105
Magnesium	97.5	95.1	P/P	90 - 110
Magnesium	98.7	97.5	P/P	95 - 105
Potassium	99.0	96.6	P/P	90 - 110
Sodium	103	99.0	P/P	90 - 110
Strontium	102	99.1	P/P	90 - 110
Strontium	99.4	102	P/P	95 - 105
Tin	96.4	98.6	P/P	95 - 105
Tin	98.6	99.0	P/P	90 - 110
Titanium	102	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A116172

Included Lab Sample IDs: 2369533, 2369546

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Titanium	98.9	102	P/P	95 - 105
Vanadium	97.9	99.1	P/P	95 - 105
Vanadium	99.1	98.0	P/P	90 - 110
Zinc	98.9	98.3	P/P	90 - 110
Zinc	99.1	98.9	P/P	95 - 105

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A116187

Included Lab Sample IDs: 2369534

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

Reference Method: SM 4500-F- C-2011

Run ID: A116202

Included Lab Sample IDs: 2369520

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116209

Included Lab Sample IDs: 2369516, 2369519

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.0	100	P/P	90 - 110
Ammonia-N	99.2	99.3	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116220

Included Lab Sample IDs: 2369533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cobalt	94.9	97.9	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116224

Included Lab Sample IDs: 2369534

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116224

Included Lab Sample IDs: 2369534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	96.3	95.7	P/P	90 - 110
Barium	96.1	95.4	P/P	90 - 110
Cadmium	97.9	97.4	P/P	90 - 110
Chromium	93.5	93.5	P/P	90 - 110
Cobalt	96.6	98.7	P/P	90 - 110
Molybdenum	97.6	97.9	P/P	90 - 110
Nickel	98.6	101	P/P	90 - 110
Silver	95.0	95.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A116231

Included Lab Sample IDs: 2369521

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116246

Included Lab Sample IDs: 2369534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Arsenic	105	104	P/P	90 - 110
Beryllium	97.4	97.6	P/P	90 - 110
Boron	101	101	P/P	90 - 110
Selenium	103	102	P/P	90 - 110
Thallium	101	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116317

Included Lab Sample IDs: 2369534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	93.9	94.4	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A116345

Included Lab Sample IDs: 2369534

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Lead	93.5	93.9	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	MS
						SMP	
DEP SOP: NU-094-1	Color (true)	97.6				1.07	
EPA 180.1 Rev. 2.0	Turbidity	99.4				9.02	
	Turbidity	99.3				3.49	
EPA 200.7 Rev. 4.4	Calcium	99.4	97.1				2.30
	Calcium	100					2.95
	Iron	101	98.0	97.9			0.118
	Iron	109	108	103			4.28
	Magnesium	99.4	95.0	94.4			0.355
	Magnesium	97.6					3.06
	Manganese	105	103	101			1.96
	Potassium	98.2	95.7				1.41
	Potassium	97.3					6.93
	Sodium	101	98.8				1.69
	Sodium	98.4					6.63
	Strontium	102	102	100			1.66
	Strontium	107					2.94
	Tin	100	103	101			2.04
	Tin	104	99.8	95.7			4.20
	Titanium	103	104	103			1.73
	Titanium	103	103	101			1.57
	Vanadium	100	101	99.5			1.83
	Vanadium	101	104	104			0.623
	Zinc	99.0	99.0	97.8			1.26
	Zinc	101	102	100			1.69
EPA 200.8 Rev. 5.4	Aluminum	100	101	102			0.369
	Aluminum	98.1	97.7	96.2			1.35
	Antimony	103	105	107			1.37
	Antimony	97.7	99.7	99.2			0.546
	Arsenic	101	104	104			0.167
	Arsenic	107	118	118			0.453
	Barium	104	106	106			0.112
	Barium	99.2	102	97.9			3.45
	Beryllium	95.8	95.3	94.5			0.826
	Beryllium	89.2	104	99.1			4.75
	Boron	105	109	113			1.83
	Boron	107	123	124			0.141
	Cadmium	100	103	102			0.153
	Cadmium	96.5	94.8	94.1			0.753
	Chromium	101	104	105			1.26
	Chromium	93.8	95.1	94.3			0.774
	Cobalt	98.5	101	103			1.84
	Cobalt	94.6	108	105			2.60
	Cobalt	101	99.4	102	98.1		2.75
	Copper	96.3	99.6	101			1.72
	Copper	91.7	103	105			2.06
	Lead	94.5	97.4	98.6			1.23
	Lead	97.1	104	102			1.65
	Manganese	105					1.54
	Molybdenum	98.2	102	103			1.29
	Molybdenum	96.4	107	104			2.26
	Nickel	97.8	101	102			0.928
	Nickel	95.2	94.1	93.2			0.853
	Selenium	100	101	102			1.20
	Selenium	105	108	110			1.22

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 200.8 Rev. 5.4	Silver	99.1	101	103			2.02
	Silver	95.4	88.9	88.6			0.354
	Thallium	97.6	101	104			3.71
	Thallium	103	107	107			0.376
EPA 300.0 Rev. 2.1	Chloride	99.5	97.0	98.4		0.152	
	Sulfate	98.7	94.4	95.8		0.0331	
EPA 350.1 Rev. 2.0	Ammonia-N	96.6	98.6	98.2			0.351
	Ammonia-N	99.8	101	103			1.09
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	100	103			1.50
	Kjeldahl Nitrogen	94.5	94.4	96.2			1.68
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	104	103			1.40
EPA 365.1 Rev. 2.0	Total-P	103	99.0	101			2.22
	Total-P	103	106	105			0.309
EPA 8270E	Aldrin	62.7	53.6	56.8			5.79
	Alpha-BHC	86.0	71.8	75.4			4.78
	Alpha-Chlordane	96.4	69.2	62.3			10.5
	Beta-BHC	95.2	82.5	79.7			3.48
	Beta-Cyfluthrin	81.0	57.5	63.9			10.6
	Bifenthrin	65.3	46.4	54.5			16.1
	Carbophenothion	60.8	53.1	56.7			6.62
	Chlorothalonil	92.6	74.8	85.8			13.7
	Cis-Nonachlor	77.2	55.6	59.7			7.12
	Cypermethrin	85.1	56.6	66.9			16.6
	Dacthal	87.6	70.4	76.2			7.89
	DDD-p,p'	89.5	67.7	70.8			4.52
	DDE-p,p'	85.3	66.3	71.0			6.85
	DDT-p,p'	76.6	57.7	63.8			9.96
	Delta-BHC	91.2	75.0	79.8			6.26
	Deltamethrin	40.5	46.4	28.1			49.2
	Dichlobenil	101	91.4	85.0			7.29
	Dicofol	87.0	66.3	69.9			5.22
	Dieldrin	86.8	72.4	75.6			4.32
	Endosulfan I	82.9	68.5	66.1			3.57
	Endosulfan II	81.9	67.1	70.9			5.61
	Endosulfan Sulfate	90.4	73.9	74.6			0.938
	Endrin	80.0	69.0	70.2			1.85
	Endrin Aldehyde	79.6	63.9	71.8			11.6
	Endrin Ketone	127	102	111			8.78
	Esfenvalerate	76.5	51.6	64.7			22.5
	Ethalfuralin	75.4	59.1	62.4			5.42
	Fenpropathrin	86.1	62.4	64.6			3.48
	Gamma-BHC	78.4	68.6	80.8			16.3
	Gamma-Chlordane	90.9	71.2	61.9			13.9
	Heptachlor	67.7	56.9	62.6			9.43
	Heptachlor Epoxide	80.7	71.0	73.6			3.57
	Hexachlorobenzene	76.5	59.5	60.2			1.21
	Kepone	64.1	55.3	56.8			2.65
	Lambda-Cyhalothrin	73.0	51.5	62.9			20.0
	Methoprene	79.6	56.2	63.0			11.5
	Methoxychlor	75.7	60.2	64.5			6.82
	MGK-264	79.4	67.2	74.5			10.2
	Mirex	66.1	50.2	57.1			13.0
	Oxychlordane	77.3	65.7	72.7			10.1
	PCB-1016	73.8	72.9	74.0			1.48

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	PCB-1260	82.6	69.6	72.7		4.29
	Permethrin	81.0	58.7	67.7		14.3
	Phenothrin	64.1	48.6	58.3		18.2
	Piperonyl Butoxide	96.1	71.4	78.8		9.88
	Prallethrin	82.3	65.9	69.5		5.28
	Tau-Fluvalinate	73.3	49.6	60.6		19.9
	Tetramethrin	93.6	69.0	80.4		15.3
	Trans-Nonachlor	81.8	63.6	64.4		1.35
	Triclosan Methyl	86.7	68.6	63.6		7.59
	Trifluralin	77.2	59.1	63.4		6.89
EPA 8276	Chlordane	74.3	81.5	84.9		4.09
	Toxaphene	81.0	112	92.9		18.8
EPA 8321B	2,4-D	110	105	100		3.22
	2,4,5-T	81.0	73.2	62.7		15.5
	Acesulfame K	124	135	139		3.32
	Acetaminophen	84.5	86.0	87.0		1.17
	Acetamiprid	81.1	25.2	25.4		0.268
	Afidopyropen	58.9	71.7	71.4		0.392
	AMPA	117	100	103		2.85
	Bentazon	78.2				5.65
	Benzovindiflupyr	77.2	73.4	77.2		5.05
	Carbamazepine	78.0				4.33
	Clothianidin	88.4	18.3	10.5		7.07
	Dinotefuran	87.5				3.04
	Diuron	72.0	46.2	44.5		3.34
	Endothall	97.3	99.2	101		1.69
	Fenuron	101	82.6	77.6		6.21
	Fluridone	88.2	75.4	74.9		0.650
	Glufosinate	113	128	116		10.1
	Glyphosate	114	156	143		8.22
	Hydrocodone	92.3	106	106		0.0742
	Ibuprofen	81.4	74.2	78.1		5.11
	Imazapyr	80.6	126	124		1.28
	Imidacloprid	96.6				2.04
	Linuron	69.4	76.1	76.9		1.02
	Mandestrobin	85.6	81.0	80.7		0.314
	MCPP	99.7	79.6	73.3		4.86
	Naproxen	78.4	78.0	84.4		7.87
	Primidone	92.2				3.57
	Pyraclostrobin	72.1	80.1	81.0		1.14
	Silvex	84.0	94.9	84.1		12.0
	Sucralose	101				6.61
	Thiamethoxam	92.8	122	122		0.177
	Tolfenpyrad	37.7	54.3	56.4		3.84
	Triclopyr	86.1	67.5	68.2		1.05
SM 2320 B-2011	Total Alkalinity	97.2			0.356	
	Total Alkalinity	96.8			0.521	
SM 2540 C-2015	TDS	99.3			6.84	
	TDS	98.4			3.31	
SM 2540 D-2015	TSS	91.5				
	TSS	91.1				
SM 4500-F- C-2011	Fluoride	99.9	102	101		0.490
	Fluoride	102	100	102		0.986
SM 5310 B-2011	Organic Carbon	96.0	96.4	96.4		0.0448

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
SM 5310 B-2011	Organic Carbon	96.4	96.2	97.4		0.945

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2369514, 2369520
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2369514, 2369518, 2369520
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2369533, 2369534, 2369546
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2369533, 2369534, 2369546
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2369514, 2369520
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2369514, 2369520
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2369516, 2369519, 2369521
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2369516, 2369519, 2369521
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2369516, 2369519, 2369521
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2369516, 2369519, 2369521
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2369531
EPA 8270E	PCBs in water matrices by GC/MS/MS	2369531
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2369531
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2369532, 2369545
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2369514, 2369518, 2369520
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2369533, 2369534
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2369514, 2369520
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2369514, 2369518, 2369520
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2369514, 2369518, 2369520
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2369516, 2369519, 2369521

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	11/15/2022			11/15/2022 15:15	Chandler E Cox	2369514
	11/15/2022			11/15/2022 15:16	Chandler E Cox	2369520
EPA 180.1 Rev. 2.0	11/15/2022			11/15/2022 14:17	Anna M. Plaviak	2369514
	11/15/2022			11/15/2022 14:19	Anna M. Plaviak	2369520
	11/15/2022			11/15/2022 14:39	Anna M. Plaviak	2369518
EPA 200.7 Rev. 4.4	11/15/2022	11/16/2022 11:55	George D Taylor	11/29/2022 13:05	McKinley C Carter	2369546
	11/15/2022	11/16/2022 11:55	George D Taylor	11/29/2022 15:08	McKinley C Carter	2369533
	11/15/2022	11/18/2022 15:50	George D Taylor	11/30/2022 08:36	McKinley C Carter	2369534
EPA 200.8 Rev. 5.4	11/15/2022	11/18/2022 15:50	George D Taylor	11/30/2022 08:44	McKinley C Carter	2369534
	11/15/2022	11/16/2022 11:55	George D Taylor	11/17/2022 20:17	Megan Whitefoot	2369546
	11/15/2022	11/16/2022 11:55	George D Taylor	11/17/2022 21:02	Megan Whitefoot	2369533
	11/15/2022	11/18/2022 15:50	George D Taylor	12/02/2022 03:05	Emily M Philpot	2369534
	11/15/2022	11/18/2022 15:50	George D Taylor	12/02/2022 04:32	Emily M Philpot	2369534
	11/15/2022	11/18/2022 15:50	George D Taylor	12/02/2022 18:04	Emily M Philpot	2369534
	11/15/2022	11/22/2022 12:10	Vijayalakshmi Reddy	12/01/2022 13:40	Emily M Philpot	2369533
	11/15/2022	12/06/2022 11:20	Vijayalakshmi Reddy	12/08/2022 00:23	Megan Whitefoot	2369534
EPA 300.0 Rev. 2.1	11/15/2022	12/06/2022 11:20	Vijayalakshmi Reddy	12/08/2022 19:14	Emily M Philpot	2369534
	11/15/2022			11/23/2022 02:58	James L Waggeberby	2369514
	11/15/2022			11/23/2022 03:13	James L Waggeberby	2369520
EPA 350.1 Rev. 2.0	11/15/2022			12/01/2022 11:38	Ping Hua	2369516
	11/15/2022			12/01/2022 12:56	Ping Hua	2369519
	11/15/2022			12/02/2022 10:52	Ping Hua	2369521
EPA 351.2 Rev. 2.0	11/15/2022	11/17/2022 10:34	Samantha L Bates	11/28/2022 13:25	Judith K. Clark	2369516
	11/15/2022	11/17/2022 10:34	Samantha L Bates	11/28/2022 13:30	Judith K. Clark	2369519
	11/15/2022	11/18/2022 10:00	Alexandra J Mattheus	11/21/2022 17:44	Judith K. Clark	2369521
EPA 353.2 Rev. 2.0	11/15/2022			11/17/2022 09:30	Beverly Y. Sanders	2369519
	11/15/2022			11/17/2022 09:31	Beverly Y. Sanders	2369521
	11/15/2022			11/17/2022 10:12	Beverly Y. Sanders	2369516
EPA 365.1 Rev. 2.0	11/15/2022	11/17/2022 13:57	Adam P Silver	11/18/2022 10:34	James L Waggeberby	2369519
	11/15/2022	11/17/2022 13:57	Adam P Silver	11/18/2022 15:11	Simonne.V. Calhoun	2369521
	11/15/2022	11/17/2022 13:57	Adam P Silver	11/18/2022 15:17	Simonne.V. Calhoun	2369516
EPA 8270E	11/15/2022	11/17/2022 08:00	Fe-Val Siddell	11/18/2022 20:07	Julie Wi	2369531
	11/15/2022	11/17/2022 08:00	Fe-Val Siddell	11/18/2022 22:51	Michael Poppell	2369531
EPA 8276	11/15/2022	11/17/2022 08:00	Fe-Val Siddell	11/19/2022 15:43	Lipi Saha	2369531
EPA 8321B	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/16/2022 13:19	Umesh Chiluwal	2369532
	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/16/2022 15:29	Umesh Chiluwal	2369545
	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/17/2022 00:58	Umesh Chiluwal	2369532
	11/15/2022	11/16/2022 12:00	Umesh Chiluwal	11/17/2022 03:28	Umesh Chiluwal	2369545
	11/15/2022	11/18/2022 09:30	June Rhew	11/21/2022 20:07	Juyoung Kim	2369532
	11/15/2022	11/18/2022 09:30	June Rhew	11/21/2022 20:27	Juyoung Kim	2369545

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2320 B-2011	11/15/2022			11/18/2022 04:15	Dale L. Simmons	2369520
	11/15/2022			11/19/2022 17:48	Dale L. Simmons	2369514
	11/15/2022			11/19/2022 18:01	Dale L. Simmons	2369518
SM 2340 B-2011	11/15/2022			11/29/2022 15:08	McKinley C Carter	2369533
	11/15/2022			11/30/2022 08:44	McKinley C Carter	2369534
SM 2540 C-2015	11/15/2022			11/18/2022 16:39	Yijie Li	2369514, 2369520
SM 2540 D-2015	11/15/2022			11/18/2022 16:39	Yijie Li	2369514, 2369518, 2369520
SM 4500-F- C-2011	11/15/2022			11/19/2022 17:48	Dale L. Simmons	2369514
	11/15/2022			11/19/2022 18:01	Dale L. Simmons	2369518
	11/15/2022			12/01/2022 09:39	Dale L. Simmons	2369520
SM 5310 B-2011	11/15/2022			11/22/2022 03:42	Khloe J Berg	2369516
	11/15/2022			11/22/2022 03:55	Khloe J Berg	2369519
	11/15/2022			11/23/2022 03:05	Touraj Touran	2369521