

Chemical Analysis Report

CEN-DIST-2023-02-14-01

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

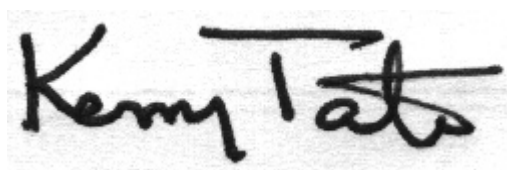
Event Description: **Clear Lake Outlet - SCI**
Request ID: **RQ-2023-02-13-16**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 03-MAR-2023 10:38

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line extending from the end of the name.

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: Clear Lake @ Arnold Palmer Drive

Collection Date/Time: 02/13/2023 13:15

Field ID: G4CE0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387009	DEP SOP: NU-094-1	Color (true)	44	A	PCU	P425788	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P425793	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P426336	
		Sulfate	8.2		mg SO4/L	P426339	
	SM 2320 B-2011	Total Alkalinity	88	A	mg CaCO3/L	P426063	
	SM 2540 C-2015	TDS	149		mg/L	P426459	
	SM 2540 D-2015	TSS	5	I	mg/L	P426313	
	SM 4500-F- C-2011	Fluoride	0.11		mg F/L	P426065	
2387010	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P426176	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.64		mg N/L	P425913	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.17		mg N/L	P425944	
	EPA 365.1 Rev. 2.0	Total-P	0.065		mg P/L	P425932	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P426023	
2387011	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.024		mg P/L	P425782	
2387016	EPA 8321B	2,4-D	0.046		ug/L	P425865	
		Acesulfame K	0.26	I	ug/L	P425764	
		2,4,5-T	0.0040	U	ug/L	P425865	
		AMPA	0.69		ug/L	P425764	
		Acetaminophen	0.0082	I	ug/L	P425865	
		Acetamiprid	0.0020	U	ug/L	P425865	
		Endothall	0.25	U	ug/L	P425764	
		Glufosinate	0.10	U	ug/L	P425764	
		Glyphosate	3.1		ug/L	P425764	
		Afidopyropen	0.0020	U	ug/L	P425865	
		Bentazon	0.050		ug/L	P425865	
		Sucralose	1.2		ug/L	P425764	
		Benzovindiflupyr	0.0020	U	ug/L	P425865	
		Carbamazepine	0.0012	I	ug/L	P425865	
		Clothianidin	0.0020	U	ug/L	P425865	
		Dinotefuran	0.0048	I	ug/L	P425865	
		Diuron	0.0046	I	ug/L	P425865	
		Fenuron	0.032	U	ug/L	P425865	
		Fluridone	0.11		ug/L	P425865	
		Imazapyr	0.26		ug/L	P425865	
		Hydrocodone	0.0020	U	ug/L	P425865	
		Ibuprofen	0.080	U	ug/L	P425865	
		Imidacloprid	0.048		ug/L	P425865	
		Linuron	0.0040	U	ug/L	P425865	
		Mandestrobin	0.0020	U	ug/L	P425865	
		MCP	0.0043	I	ug/L	P425865	
		Naproxen	0.0080	U	ug/L	P425865	
		Primidone	0.0061	I	ug/L	P425865	
		Pyraclostrobin	0.0020	U	ug/L	P425865	

Field ID: G4CE0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387016	EPA 8321B	Silvex	0.0040	U	ug/L	P425865	
		Thiamethoxam	0.0020	U	ug/L	P425865	
		Tolfenpyrad	0.0020	U	ug/L	P425865	
		Triclopyr	0.0040	U	ug/L	P425865	
2387017	EPA 200.7 Rev. 4.4	Calcium	35.6		mg/L	P425970	
		Iron	350		ug/L	P425970	
		Magnesium	3.43		mg/L	P425970	
		Potassium	2.4		mg/L	P425970	
		Sodium	9.8		mg/L	P425970	
		Strontium	88.2		ug/L	P425970	
		Tin	3.0	U	ug/L	P425970	
		Titanium	4.1		ug/L	P425970	
		Vanadium	2.0	U	ug/L	P425970	
		Zinc	5.0	U	ug/L	P425970	
	EPA 200.8 Rev. 5.4	Aluminum	68		ug/L	P425970	
		Antimony	0.34		ug/L	P425970	
		Arsenic	0.77		ug/L	P425970	
		Barium	15.4		ug/L	P425970	
		Beryllium	0.010	U	ug/L	P425970	
		Boron	36.6		ug/L	P425970	
		Cadmium	0.020	U	ug/L	P425970	
		Chromium	0.40	U	ug/L	P425970	
		Cobalt	0.058	I	ug/L	P425970	
		Copper	3.68		ug/L	P425970	
		Lead	0.33	I	ug/L	P425970	
		Manganese	9.52		ug/L	P425970	
		Molybdenum	1.50		ug/L	P425970	
		Nickel	0.50	U	ug/L	P425970	
		Selenium	0.20	U	ug/L	P425970	
		Silver	0.010	U	ug/L	P426231	
		Thallium	0.10	U	ug/L	P425970	
		Hardness	103		mg/L	P425970	
2387019	SM 2340 B-2011	Oxybenzone**	10	U	ng/L	P425781	
	EPA 8270E	Acetochlor	0.25	U	ng/L	P425781	
		Octinoxate**	21	I	ng/L	P425781	
		Alachlor	0.25	U	ng/L	P425781	MS
		Avobenzone**	100	U	ng/L	P425781	
		Ametryn	0.87	I	ng/L	P425781	
		Atrazine	28		ng/L	P425781	
		PBDE-47**	4.0	UJ	ng/L	P425781	CCV
		Atrazine Desethyl	3.6	I	ng/L	P425781	
		PBDE-99**	5.0	U	ng/L	P425781	
		Azinphos Methyl	2.0	U	ng/L	P425781	
		Tri-o-cresyl Phosphate**	6.0	UJ	ng/L	P425781	CCV
		Azoxystrobin	0.50	U	ng/L	P425781	

Field ID: G4CE0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387019	EPA 8270E	Bromacil	0.50	U	ng/L	P425781	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P425781	
		Butylate	0.40	U	ng/L	P425781	
		Dechlorane Plus**	30	U	ng/L	P425781	
		Caffeine**	82		ng/L	P425781	
		Carbophenothion	0.20	U	ng/L	P425781	
		Carfentrazone Ethyl	0.10	U	ng/L	P425781	RPD
		Chlorpyrifos Ethyl	0.25	U	ng/L	P425781	
		Chlorpyrifos Methyl	0.050	U	ng/L	P425781	MS
		Cyanazine	3.2	U	ng/L	P425781	
		Demeton	1.5	U	ng/L	P425781	
		Diazinon	0.12	U	ng/L	P425781	
		Difenoconazole	0.60	U	ng/L	P425781	
		Dimethenamid	0.10	U	ng/L	P425781	
		Disulfoton	0.50	U	ng/L	P425781	
		Dithiopyr	0.62	U	ng/L	P425781	RPD
		EPTC	1.2	U	ng/L	P425781	
		Ethion	0.15	U	ng/L	P425781	
		Ethoprop	0.10	U	ng/L	P425781	
		Fenamiphos	0.50	U	ng/L	P425781	
		Fenbuconazole	0.12	U	ng/L	P425781	
		Fipronil	0.45	I	ng/L	P425781	MS, RPD
		Fipronil Desulfinyl**	0.48	I	ng/L	P425781	MS, RPD
		Fipronil Sulfide	0.39	I	ng/L	P425781	MS, RPD
		Fipronil Sulfone	1.1		ng/L	P425781	MS, RPD
		Fluazifop-P-butyl	0.10	U	ng/L	P425781	
		Fludioxonil	0.12	U	ng/L	P425781	
		Flumioxazin	4.5	U	ng/L	P425781	
		Flutolanil	0.10	U	ng/L	P425781	RPD
		Fluxapyroxad	0.35	I	ng/L	P425781	
		Fonofos	0.20	U	ng/L	P425781	
		Hexazinone	0.50	U	ng/L	P425781	
		Imazalil	0.75	U	ng/L	P425781	
		Iprodione	0.60	U	ng/L	P425781	
		Malathion	0.35	U	ng/L	P425781	
		Metalaxyl	0.75	U	ng/L	P425781	
		Metolachlor	1.4	I	ng/L	P425781	
		Metribuzin	1.5	U	ng/L	P425781	
		Mevinphos	1.0	U	ng/L	P425781	
		Molinate	0.30	U	ng/L	P425781	
		Myclobutanil	0.25	U	ng/L	P425781	MS, RPD
		Naled	1.5	UJ	ng/L	P425781	LCS
		Norflurazon	0.50	U	ng/L	P425781	MS, RPD
		Oxadiazon	0.43	I	ng/L	P425781	RPD

Field ID: G4CE0107

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2387019	EPA 8270E	Oxyfluorfen	0.15	U	ng/L	P425781	RPD
		Parathion Ethyl	0.25	U	ng/L	P425781	
		Parathion Methyl	0.55	U	ng/L	P425781	
		Pendimethalin	1.0	U	ng/L	P425781	
		Phorate	0.52	U	ng/L	P425781	
		Prodiamine	0.17	U	ng/L	P425781	
		Prometon	0.90	U	ng/L	P425781	
		Prometryn	0.20	U	ng/L	P425781	RPD
		Pronamide	0.15	U	ng/L	P425781	
		Propiconazole	0.57	I	ng/L	P425781	RPD
		Pyriproxyfen	0.12	U	ng/L	P425781	
		Simazine	0.50	U	ng/L	P425781	
		Sulfentrazone	1.6	I	ng/L	P425781	
		Tebuconazole	1.1	I	ng/L	P425781	
		Terbufos	0.10	U	ng/L	P425781	
		Terbuthylazine	0.42	U	ng/L	P425781	

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.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P425788

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425793

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425970

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P425970

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Thallium	0.10	U	ug/L

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

Component	Result	Code	Units
Silver	0.010	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426336

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426339

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426176

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425913

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425944

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425932

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425782

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P425781

Component	Result	Code	Units
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	12	U	ng/L
Acetochlor	0.25	U	ng/L
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine	0.25	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425781

Component	Result	Code	Units
Atrazine Desethyl	1.5	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Avobenzone	100	U	ng/L
Avobenzone	100	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azinphos Methyl	2.0	U	ng/L
Azoxystrobin	0.50	U	ng/L
Azoxystrobin	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Butylate	0.40	U	ng/L
Caffeine	7.5	U	ng/L
Caffeine	7.5	U	ng/L
Carbophenothion	0.20	U	ng/L
Carbophenothion	0.20	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Carfentrazone Ethyl	0.10	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Chlorpyrifos Methyl	0.050	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Dechlorane Plus	30	U	ng/L
Dechlorane Plus	30	U	ng/L
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L
Diazinon	0.12	U	ng/L
Diazinon	0.12	U	ng/L
Difenoconazole	0.60	U	ng/L
Difenoconazole	0.60	U	ng/L
Dimethenamid	0.10	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.62	U	ng/L
Dithiopyr	0.62	U	ng/L
EPTC	1.2	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenamiphos	0.50	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fenbuconazole	0.12	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425781

Component	Result	Code	Units
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fluazifop-P-butyl	0.10	U	ng/L
Fludioxonil	0.12	U	ng/L
Fludioxonil	0.12	U	ng/L
Flumioxazin	4.5	U	ng/L
Flumioxazin	4.5	U	ng/L
Flutolanil	0.10	U	ng/L
Flutolanil	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fluxapyroxad	0.10	U	ng/L
Fonofos	0.20	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Hexazinone	0.50	U	ng/L
Imazalil	0.75	U	ng/L
Imazalil	0.75	U	ng/L
Iprodione	0.60	U	ng/L
Iprodione	0.60	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.75	U	ng/L
Metalaxyl	0.75	U	ng/L
Metolachlor	0.35	U	ng/L
Metolachlor	0.35	U	ng/L
Metribuzin	1.5	U	ng/L
Metribuzin	1.5	U	ng/L
Mevinphos	1.0	U	ng/L
Mevinphos	1.0	U	ng/L
Molinate	0.30	U	ng/L
Molinate	0.30	U	ng/L
Myclobutanil	0.25	U	ng/L
Myclobutanil	0.25	U	ng/L
Naled	1.5	U	ng/L
Naled	1.5	U	ng/L
Norflurazon	0.50	U	ng/L
Norflurazon	0.50	U	ng/L
Octinoxate	20	U	ng/L
Octinoxate	20	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxadiazon	0.30	U	ng/L
Oxybenzone	10	U	ng/L
Oxybenzone	10	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Oxyfluorfen	0.15	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Parathion Methyl	0.55	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P425781

Component	Result	Code	Units
PBDE-47	4.0	U	ng/L
PBDE-47	4.0	U	ng/L
PBDE-99	5.0	U	ng/L
PBDE-99	5.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiamine	0.18	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Prometryn	0.20	U	ng/L
Pronamide	0.15	U	ng/L
Pronamide	0.15	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Pyriproxyfen	0.12	U	ng/L
Simazine	0.50	U	ng/L
Simazine	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Sulfentrazone	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L
Terbutylazine	0.42	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L

Reference Method: EPA 8321B

Batch ID: P425764

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: P425865

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P425865

Component	Result	Code	Units
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: P426063

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

Reference Method: SM 2540 C-2015

Batch ID: P426459

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P426313

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P426065

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P426023

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2011
Batch ID: P426023

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: P425788

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425793

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	100		P	85 - 115
Iron	102		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	95.2		P	85 - 115
Sodium	98.5		P	85 - 115
Strontium	99.6		P	85 - 115
Tin	104		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	101		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P425970

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	99.9		P	85 - 115
Barium	101		P	85 - 115
Beryllium	97.5		P	85 - 115
Boron	98.6		P	85 - 115
Cadmium	99.2		P	85 - 115
Chromium	102		P	85 - 115
Cobalt	102		P	85 - 115
Copper	99.9		P	85 - 115
Lead	100		P	85 - 115
Manganese	98.9		P	85 - 115
Molybdenum	98.9		P	85 - 115
Nickel	103		P	85 - 115
Selenium	99.4		P	85 - 115
Thallium	102		P	85 - 115

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

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Silver	97.5		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426336

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426339

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426176

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425913

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425944

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425932

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425782

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

Reference Method: EPA 8270E
Batch ID: P425781

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	66.0		P	42 - 162
Acetochlor	85.2		P	69 - 123
Alachlor	87.0		P	65 - 118
Ametryn	135		P	58 - 141
Atrazine	90.6		P	73 - 118
Atrazine Desethyl	54.8		P	32 - 125
Avobenzone	74.2		P	40 - 203
Azinphos Methyl	127		P	36 - 197
Azoxystrobin	114		P	58 - 226
Bromacil	88.8		P	48 - 120

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
 Batch ID: P425781

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Butylate	44.9		P	27 - 85.0
Caffeine	75.3		P	40 - 137
Carbophenothion	93.9		P	54 - 132
Carfentrazone Ethyl	104		P	60 - 142
Chlorpyrifos Ethyl	81.3		P	59 - 116
Chlorpyrifos Methyl	80.4		P	66 - 119
Cyanazine	105		P	61 - 248
Dechlorane Plus	67.9		P	47 - 182
Demeton	76.4		P	30 - 138
Diazinon	103		P	67 - 126
Difenoconazole	108		P	38 - 205
Dimethenamid	78.2		P	57 - 111
Disulfoton	86.4		P	46 - 126
Dithiopyr	73.0		P	62 - 115
EPTC	49.1		P	28 - 80.0
Ethion	73.0		P	24 - 122
Ethoprop	91.9		P	62 - 113
Fenamiphos	107		P	57 - 128
Fenbuconazole	91.5		P	52 - 155
Fipronil	73.9		P	63 - 130
Fipronil Desulfinyl	73.7		P	61 - 130
Fipronil Sulfide	68.0		P	56 - 117
Fipronil Sulfone	67.7		P	52 - 118
Fluazifop-P-butyl	111		P	61 - 128
Fludioxonil	81.0		P	59 - 129
Flumioxazin	142		P	30 - 250
Flutolanil	109		P	53 - 127
Fluxapyroxad	79.5		P	42 - 132
Fonofos	88.7		P	61 - 110
Hexazinone	96.0		P	46 - 139
Imazalil	68.0		P	40 - 139
Iprodione	115		P	40 - 146
Malathion	113		P	61 - 135
Metaxyl	76.0		P	58 - 121
Metolachlor	86.0		P	64 - 118
Metribuzin	97.1		P	45 - 245
Mevinphos	79.9		P	49 - 118
Molinate	59.8		P	42 - 92.0
Myclobutanil	86.1		P	55 - 127
Naled	115		F	10 - 114
Norflurazon	69.1		P	55 - 129
Octinoxate	86.6		P	26 - 166
Oxadiazon	76.7		P	54 - 115
Oxybenzone	50.1		P	49 - 135
Oxyfluorfen	114		P	64 - 139
Parathion Ethyl	105		P	70 - 111
Parathion Methyl	111		P	76 - 136
PBDE-47	59.6		P	41 - 148
PBDE-99	63.9		P	38 - 147
Pendimethalin	94.1		P	52 - 118
Phorate	73.0		P	40 - 122
Prodiamine	32.5		P	26 - 141

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P425781

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometon	69.6		P	54 - 122
Prometryn	82.3		P	61 - 128
Pronamide	104		P	72 - 121
Propiconazole	80.7		P	56 - 127
Pyriproxyfen	85.8		P	33 - 194
Simazine	87.1		P	67 - 121
Sulfentrazone	72.2		P	21 - 144
Tebuconazole	57.6		P	10 - 122
Terbufos	96.7		P	60 - 129
Terbuthylazine	89.1		P	69 - 113
Tri-o-cresyl Phosphate	57.7		P	49 - 150

Reference Method: EPA 8321B

Batch ID: P425764

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	108		P	40 - 150
AMPA	107		P	40 - 150
Endothall	101		P	40 - 150
Glufosinate	104		P	40 - 150
Glyphosate	97.6		P	40 - 150
Sucralose	104		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P425865

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	115		P	40 - 150
2,4,5-T	101		P	40 - 150
Acetaminophen	93.8		P	30 - 150
Acetamiprid	110		P	40 - 150
Afidopyropen	69.3		P	30 - 150
Bentazon	96.5		P	30 - 150
Benzovindiflupyr	87.1		P	40 - 150
Carbamazepine	64.6		P	40 - 150
Clothianidin	96.1		P	40 - 150
Dinotefuran	104		P	40 - 150
Diuron	64.8		P	40 - 150
Fenuron	94.7		P	40 - 150
Fluridone	86.0		P	40 - 150
Hydrocodone	76.8		P	40 - 150
Ibuprofen	77.0		P	40 - 150
Imazapyr	92.8		P	40 - 150
Imidacloprid	106		P	40 - 150
Linuron	85.4		P	40 - 150
Mandestrobin	95.9		P	40 - 150
MCPP	97.8		P	40 - 150
Naproxen	70.5		P	40 - 150
Primidone	95.2		P	40 - 150
Pyraclostrobin	81.7		P	40 - 150
Silvex	106		P	40 - 150
Thiamethoxam	97.9		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P425865

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Tolfenpyrad	57.5		P	30 - 150
Triclopyr	108		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P426063

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	94.2		P	94 - 106

Reference Method: SM 2540 C-2015
Batch ID: P426459

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	106		P	89 - 110

Reference Method: SM 2540 D-2015
Batch ID: P426313

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P426065

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426023

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.3		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P425970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386597	Calcium	97.2		P	80 - 120
2386597	Iron	101	99.1	P/P	80 - 120
2386597	Magnesium	97.0		P	80 - 120
2386597	Potassium	92.6	91.5	P/P	80 - 120
2386597	Sodium	98.3		P	80 - 120
2386597	Strontium	97.5	97.9	P/P	80 - 120
2386597	Tin	102	101	P/P	80 - 120
2386597	Titanium	101	102	P/P	80 - 120
2386597	Vanadium	101	101	P/P	80 - 120
2386597	Zinc	104	104	P/P	80 - 120
2387854	Calcium	103		P	80 - 120
2387854	Iron	102		P	80 - 120
2387854	Magnesium	101		P	80 - 120
2387854	Potassium	101		P	80 - 120
2387854	Sodium	101		P	80 - 120
2387854	Strontium	98.5		P	80 - 120
2387854	Tin	101		P	80 - 120
2387854	Titanium	100		P	80 - 120
2387854	Vanadium	101		P	80 - 120
2387854	Zinc	108		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P425970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386597	Aluminum	98.6	98.5	P/P	80 - 120
2386597	Antimony	103	103	P/P	80 - 120
2386597	Arsenic	99.4	98.7	P/P	80 - 120
2386597	Barium	101	100	P/P	80 - 120
2386597	Beryllium	97.3	97.4	P/P	80 - 120
2386597	Boron	101	102	P/P	80 - 120
2386597	Cadmium	101	100	P/P	80 - 120
2386597	Chromium	103	103	P/P	80 - 120
2386597	Cobalt	99.9	98.9	P/P	80 - 120
2386597	Copper	95.6	95.3	P/P	80 - 120
2386597	Lead	101	99.6	P/P	80 - 120
2386597	Manganese	102	101	P/P	80 - 120
2386597	Molybdenum	101	99.6	P/P	80 - 120
2386597	Nickel	100	101	P/P	80 - 120
2386597	Selenium	93.6	93.3	P/P	80 - 120
2386597	Thallium	103	102	P/P	80 - 120
2387854	Aluminum	98.6		P	80 - 120
2387854	Antimony	103		P	80 - 120
2387854	Arsenic	99.5		P	80 - 120
2387854	Barium	101		P	80 - 120
2387854	Beryllium	94.7		P	80 - 120
2387854	Boron	103		P	80 - 120
2387854	Cadmium	100		P	80 - 120
2387854	Chromium	101		P	80 - 120
2387854	Cobalt	99.0		P	80 - 120
2387854	Copper	97.5		P	80 - 120
2387854	Lead	101		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P425970

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387854	Manganese	99.1		P	80 - 120
2387854	Molybdenum	99.5		P	80 - 120
2387854	Nickel	99.7		P	80 - 120
2387854	Selenium	97.5		P	80 - 120
2387854	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	Silver	98.3	98.3	P/P	80 - 120
2387854	Silver	98.7		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426336

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386877	Chloride	104		P	90 - 110
2387009	Chloride	105		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426339

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386877	Sulfate	94.3		P	90 - 110
2387009	Sulfate	109		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426176

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386838	Ammonia-N	97.8	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425913

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386921	Kjeldahl Nitrogen	92.3	114	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425944

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386921	NO2NO3-N	94.2		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425932

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387087	Total-P	103	103	P/P	90 - 110

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425782

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387011	O-Phosphate-P	97.6	96.6	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P425781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386831	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	55.6	50.5	P/P	26 - 165
2386831	Acetochlor	74.5	69.4	P/P	67 - 124
2386831	Alachlor	71.5	55.3	P/F	60 - 120
2386831	Ametryn	105	122	P/P	54 - 216
2386831	Atrazine	86.7	74.8	P/P	66 - 128
2386831	Atrazine Desethyl	47.4	48.2	P/P	15 - 122
2386831	Avobenzone	64.6	62.2	P/P	37 - 178
2386831	Azinphos Methyl	119	64.9	P/P	40 - 292
2386831	Azoxystrobin	102	87.3	P/P	35 - 220
2386831	Bromacil	80.1	58.5	P/P	45 - 127
2386831	Butylate	32.4	36.7	P/P	20 - 83.0
2386831	Caffeine	85.2	83.4	P/P	10 - 194
2386831	Carbophenothion	76.3	62.5	P/P	57 - 127
2386831	Carfentrazone Ethyl	85.4	51.6	P/P	51 - 141
2386831	Chlorpyrifos Ethyl	108	93.4	P/P	52 - 120
2386831	Chlorpyrifos Methyl	68.7	61.6	P/F	63 - 119
2386831	Cyanazine	84.8	71.8	P/P	59 - 241
2386831	Dechlorane Plus	55.1	54.5	P/P	50 - 150
2386831	Demeton	71.8	58.2	P/P	40 - 136
2386831	Diazinon	107	87.3	P/P	69 - 132
2386831	Difenoconazole	174	135	P/P	57 - 258
2386831	Dimethenamid	68.4	60.7	P/P	54 - 110
2386831	Disulfoton	67.3	61.2	P/P	43 - 133
2386831	Dithiopyr	64.8	40.1	P/P	39 - 116
2386831	EPTC	24.8	25.5	P/P	20 - 78.0
2386831	Ethion	55.2	34.5	P/P	17 - 119
2386831	Ethoprop	80.4	67.9	P/P	66 - 120
2386831	Fenamiphos	82.4	56.1	P/P	41 - 126
2386831	Fenbuconazole	67.7	65.6	P/P	42 - 169
2386831	Fipronil	71.4	33.7	P/F	61 - 132
2386831	Fipronil Desulfinyl	59.8	33.1	P/F	56 - 132
2386831	Fipronil Sulfide	63.5	34.8	P/F	48 - 119
2386831	Fipronil Sulfone	64.3	35.9	P/F	42 - 131
2386831	Fluazifop-P-butyl	81.1	66.7	P/P	53 - 131
2386831	Fludioxonil	71.1	58.5	P/P	56 - 127
2386831	Flumioxazin	70.7	53.0	P/P	19 - 300
2386831	Flutolanil	74.3	51.9	P/P	41 - 127
2386831	Fluxapyroxad	62.0	45.0	P/P	42 - 172
2386831	Fonofos	77.7	60.9	P/P	59 - 113
2386831	Hexazinone	101	83.0	P/P	66 - 122
2386831	Imazalil	104	63.5	P/P	21 - 283
2386831	Iprodione	71.5	55.9	P/P	43 - 150
2386831	Malathion	79.1	58.3	P/P	58 - 136
2386831	Metalaxyl	76.3	55.6	P/P	55 - 120
2386831	Metolachlor	87.5	65.4	P/P	57 - 121
2386831	Metribuzin	108	68.5	P/P	58 - 294

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P425781

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386831	Mevinphos	80.6	66.4	P/P	50 - 126
2386831	Molinate	59.0	43.3	P/P	42 - 93.0
2386831	Myclobutanil	80.5	48.9	P/F	55 - 125
2386831	Naled	88.2	69.2	P/P	18 - 200
2386831	Norflurazon	73.1	46.9	P/F	48 - 128
2386831	Octinoxate	95.9	145	P/P	21 - 159
2386831	Oxadiazon	59.4	43.8	P/P	43 - 112
2386831	Oxybenzone	47.6	41.7	P/P	41 - 142
2386831	Oxyfluorfen	101	68.8	P/P	64 - 153
2386831	Parathion Ethyl	70.8	69.6	P/P	69 - 114
2386831	Parathion Methyl	86.2	93.2	P/P	79 - 139
2386831	PBDE-47	50.2	43.8	P/P	27 - 144
2386831	PBDE-99	54.0	47.7	P/P	18 - 150
2386831	Pendimethalin	87.3	70.3	P/P	50 - 139
2386831	Phorate	72.3	62.2	P/P	54 - 161
2386831	Prodiamine	134	81.3	P/P	30 - 161
2386831	Prometon	60.0	56.4	P/P	45 - 134
2386831	Prometryn	70.3	49.8	P/P	45 - 137
2386831	Pronamide	98.8	83.0	P/P	65 - 133
2386831	Propiconazole	63.7	40.9	P/P	38 - 146
2386831	Pyriproxyfen	84.3	51.4	P/P	33 - 180
2386831	Simazine	81.3	78.7	P/P	51 - 157
2386831	Sulfentrazone	66.6	81.1	P/P	53 - 186
2386831	Tebuconazole	40.5	21.8	P/P	10 - 133
2386831	Terbufos	104	91.3	P/P	65 - 139
2386831	Terbutylazine	82.6	69.2	P/P	66 - 117
2386831	Tri-o-cresyl Phosphate	49.0	42.7	P/P	31 - 144

Reference Method: EPA 8321B

Batch ID: P425764

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386890	Acesulfame K	77.9	79.5	P/P	40 - 150
2386890	AMPA	95.5	87.2	P/P	40 - 150
2386890	Endothall	114	118	P/P	40 - 150
2386890	Glufosinate	118	119	P/P	40 - 150
2386890	Glyphosate	120	140	P/P	40 - 150
2386890	Sucralose	73.7	75.2	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P425865

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386891	2,4-D	119	107	P/P	40 - 150
2386891	2,4,5-T	93.9	95.3	P/P	40 - 150
2386891	Acetaminophen	99.5	95.0	P/P	30 - 150
2386891	Acetamiprid	84.2	92.2	P/P	40 - 150
2386891	Afidopyropen	65.6	67.3	P/P	30 - 150
2386891	Bentazon	90.0	86.7	P/P	30 - 150
2386891	Benzovindiflupyr	78.1	76.7	P/P	40 - 150
2386891	Carbamazepine	59.9	58.1	P/P	40 - 150
2386891	Clothianidin	99.4	92.1	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P425865

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2386891	Dinotefuran	97.7	94.7	P/P	40 - 150
2386891	Diuron	53.7	55.8	P/P	40 - 150
2386891	Fenuron	81.9	77.6	P/P	40 - 150
2386891	Fluridone	83.3	72.4	P/P	40 - 150
2386891	Hydrocodone	75.6	72.4	P/P	40 - 150
2386891	Ibuprofen	87.5	66.6	P/P	40 - 150
2386891	Imazapyr	90.8	86.2	P/P	40 - 150
2386891	Imidacloprid	125	118	P/P	40 - 150
2386891	Linuron	71.2	68.4	P/P	40 - 150
2386891	Mandestrobin	87.4	85.8	P/P	40 - 150
2386891	MCPP	91.2	87.5	P/P	40 - 150
2386891	Naproxen	82.4	103	P/P	40 - 150
2386891	Primidone	102	89.7	P/P	40 - 150
2386891	Pyraclostrobin	82.1	79.3	P/P	40 - 150
2386891	Silvex	88.1	91.9	P/P	40 - 150
2386891	Thiamethoxam	105	96.9	P/P	40 - 150
2386891	Tolfenpyrad	53.8	50.1	P/P	30 - 150
2386891	Triclopyr	107	87.4	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P426065

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387009	Fluoride	101	101	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P426023

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2387115	Organic Carbon	95.0	96.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P425788

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387009	Color (true)	0.0902	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P425793

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386877	Turbidity	2.80	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P425970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386597	Calcium	0.345	Spike	P	0 - 20
2386597	Iron	1.46	Spike	P	0 - 20
2386597	Magnesium	1.68	Spike	P	0 - 20
2386597	Potassium	1.03	Spike	P	0 - 20
2386597	Sodium	0.0337	Spike	P	0 - 20
2386597	Strontium	0.329	Spike	P	0 - 20
2386597	Tin	0.777	Spike	P	0 - 20
2386597	Titanium	0.149	Spike	P	0 - 20
2386597	Vanadium	0.323	Spike	P	0 - 20
2386597	Zinc	0.263	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P425970

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386597	Aluminum	0.0930	Spike	P	0 - 20
2386597	Antimony	0.0664	Spike	P	0 - 20
2386597	Arsenic	0.691	Spike	P	0 - 20
2386597	Barium	0.754	Spike	P	0 - 20
2386597	Beryllium	0.0848	Spike	P	0 - 20
2386597	Boron	0.569	Spike	P	0 - 20
2386597	Cadmium	1.32	Spike	P	0 - 20
2386597	Chromium	0.149	Spike	P	0 - 20
2386597	Cobalt	0.978	Spike	P	0 - 20
2386597	Copper	0.405	Spike	P	0 - 20
2386597	Lead	1.28	Spike	P	0 - 20
2386597	Manganese	0.952	Spike	P	0 - 20
2386597	Molybdenum	1.09	Spike	P	0 - 20
2386597	Nickel	0.696	Spike	P	0 - 20
2386597	Selenium	0.358	Spike	P	0 - 20
2386597	Thallium	0.876	Spike	P	0 - 20

Quality Assurance Report Precision

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	Silver	0.0528	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426336

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386877	Chloride	1.94	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P426339

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386877	Sulfate	3.03	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P426176

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386838	Ammonia-N	0.821	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P425913

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386921	Kjeldahl Nitrogen	12.6	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P425944

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386921	NO2NO3-N	0.380	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P425932

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387087	Total-P	0.0462	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P425782

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387011	O-Phosphate-P	0.822	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P425781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386831	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	9.55	Spike	P	0 - 37
2386831	Acetochlor	7.12	Spike	P	0 - 28
2386831	Alachlor	25.5	Spike	P	0 - 30
2386831	Ametryn	15.4	Spike	P	0 - 32
2386831	Atrazine	14.8	Spike	P	0 - 41
2386831	Atrazine Desethyl	1.77	Spike	P	0 - 36
2386831	Avobenzone	3.75	Spike	P	0 - 36
2386831	Azinphos Methyl	59.0	Spike	P	0 - 75
2386831	Azoxystrobin	15.5	Spike	P	0 - 39
2386831	Bromacil	31.1	Spike	P	0 - 33
2386831	Butylate	12.4	Spike	P	0 - 44
2386831	Caffeine	2.03	Spike	P	0 - 74
2386831	Carbophenothion	19.8	Spike	P	0 - 25
2386831	Carfentrazone Ethyl	49.4	Spike	F	0 - 27
2386831	Chlorpyrifos Ethyl	14.7	Spike	P	0 - 26
2386831	Chlorpyrifos Methyl	11.0	Spike	P	0 - 26
2386831	Cyanazine	16.5	Spike	P	0 - 48
2386831	Dechlorane Plus	1.08	Spike	P	0 - 30
2386831	Demeton	21.0	Spike	P	0 - 33
2386831	Diazinon	19.9	Spike	P	0 - 29
2386831	Difenoconazole	25.3	Spike	P	0 - 34
2386831	Dimethenamid	12.0	Spike	P	0 - 39
2386831	Disulfoton	9.53	Spike	P	0 - 30
2386831	Dithiopyr	47.1	Spike	F	0 - 26
2386831	EPTC	2.87	Spike	P	0 - 43
2386831	Ethion	46.1	Spike	P	0 - 79
2386831	Ethoprop	16.8	Spike	P	0 - 29
2386831	Fenamiphos	38.0	Spike	P	0 - 40
2386831	Fenbuconazole	3.12	Spike	P	0 - 74
2386831	Fipronil	71.6	Spike	F	0 - 29
2386831	Fipronil Desulfinyl	57.5	Spike	F	0 - 32
2386831	Fipronil Sulfide	58.4	Spike	F	0 - 30
2386831	Fipronil Sulfone	56.6	Spike	F	0 - 33
2386831	Fluazifop-P-butyl	19.5	Spike	P	0 - 38
2386831	Fludioxonil	19.4	Spike	P	0 - 29
2386831	Flumioxazin	28.6	Spike	P	0 - 51
2386831	Flutolanil	35.5	Spike	F	0 - 25
2386831	Fluxapyroxad	31.9	Spike	P	0 - 45
2386831	Fonofos	24.2	Spike	P	0 - 27
2386831	Hexazinone	19.8	Spike	P	0 - 30
2386831	Imazalil	48.2	Spike	P	0 - 100
2386831	Iprodione	24.5	Spike	P	0 - 33
2386831	Malathion	30.3	Spike	P	0 - 37
2386831	Metalaxyl	31.4	Spike	P	0 - 40
2386831	Metolachlor	28.9	Spike	P	0 - 29
2386831	Metribuzin	44.5	Spike	P	0 - 45
2386831	Mevinphos	19.4	Spike	P	0 - 29
2386831	Molinate	30.8	Spike	P	0 - 33
2386831	Myclobutanil	48.8	Spike	F	0 - 26
2386831	Naled	24.1	Spike	P	0 - 37
2386831	Norflurazon	43.7	Spike	F	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8270E

Batch ID: P425781

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386831	Octinoxate	41.0	Spike	P	0 - 45
2386831	Oxadiazon	30.3	Spike	F	0 - 28
2386831	Oxybenzone	13.3	Spike	P	0 - 46
2386831	Oxyfluorfen	38.1	Spike	F	0 - 28
2386831	Parathion Ethyl	1.77	Spike	P	0 - 31
2386831	Parathion Methyl	7.81	Spike	P	0 - 29
2386831	PBDE-47	13.6	Spike	P	0 - 36
2386831	PBDE-99	12.3	Spike	P	0 - 40
2386831	Pendimethalin	21.6	Spike	P	0 - 33
2386831	Phorate	15.0	Spike	P	0 - 36
2386831	Prodiamine	48.6	Spike	P	0 - 71
2386831	Prometon	6.08	Spike	P	0 - 36
2386831	Prometryn	34.3	Spike	F	0 - 28
2386831	Pronamide	17.3	Spike	P	0 - 24
2386831	Propiconazole	43.6	Spike	F	0 - 33
2386831	Pyriproxyfen	48.4	Spike	P	0 - 79
2386831	Simazine	3.32	Spike	P	0 - 29
2386831	Sulfentrazone	19.6	Spike	P	0 - 33
2386831	Tebuconazole	59.9	Spike	P	0 - 69
2386831	Terbufos	12.8	Spike	P	0 - 29
2386831	Terbuthylazine	17.5	Spike	P	0 - 32
2386831	Tri-o-cresyl Phosphate	13.8	Spike	P	0 - 33

Reference Method: EPA 8321B

Batch ID: P425764

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386890	Acesulfame K	2.03	Spike	P	0 - 30
2386890	AMPA	7.03	Spike	P	0 - 30
2386890	Endothall	3.29	Spike	P	0 - 30
2386890	Glufosinate	0.183	Spike	P	0 - 30
2386890	Glyphosate	10.7	Spike	P	0 - 30
2386890	Sucralose	1.80	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P425865

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386891	2,4-D	10.1	Spike	P	0 - 30
2386891	2,4,5-T	1.41	Spike	P	0 - 30
2386891	Acetaminophen	4.60	Spike	P	0 - 30
2386891	Acetamiprid	9.10	Spike	P	0 - 30
2386891	Afidopyropen	2.45	Spike	P	0 - 30
2386891	Bentazon	3.74	Spike	P	0 - 30
2386891	Benzovindiflupyr	1.75	Spike	P	0 - 30
2386891	Carbamazepine	3.12	Spike	P	0 - 30
2386891	Clothianidin	7.54	Spike	P	0 - 30
2386891	Dinotefuran	3.12	Spike	P	0 - 30
2386891	Diuron	3.83	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P425865

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386891	Fenuron	5.32	Spike	P	0 - 30
2386891	Fluridone	12.0	Spike	P	0 - 30
2386891	Hydrocodone	4.24	Spike	P	0 - 30
2386891	Ibuprofen	27.0	Spike	P	0 - 30
2386891	Imazapyr	5.23	Spike	P	0 - 30
2386891	Imidacloprid	5.81	Spike	P	0 - 30
2386891	Linuron	4.10	Spike	P	0 - 30
2386891	Mandestrobin	1.86	Spike	P	0 - 30
2386891	MCCP	4.11	Spike	P	0 - 30
2386891	Naproxen	22.1	Spike	P	0 - 30
2386891	Primidone	12.3	Spike	P	0 - 30
2386891	Pyraclostrobin	3.40	Spike	P	0 - 30
2386891	Silvex	4.27	Spike	P	0 - 30
2386891	Thiamethoxam	8.07	Spike	P	0 - 30
2386891	Tolfenpyrad	7.05	Spike	P	0 - 30
2386891	Triclopyr	19.7	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P426063

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387009	Total Alkalinity	0.478	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P426459

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2386878	TDS	7.32	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P426065

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387009	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011

Batch ID: P426023

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2387115	Organic Carbon	0.834	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2387016
Field Sample ID: G4CE0107

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	102	P	30 - 160
EPA 8321B	Acetaminophen-d4	105	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.7	P	30 - 160
EPA 8321B	Diuron-d6	45.5	P	30 - 160
EPA 8321B	Endothall-d6	121	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	123	P	30 - 160
EPA 8321B	Ibuprofen-d3	78.5	P	30 - 160
EPA 8321B	Primidone-d5	94.4	P	30 - 160
EPA 8321B	Sucralose-d6	82.5	P	30 - 160

Lab Sample ID: 2387019
Field Sample ID: G4CE0107

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	50.8	P	20 - 200
EPA 8270E	Simazine-d10	76.5	P	62 - 142
EPA 8270E	Terbufos-d10	72.9	P	58 - 132
EPA 8270E	Terphenyl-d14	81.1	P	52 - 137

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A117433

Included Lab Sample IDs: 2387011

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.9	100	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A117435

Included Lab Sample IDs: 2387009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	100	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A117437

Included Lab Sample IDs: 2387009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A117480

Included Lab Sample IDs: 2387010

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

Reference Method: SM 5310 B-2011

Run ID: A117520

Included Lab Sample IDs: 2387010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.7	98.2	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A117531

Included Lab Sample IDs: 2387009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.6	93.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A117531

Included Lab Sample IDs: 2387009

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

Reference Method: EPA 8321B

Run ID: A117541

Included Lab Sample IDs: 2387016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	108	111	P/P	60 - 160
Sucralose	105	109	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A117543
Included Lab Sample IDs: 2387016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	115	90.0	P/P	50 - 150
2,4,5-T	103	104	P/P	50 - 150
Acetaminophen	108	111	P/P	60 - 160
Acetamiprid	113	119	P/P	50 - 150
Afidopyropen	106	81.0	P/P	50 - 150
Bentazon	101	104	P/P	50 - 160
Benzovindiflupyr	108	106	P/P	50 - 150
Carbamazepine	99.6	111	P/P	60 - 150
Clothianidin	98.6	102	P/P	60 - 150
Dinotefuran	113	107	P/P	50 - 150
Diuron	107	110	P/P	60 - 160
Fenuron	104	103	P/P	60 - 150
Fluridone	109	113	P/P	60 - 160
Hydrocodone	105	113	P/P	60 - 150
Ibuprofen	74.7	132	P/P	50 - 160
Imazapyr	96.6	104	P/P	50 - 150
Imidacloprid	99.8	103	P/P	60 - 150
Linuron	103	109	P/P	60 - 150
Mandestrobin	116	112	P/P	50 - 150
MCPP	109	101	P/P	50 - 150
Naproxen	75.8	112	P/P	50 - 160
Primidone	102	105	P/P	60 - 150
Pyraclostrobin	113	111	P/P	60 - 150
Silvex	95.1	109	P/P	50 - 150
Thiamethoxam	108	111	P/P	50 - 150
Tolfenpyrad	102	97.9	P/P	60 - 150
Triclopyr	107	91.9	P/P	50 - 150

Reference Method: EPA 8321B
Run ID: A117549
Included Lab Sample IDs: 2387016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.6	101	P/P	60 - 160
Endothall	100	97.8	P/P	60 - 160
Glufosinate	86.6	100	P/P	60 - 160
Glyphosate	105	105	P/P	60 - 160

Reference Method: EPA 8270E
Run ID: A117553
Included Lab Sample IDs: 2387019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	102		P	80 - 120
Avobenzone	113		P	80 - 120
Dechlorane Plus	104		P	80 - 120
Octinoxate	82.5		P	80 - 120
Oxybenzone	90.9		P	80 - 120
PBDE-47	68.1*		F	80 - 120
PBDE-99	105		P	80 - 120
Tri-o-cresyl Phosphate	71.4*		F	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117557

Included Lab Sample IDs: 2387017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.8	99.0	P/P	90 - 110
Antimony	102	103	P/P	90 - 110
Arsenic	98.8	98.3	P/P	90 - 110
Barium	99.2	100	P/P	90 - 110
Beryllium	98.6	96.4	P/P	90 - 110
Boron	97.6	96.8	P/P	90 - 110
Cadmium	99.3	99.3	P/P	90 - 110
Chromium	101	99.9	P/P	90 - 110
Cobalt	98.9	97.3	P/P	90 - 110
Copper	96.8	96.1	P/P	90 - 110
Lead	99.7	99.9	P/P	90 - 110
Manganese	101	100	P/P	90 - 110
Molybdenum	98.0	98.2	P/P	90 - 110
Nickel	98.5	97.0	P/P	90 - 110
Selenium	99.5	98.9	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A117566

Included Lab Sample IDs: 2387010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	96.2	96.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A117572

Included Lab Sample IDs: 2387010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	105	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A117607

Included Lab Sample IDs: 2387009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	104	105	P/P	90 - 110
Sulfate	105	108	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117613

Included Lab Sample IDs: 2387017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	100	98.5	P/P	90 - 110
Iron	99.7	98.4	P/P	90 - 110
Magnesium	100	98.5	P/P	90 - 110
Potassium	98.4	97.0	P/P	90 - 110
Sodium	99.4	97.3	P/P	90 - 110
Strontium	99.9	100	P/P	90 - 110
Tin	102	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A117613

Included Lab Sample IDs: 2387017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Titanium	99.9	98.4	P/P	90 - 110
Vanadium	100	98.9	P/P	90 - 110
Zinc	106	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A117625

Included Lab Sample IDs: 2387010

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	101	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A117640

Included Lab Sample IDs: 2387017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	95.6	96.7	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A117679

Included Lab Sample IDs: 2387019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	101		P	80 - 120
Alachlor	88.7		P	80 - 120
Ametryn	91.2		P	80 - 120
Atrazine	95.7		P	80 - 120
Atrazine Desethyl	105		P	80 - 120
Azinphos Methyl	86.2		P	80 - 120
Azoxystrobin	104		P	80 - 120
Bromacil	94.9		P	80 - 120
Butylate	85.9		P	80 - 120
Caffeine	110		P	80 - 120
Carbophenothion	95.5		P	80 - 120
Carfentrazone Ethyl	105		P	80 - 120
Chlorpyrifos Ethyl	94.6		P	80 - 120
Chlorpyrifos Methyl	106		P	80 - 120
Cyanazine	97.0		P	80 - 120
Demeton	98.2		P	80 - 120
Diazinon	93.8		P	80 - 120
Difenoconazole	96.9		P	80 - 120
Dimethenamid	115		P	80 - 120
Disulfoton	92.7		P	80 - 120
Dithiopyr	82.8		P	80 - 120
EPTC	102		P	80 - 120
Ethion	95.4		P	80 - 120
Ethoprop	99.0		P	80 - 120
Fenamiphos	106		P	80 - 120
Fenbuconazole	89.2		P	80 - 120
Fipronil	95.7		P	80 - 120
Fipronil Desulfinyl	93.9		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
 Run ID: A117679
 Included Lab Sample IDs: 2387019

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fipronil Sulfide	99.8		P	80 - 120
Fipronil Sulfone	102		P	80 - 120
Fluazifop-P-butyl	105		P	80 - 120
Fludioxonil	97.4		P	80 - 120
Flumioxazin	83.9		P	80 - 120
Flutolanil	111		P	80 - 120
Fluxapyroxad	92.1		P	80 - 120
Fonofos	89.3		P	80 - 120
Hexazinone	97.5		P	80 - 120
Imazalil	110		P	80 - 120
Iprodione	83.0		P	80 - 120
Malathion	95.9		P	80 - 120
Metaxyl	93.6		P	80 - 120
Metolachlor	92.8		P	80 - 120
Metribuzin	96.0		P	80 - 120
Mevinphos	102		P	80 - 120
Molinate	82.6		P	80 - 120
Myclobutanil	101		P	80 - 120
Naled	103		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	99.9		P	80 - 120
Oxyfluorfen	109		P	80 - 120
Parathion Ethyl	98.4		P	80 - 120
Parathion Methyl	97.6		P	80 - 120
Pendimethalin	97.1		P	80 - 120
Phorate	101		P	80 - 120
Prodiamine	87.1		P	80 - 120
Prometon	83.0		P	80 - 120
Prometryn	84.9		P	80 - 120
Pronamide	94.0		P	80 - 120
Propiconazole	105		P	80 - 120
Pyriproxyfen	95.1		P	80 - 120
Simazine	102		P	80 - 120
Sulfentrazone	105		P	80 - 120
Tebuconazole	89.0		P	80 - 120
Terbufos	94.1		P	80 - 120
Terbuthylazine	96.4		P	80 - 120

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	102					0.0902	
EPA 180.1 Rev. 2.0	Turbidity	102					2.80	
EPA 200.7 Rev. 4.4	Calcium	100	97.2	103				0.345
	Iron	102	101	99.1	102			1.46
	Magnesium	100	97.0	101				1.68
	Potassium	95.2	92.6	91.5	101			1.03
	Sodium	98.5	98.3	101				0.0337
	Strontium	99.6	97.5	97.9	98.5			0.329
	Tin	104	102	101	101			0.777
	Titanium	103	101	102	100			0.149
	Vanadium	101	101	101	101			0.323
	Zinc	107	104	104	108			0.263
EPA 200.8 Rev. 5.4	Aluminum	100	98.6	98.5	98.6			0.0930
	Antimony	101	103	103	103			0.0664
	Arsenic	99.9	99.4	98.7	99.5			0.691
	Barium	101	101	100	101			0.754
	Beryllium	97.5	97.3	97.4	94.7			0.0848
	Boron	98.6	101	102	103			0.569
	Cadmium	99.2	101	100	100			1.32
	Chromium	102	103	103	101			0.149
	Cobalt	102	99.0	99.9	98.9			0.978
	Copper	99.9	95.6	95.3	97.5			0.405
	Lead	100	101	99.6	101			1.28
	Manganese	98.9	102	101	99.1			0.952
	Molybdenum	98.9	101	99.6	99.5			1.09
	Nickel	103	100	101	99.7			0.696
	Selenium	99.4	93.6	93.3	97.5			0.358
	Silver	97.5	98.3	98.3	98.7			0.0528
	Thallium	102	103	102	104			0.876
EPA 300.0 Rev. 2.1	Chloride	101	104	105			1.94	
	Sulfate	105	94.3	109			3.03	
EPA 350.1 Rev. 2.0	Ammonia-N	97.0	97.8	97.0				0.821
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103	92.3	114				12.6
EPA 353.2 Rev. 2.0	NO2NO3-N	102	94.2					0.380
EPA 365.1 Rev. 2.0	Total-P	104	103	103				0.0462
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8	97.6	96.6				0.822
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	66.0	55.6	50.5				9.55
	Acetochlor	85.2	69.4	74.5				7.12
	Alachlor	87.0	71.5	55.3				25.5
	Ametryn	135	122	105				15.4
	Atrazine	90.6	74.8	86.7				14.8
	Atrazine Desethyl	54.8	48.2	47.4				1.77
	Avobenzone	74.2	64.6	62.2				3.75
	Azinphos Methyl	127	64.9	119				59.0
	Azoxystrobin	114	87.3	102				15.5
	Bromacil	88.8	58.5	80.1				31.1
	Butylate	44.9	36.7	32.4				12.4
	Caffeine	75.3	83.4	85.2				2.03
	Carbophenothion	93.9	76.3	62.5				19.8
	Carfentrazone Ethyl	104	85.4	51.6				49.4
	Chlorpyrifos Ethyl	81.3	108	93.4				14.7
	Chlorpyrifos Methyl	80.4	68.7	61.6				11.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Cyanazine	105	71.8	84.8			16.5
	Dechlorane Plus	67.9	55.1	54.5			1.08
	Demeton	76.4	58.2	71.8			21.0
	Diazinon	103	107	87.3			19.9
	Difenoconazole	108	174	135			25.3
	Dimethenamid	78.2	60.7	68.4			12.0
	Disulfoton	86.4	67.3	61.2			9.53
	Dithiopyr	73.0	64.8	40.1			47.1
	EPTC	49.1	25.5	24.8			2.87
	Ethion	73.0	34.5	55.2			46.1
	Ethoprop	91.9	67.9	80.4			16.8
	Fenamiphos	107	56.1	82.4			38.0
	Fenbuconazole	91.5	67.7	65.6			3.12
	Fipronil	73.9	71.4	33.7			71.6
	Fipronil Desulfinyl	73.7	59.8	33.1			57.5
	Fipronil Sulfide	68.0	63.5	34.8			58.4
	Fipronil Sulfone	67.7	64.3	35.9			56.6
	Fluazifop-P-butyl	111	66.7	81.1			19.5
	Fludioxonil	81.0	58.5	71.1			19.4
	Flumioxazin	142	70.7	53.0			28.6
	Flutolanil	109	74.3	51.9			35.5
	Fluxapyroxad	79.5	45.0	62.0			31.9
	Fonofos	88.7	77.7	60.9			24.2
	Hexazinone	96.0	83.0	101			19.8
	Imazalil	68.0	63.5	104			48.2
	Iprodione	115	55.9	71.5			24.5
	Malathion	113	79.1	58.3			30.3
	Metalaxyl	76.0	76.3	55.6			31.4
	Metolachlor	86.0	87.5	65.4			28.9
	Metribuzin	97.1	68.5	108			44.5
	Mevinphos	79.9	66.4	80.6			19.4
	Molinate	59.8	43.3	59.0			30.8
	Myclobutanil	86.1	80.5	48.9			48.8
	Naled	115	69.2	88.2			24.1
	Norflurazon	69.1	73.1	46.9			43.7
	Octinoxate	86.6	95.9	145			41.0
	Oxadiazon	76.7	59.4	43.8			30.3
	Oxybenzone	50.1	47.6	41.7			13.3
	Oxyfluorfen	114	101	68.8			38.1
	Parathion Ethyl	105	69.6	70.8			1.77
	Parathion Methyl	111	93.2	86.2			7.81
	PBDE-47	59.6	50.2	43.8			13.6
	PBDE-99	63.9	54.0	47.7			12.3
	Pendimethalin	94.1	70.3	87.3			21.6
	Phorate	73.0	72.3	62.2			15.0
	Prodiamine	32.5	134	81.3			48.6
	Prometon	69.6	56.4	60.0			6.08
	Prometryn	82.3	70.3	49.8			34.3
	Pronamide	104	98.8	83.0			17.3
	Propiconazole	80.7	63.7	40.9			43.6
	Pyriproxyfen	85.8	51.4	84.3			48.4
	Simazine	87.1	78.7	81.3			3.32
	Sulfentrazone	72.2	81.1	66.6			19.6
	Tebuconazole	57.6	21.8	40.5			59.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Terbufos	96.7	104	91.3			12.8
	Terbutylazine	89.1	82.6	69.2			17.5
	Tri-o-cresyl Phosphate	57.7	49.0	42.7			13.8
EPA 8321B	2,4-D	115	107	119			10.1
	2,4,5-T	101	95.3	93.9			1.41
	Acesulfame K	108	77.9	79.5			2.03
	Acetaminophen	93.8	99.5	95.0			4.60
	Acetamiprid	110	84.2	92.2			9.10
	Afidopyropen	69.3	65.6	67.3			2.45
	AMPA	107	95.5	87.2			7.03
	Bentazon	96.5	86.7	90.0			3.74
	Benzovindiflupyr	87.1	78.1	76.7			1.75
	Carbamazepine	64.6	59.9	58.1			3.12
	Clothianidin	96.1	99.4	92.1			7.54
	Dinotefuran	104	97.7	94.7			3.12
	Diuron	64.8	53.7	55.8			3.83
	Endothall	101	114	118			3.29
	Fenuron	94.7	81.9	77.6			5.32
	Fluridone	86.0	83.3	72.4			12.0
	Glufosinate	104	118	119			0.183
	Glyphosate	97.6	120	140			10.7
	Hydrocodone	76.8	75.6	72.4			4.24
	Ibuprofen	77.0	66.6	87.5			27.0
	Imazapyr	92.8	86.2	90.8			5.23
	Imidacloprid	106	125	118			5.81
	Linuron	85.4	71.2	68.4			4.10
	Mandestrobin	95.9	87.4	85.8			1.86
	MCPP	97.8	87.5	91.2			4.11
	Naproxen	70.5	103	82.4			22.1
	Primidone	95.2	102	89.7			12.3
	Pyraclostrobin	81.7	79.3	82.1			3.40
	Silvex	106	91.9	88.1			4.27
	Sucralose	104	73.7	75.2			1.80
	Thiamethoxam	97.9	105	96.9			8.07
	Tolfenpyrad	57.5	50.1	53.8			7.05
	Triclopyr	108	87.4	107			19.7
SM 2320 B-2011	Total Alkalinity	94.2				0.478	
SM 2540 C-2015	TDS	106				7.32	
SM 2540 D-2015	TSS	94.3					
SM 4500-F- C-2011	Fluoride	99.8	101	101			0.0
SM 5310 B-2011	Organic Carbon	94.3	95.0	96.1			0.834

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2387009
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2387009
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2387017
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2387017
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2387009
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2387009

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2387010
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2387010
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2387010
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2387010
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2387011
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2387019
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2387019
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2387016
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2387009
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2387017
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2387009
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2387009
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2387009
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2387010

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	02/14/2023			02/14/2023 14:47	Alexis Price	2387009
EPA 180.1 Rev. 2.0	02/14/2023			02/14/2023 14:49	Anna M. Plaviak	2387009
EPA 200.7 Rev. 4.4	02/14/2023	02/17/2023 10:50	George D Taylor	02/22/2023 14:01	McKinley C Carter	2387017
EPA 200.8 Rev. 5.4	02/14/2023	02/17/2023 10:50	George D Taylor	02/20/2023 18:24	Conrad Hartmann	2387017
	02/14/2023	02/22/2023 13:20	George D Taylor	02/23/2023 14:39	Conrad Hartmann	2387017
EPA 300.0 Rev. 2.1	02/14/2023			02/23/2023 21:16	Anna M. Plaviak	2387009
EPA 350.1 Rev. 2.0	02/14/2023			02/21/2023 12:52	Ping Hua	2387010
EPA 351.2 Rev. 2.0	02/14/2023	02/16/2023 11:30	Simonne.V. Calhoun	02/23/2023 11:54	Judith K. Clark	2387010
EPA 353.2 Rev. 2.0	02/14/2023			02/16/2023 10:42	Beverly Y. Sanders	2387010
EPA 365.1 Rev. 2.0	02/14/2023	02/16/2023 16:29	Adam P Silver	02/17/2023 10:08	James L Waggeberby	2387010
EPA 365.1 Rev. 2.0 dissolved	02/14/2023			02/14/2023 14:04	Elise M. Gillis	2387011
EPA 8270E	02/14/2023	02/15/2023 09:30	Rasheda Ghaffari	02/20/2023 18:57	Arthur Maknenko	2387019
	02/14/2023	02/15/2023 09:30	Rasheda Ghaffari	02/20/2023 23:42	Michael Poppell	2387019
EPA 8321B	02/14/2023	02/16/2023 14:00	Hoor Shaik	02/17/2023 18:11	Juyoung Kim	2387016
	02/14/2023	02/16/2023 14:00	Manjita Shrestha	02/16/2023 18:11	Manjita Shrestha	2387016
	02/14/2023	02/16/2023 14:00	Manjita Shrestha	02/17/2023 08:43	Manjita Shrestha	2387016
SM 2320 B-2011	02/14/2023			02/17/2023 21:00	Dale L. Simmons	2387009
SM 2340 B-2011	02/14/2023			02/22/2023 14:01	McKinley C Carter	2387017
SM 2540 C-2015	02/14/2023			02/17/2023 15:46	Yijie Li	2387009
SM 2540 D-2015	02/14/2023			02/17/2023 15:46	Yijie Li	2387009
SM 4500-F- C-2011	02/14/2023			02/17/2023 20:48	Dale L. Simmons	2387009
SM 5310 B-2011	02/14/2023			02/17/2023 04:38	Elise M. Gillis	2387010