

Chemical Analysis Report

SW-DIST-2022-11-03-01

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

Event Description: **SCIs**
Request ID: **RQ-2022-11-07-64**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 29-NOV-2022 11:07



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: McMullen Creek @ CR 683

Collection Date/Time: 11/02/2022 10:55

Field ID: G1SW0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367177	DEP SOP: NU-094-1	Color (true)	56		PCU	P421920	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P421854	
	EPA 300.0 Rev. 2.1	Chloride	25		mg Cl/L	P422462	
		Sulfate	57		mg SO4/L	P422466	
	SM 2320 B-2011	Total Alkalinity	186		mg CaCO3/L	P422256	
	SM 2540 C-2015	TDS	342		mg/L	P422532	
	SM 2540 D-2015	TSS	2	I	mg/L	P422507	
2367178	SM 4500-F- C-2011	Fluoride	0.63		mg F/L	P422784	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P422275	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P421993	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.24		mg N/L	P422480	
	EPA 365.1 Rev. 2.0	Total-P	0.59		mg P/L	P422111	
2367179	SM 5310 B-2011	Organic Carbon	14		mg C/L	P422360	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.46		mg P/L	P421893	
2367184	EPA 8321B	2,4-D	0.0056	I	ug/L	P421979	
		Acesulfame K	0.10	U	ug/L	P421965	
		2,4,5-T	0.0040	U	ug/L	P421979	
		AMPA	0.60		ug/L	P421965	
		Acetaminophen	0.0080	U	ug/L	P421979	
		Acetamiprid	0.0020	U	ug/L	P421979	
		Endothall	0.25	U	ug/L	P421965	MS
		Glufosinate	0.10	U	ug/L	P421965	
		Glyphosate	1.6		ug/L	P421965	
		Afidopyrophen	0.0020	U	ug/L	P421979	
		Bentazon	0.040		ug/L	P421979	
		Sucralose	0.077		ug/L	P421965	
		Benzovindiflupyr	0.0020	U	ug/L	P421979	
		Carbamazepine	0.0018	I	ug/L	P421979	
		Clothianidin	0.0073	I	ug/L	P421979	
		Dinotefuran	0.0020	U	ug/L	P421979	MS
		Diuron	0.0020	I	ug/L	P421979	
		Fenuron	0.032	U	ug/L	P421979	
		Fluridone	8.0E-04	U	ug/L	P421979	
		Imazapyr	0.12		ug/L	P421979	
		Hydrocodone	0.0020	U	ug/L	P421979	
		Ibuprofen	0.20	U	ug/L	P421979	
		Imidacloprid	0.012		ug/L	P421979	MS
		Linuron	0.0040	U	ug/L	P421979	
		Mandestrobin	0.0020	U	ug/L	P421979	
		MCP	0.0040	U	ug/L	P421979	
		Naproxen	0.0080	U	ug/L	P421979	
		Primidone	0.0040	U	ug/L	P421979	
		Pyraclostrobin	0.0020	U	ug/L	P421979	

Field ID: G1SW0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367184	EPA 8321B	Silvex	0.0040	U	ug/L	P421979	
		Thiamethoxam	0.0020	U	ug/L	P421979	MS
		Tolfenpyrad	0.0020	U	ug/L	P421979	
		Triclopyr	0.0040	U	ug/L	P421979	
2367186	EPA 200.7 Rev. 4.4	Calcium	72.0		mg/L	P421909	
		Iron	470		ug/L	P421909	
		Magnesium	20.1		mg/L	P421909	
		Potassium	3.1		mg/L	P421909	
		Sodium	15.2		mg/L	P421909	
		Strontium	801		ug/L	P421909	
		Tin	3.0	U	ug/L	P421909	
		Titanium	2.3	I	ug/L	P421909	
		Vanadium	2.0	U	ug/L	P421909	
		Zinc	5.0	U	ug/L	P421909	
	EPA 200.8 Rev. 5.4	Aluminum	55		ug/L	P421909	
		Antimony	0.22		ug/L	P421909	
		Arsenic	6.09		ug/L	P421909	
		Barium	17.1		ug/L	P421909	
		Beryllium	0.017	I	ug/L	P421909	
		Boron	42.4		ug/L	P421909	
		Cadmium	0.020	U	ug/L	P421909	
		Chromium	0.69	I	ug/L	P421909	
		Cobalt	0.098		ug/L	P421909	
		Copper	2.57		ug/L	P421909	
		Lead	0.20	U	ug/L	P421909	
		Manganese	36.9		ug/L	P421909	
		Molybdenum	2.08		ug/L	P421909	
		Nickel	0.75	I	ug/L	P421909	
		Selenium	0.20	U	ug/L	P421909	
		Silver	0.010	U	ug/L	P421909	
		Thallium	0.10	U	ug/L	P421909	
		Hardness	263		mg/L	P421909	
2367191	SM 2340 B-2011	Oxybenzone**	9.8	U	ng/L	P421812	
	EPA 8270E	Acetochlor	0.25	U	ng/L	P421812	
		Octinoxate**	20	U	ng/L	P421812	
		Alachlor	0.25	U	ng/L	P421812	
		Avobenzone**	98	U	ng/L	P421812	
		Ametryn	0.59	U	ng/L	P421812	
		Atrazine	130		ng/L	P421812	
		PBDE-47**	3.9	U	ng/L	P421812	
		Atrazine Desethyl	10		ng/L	P421812	
		PBDE-99**	4.9	U	ng/L	P421812	
		Azinphos Methyl	2.0	U	ng/L	P421812	
		Tri-o-cresyl Phosphate**	5.9	U	ng/L	P421812	
		Azoxystrobin	0.49	U	ng/L	P421812	

Field ID: G1SW0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367191	EPA 8270E	Bromacil	0.49	U	ng/L	P421812	
		2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)**	12	U	ng/L	P421812	
		Butylate	0.39	U	ng/L	P421812	
		Dechlorane Plus**	29	U	ng/L	P421812	
		Caffeine**	19	I	ng/L	P421812	
		Carbophenothion	0.20	U	ng/L	P421812	
		Carfentrazone Ethyl	0.098	U	ng/L	P421812	
		Chlorfenapyr	0.17	U	ng/L	P421812	
		Chlorpyrifos Ethyl	0.25	U	ng/L	P421812	
		Chlorpyrifos Methyl	0.049	U	ng/L	P421812	
		Coumaphos	0.49	U	ng/L	P421812	
		Cyanazine	3.2	U	ng/L	P421812	
		Cyprodinil	0.098	U	ng/L	P421812	
		Demeton	1.5	U	ng/L	P421812	
		Diazinon	0.20	I	ng/L	P421812	
		Difenoconazole	0.59	U	ng/L	P421812	
		Dimethenamid	0.098	U	ng/L	P421812	
		Dimethomorph	0.17	U	ng/L	P421812	
		Disulfoton	0.49	U	ng/L	P421812	
		Dithiopyr	0.61	U	ng/L	P421812	
		EPTC	1.2	U	ng/L	P421812	
		Ethion	0.15	U	ng/L	P421812	
		Ethoprop	0.098	U	ng/L	P421812	
		Etridiazole	0.15	U	ng/L	P421812	
		Fenamiphos	0.49	U	ng/L	P421812	
		Fenbuconazole	0.12	U	ng/L	P421812	
		Fipronil	0.44	I	ng/L	P421812	
		Fipronil Desulfinyl**	0.86		ng/L	P421812	
		Fipronil Sulfide	1.3		ng/L	P421812	
		Fipronil Sulfone	1.5		ng/L	P421812	
		Fluazifop-P-butyl	0.098	U	ng/L	P421812	
		Fludioxonil	0.12	U	ng/L	P421812	
		Flumioxazin	4.4	U	ng/L	P421812	
		Flutolanil	0.098	U	ng/L	P421812	
		Fluxapyroxad	0.098	U	ng/L	P421812	
		Fonofos	0.20	U	ng/L	P421812	
		Hexazinone	0.49	U	ng/L	P421812	
		Imazalil	0.74	U	ng/L	P421812	
		Iprodione	0.59	U	ng/L	P421812	
		Loratadine**	0.34	U	ng/L	P421812	
		Malathion	0.80	I	ng/L	P421812	
		Metalaxyl	0.74	U	ng/L	P421812	
		Metolachlor	0.61	I	ng/L	P421812	
		Metribuzin	1.5	U	ng/L	P421812	

Field ID: G1SW0122

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2367191	EPA 8270E	Mevinphos	1.0	U	ng/L	P421812	
		Molinate	0.29	U	ng/L	P421812	
		Myclobutanil	0.25	U	ng/L	P421812	
		Naled	1.5	U	ng/L	P421812	
		Napropamide	0.39	U	ng/L	P421812	
		Norflurazon	0.49	U	ng/L	P421812	
		Oxadiazon	0.29	U	ng/L	P421812	
		Oxyfluorfen	0.15	U	ng/L	P421812	
		Parathion Ethyl	0.25	U	ng/L	P421812	
		Parathion Methyl	0.54	U	ng/L	P421812	
		Pendimethalin	0.98	U	ng/L	P421812	
		Phenytoin**	3.4	U	ng/L	P421812	
		Phorate	0.52	U	ng/L	P421812	
		Prodiamine	0.17	U	ng/L	P421812	
		Prometon	42		ng/L	P421812	
		Prometryn	0.20	U	ng/L	P421812	
		Pronamide	0.15	U	ng/L	P421812	
		Propanil	0.12	U	ng/L	P421812	
		Propargite	1.5	U	ng/L	P421812	
		Propiconazole	0.49	U	ng/L	P421812	
		Pyraflufen Ethyl	0.25	U	ng/L	P421812	
		Pyridaben	0.44	U	ng/L	P421812	
		Pyriproxyfen	0.12	U	ng/L	P421812	
		Simazine	5.9		ng/L	P421812	
		Stirophos	0.12	U	ng/L	P421812	
		Sulfentrazone	6.6		ng/L	P421812	
		Tebuconazole	0.49	U	ng/L	P421812	
		Terbufos	0.098	U	ng/L	P421812	
		Terbutylazine	0.42	U	ng/L	P421812	
		Thiobencarb	0.59	U	ng/L	P421812	
		Triadimefon	0.25	U	ng/L	P421812	

Ref. Method and Comment:

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

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

EPA 8270E: MS accuracy for atrazine, prometon, and simazine not assessed due to high content of these parameters in the sample spiked.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P421920

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421854

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421909

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: P421909

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422462

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: P422466

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422275

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421993

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422480

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422111

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421893

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

Reference Method: EPA 8270E
Batch ID: P421812

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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P421812

Component	Result	Code	Units
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
Chlorfenapyr	0.18	U	ng/L
Chlorfenapyr	0.18	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
Coumaphos	0.50	U	ng/L
Coumaphos	0.50	U	ng/L
Cyanazine	3.2	U	ng/L
Cyanazine	3.2	U	ng/L
Cyprodinil	0.10	U	ng/L
Cyprodinil	0.10	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
Dimethomorph	0.18	U	ng/L
Dimethomorph	0.18	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
Etridiazole	0.15	U	ng/L
Etridiazole	0.15	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P421812

Component	Result	Code	Units
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
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
Loratadine	0.35	U	ng/L
Loratadine	0.35	U	ng/L
Malathion	0.35	U	ng/L
Malathion	0.35	U	ng/L
Metaxyl	0.75	U	ng/L
Metaxyl	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
Napropamide	0.40	U	ng/L
Napropamide	0.40	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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P421812

Component	Result	Code	Units
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
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
Phenytol	3.5	U	ng/L
Phenytol	3.5	U	ng/L
Phorate	0.52	U	ng/L
Phorate	0.52	U	ng/L
Prodiatone	0.18	U	ng/L
Prodiatone	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
Propanil	0.12	U	ng/L
Propanil	0.12	U	ng/L
Propargite	1.5	U	ng/L
Propargite	1.5	U	ng/L
Propiconazole	0.50	U	ng/L
Propiconazole	0.50	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyraflufen Ethyl	0.25	U	ng/L
Pyridaben	0.45	U	ng/L
Pyridaben	0.45	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
Stirophos	0.12	U	ng/L
Stirophos	0.12	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
Thiobencarb	0.60	U	ng/L
Thiobencarb	0.60	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P421812

Component	Result	Code	Units
Tri-o-cresyl Phosphate	6.0	U	ng/L
Tri-o-cresyl Phosphate	6.0	U	ng/L
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: EPA 8321B

Batch ID: P421965

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: P421979

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
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: P422256

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P422256

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2015
Batch ID: P422532

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P422507

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P422784

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P422360

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: P421920

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421854

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421909

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	106		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	104		P	85 - 115
Sodium	106		P	85 - 115
Strontium	108		P	85 - 115
Tin	99.9		P	85 - 115
Titanium	99.8		P	85 - 115
Vanadium	99.4		P	85 - 115
Zinc	95.9		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421909

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.5		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Barium	103		P	85 - 115
Beryllium	96.2		P	85 - 115
Boron	104		P	85 - 115
Cadmium	98.7		P	85 - 115
Chromium	98.8		P	85 - 115
Cobalt	97.4		P	85 - 115
Copper	97.9		P	85 - 115
Lead	93.8		P	85 - 115
Manganese	100		P	85 - 115
Molybdenum	98.3		P	85 - 115
Nickel	98.2		P	85 - 115
Selenium	99.4		P	85 - 115
Silver	99.4		P	85 - 115
Thallium	96.8		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422462

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P422466

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

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P422275

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P421993

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

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P422480

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: P422111

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: P421893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	99.7		P	90 - 110

Reference Method: EPA 8270E

Batch ID: P421812

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	89.0		P	42 - 162
Acetochlor	108		P	69 - 123
Alachlor	97.7		P	65 - 118
Ametryn	70.1		P	58 - 141
Atrazine	101		P	73 - 118
Atrazine Desethyl	72.2		P	32 - 125
Avobenzone	111		P	40 - 203
Azinphos Methyl	139		P	36 - 197
Azoxystrobin	121		P	58 - 226
Bromacil	65.7		P	48 - 120
Butylate	63.9		P	27 - 85.0
Caffeine	86.5		P	40 - 137
Carbophenothion	91.0		P	54 - 132
Carfentrazone Ethyl	106		P	60 - 142
Chlorfenapyr	71.7		P	53 - 117
Chlorpyrifos Ethyl	60.7		P	59 - 116

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P421812

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorpyrifos Methyl	88.1		P	66 - 119
Coumaphos	33.9		P	11 - 234
Cyanazine	71.7		P	61 - 248
Cyprodinil	80.0		P	50 - 147
Dechlorane Plus	119		P	47 - 182
Demeton	81.3		P	30 - 138
Diazinon	93.8		P	67 - 126
Difenoconazole	62.6		P	38 - 205
Dimethenamid	67.8		P	57 - 111
Dimethomorph	180		P	16 - 212
Disulfoton	65.9		P	46 - 126
Dithiopyr	80.0		P	62 - 115
EPTC	49.2		P	28 - 80.0
Ethion	66.7		P	24 - 122
Ethoprop	78.8		P	62 - 113
Etridiazole	58.1		P	28 - 92.0
Fenamiphos	73.0		P	57 - 128
Fenbuconazole	89.5		P	52 - 155
Fipronil	76.1		P	63 - 130
Fipronil Desulfinyl	78.8		P	61 - 130
Fipronil Sulfide	91.8		P	56 - 117
Fipronil Sulfone	58.1		P	52 - 118
Fluazifop-P-butyl	66.1		P	61 - 128
Fludioxonil	82.6		P	59 - 129
Flumioxazin	58.7		P	30 - 250
Flutolanil	62.4		P	53 - 127
Fluxapyroxad	43.9		P	42 - 132
Fonofos	83.9		P	61 - 110
Hexazinone	83.0		P	46 - 139
Imazalil	86.0		P	40 - 139
Iprodione	76.4		P	40 - 146
Loratadine	211		P	10 - 224
Malathion	96.7		P	61 - 135
Metaxyl	80.3		P	58 - 121
Metolachlor	83.5		P	64 - 118
Metribuzin	105		P	45 - 245
Mevinphos	81.6		P	49 - 118
Molinate	72.4		P	42 - 92.0
Myclobutanil	58.4		P	55 - 127
Naled	74.2		P	10 - 114
Napropamide	63.9		P	39 - 121
Norflurazon	63.2		P	55 - 129
Octinoxate	94.7		P	26 - 166
Oxadiazon	61.8		P	54 - 115
Oxybenzone	89.2		P	49 - 135
Oxyfluorfen	72.1		P	64 - 139
Parathion Ethyl	86.6		P	70 - 111
Parathion Methyl	116		P	76 - 136
PBDE-47	71.7		P	41 - 148
PBDE-99	61.8		P	38 - 147
Pendimethalin	79.5		P	52 - 118
Phenytol	38.3		P	10 - 162

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E

Batch ID: P421812

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Phorate	73.3		P	40 - 122
Prodiamine	32.1		P	26 - 141
Prometon	54.9		P	54 - 122
Prometryn	118		P	61 - 128
Pronamide	98.8		P	72 - 121
Propanil	99.3		P	45 - 144
Propargite	32.1		P	10 - 199
Propiconazole	124		P	56 - 127
Pyraflufen Ethyl	56.5		P	56 - 140
Pyridaben	50.3		P	26 - 211
Pyriproxyfen	38.6		P	33 - 194
Simazine	91.9		P	67 - 121
Stirophos	22.5		P	20 - 142
Sulfentrazone	45.1		P	21 - 144
Tebuconazole	12.9		P	10 - 122
Terbufos	83.2		P	60 - 129
Terbuthylazine	94.2		P	69 - 113
Thiobencarb	80.6		P	51 - 120
Tri-o-cresyl Phosphate	89.4		P	49 - 150
Triadimefon	60.4		P	56 - 114

Reference Method: EPA 8321B

Batch ID: P421965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	118		P	40 - 150
AMPA	104		P	40 - 150
Endothall	110		P	40 - 150
Glufosinate	106		P	40 - 150
Glyphosate	93.0		P	40 - 150
Sucralose	110		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P421979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	84.9		P	40 - 150
2,4,5-T	74.8		P	40 - 150
Acetaminophen	94.7		P	30 - 150
Acetamiprid	76.5		P	40 - 150
Afidopyropen	32.9		P	30 - 150
Bentazon	90.7		P	30 - 150
Benzovindiflupyr	87.9		P	40 - 150
Carbamazepine	81.4		P	40 - 150
Clothianidin	95.9		P	40 - 150
Dinotefuran	114		P	40 - 150
Diuron	79.9		P	40 - 150
Fenuron	107		P	40 - 150
Fluridone	101		P	40 - 150
Hydrocodone	104		P	40 - 150
Ibuprofen	87.9		P	40 - 150
Imazapyr	90.7		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P421979

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Imidacloprid	94.1		P	40 - 150
Linuron	80.9		P	40 - 150
Mandestrobin	96.6		P	40 - 150
MCPP	92.3		P	40 - 150
Naproxen	77.4		P	40 - 150
Primidone	90.9		P	40 - 150
Pyraclostrobin	88.1		P	40 - 150
Silvex	70.8		P	40 - 150
Thiamethoxam	85.5		P	40 - 150
Tolfenpyrad	40.3		P	30 - 150
Triclopyr	85.4		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P422256

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.2		P	94 - 106

Reference Method: SM 2540 C-2015

Batch ID: P422532

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

Reference Method: SM 2540 D-2015

Batch ID: P422507

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	94.8		P	85 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P422784

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	100		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P422360

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P421909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367365	Calcium	103		P	80 - 120
2367365	Iron	107	106	P/P	80 - 120
2367365	Magnesium	102		P	80 - 120
2367365	Potassium	105	103	P/P	80 - 120
2367365	Sodium	107	104	P/P	80 - 120
2367365	Strontium	108	106	P/P	80 - 120
2367365	Tin	102	99.7	P/P	80 - 120
2367365	Titanium	104	101	P/P	80 - 120
2367365	Vanadium	104	101	P/P	80 - 120
2367365	Zinc	98.8	96.3	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P421909

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367365	Aluminum	103	102	P/P	80 - 120
2367365	Antimony	103	104	P/P	80 - 120
2367365	Arsenic	101	101	P/P	80 - 120
2367365	Barium	103	103	P/P	80 - 120
2367365	Beryllium	95.2	96.9	P/P	80 - 120
2367365	Boron	108	109	P/P	80 - 120
2367365	Cadmium	100	101	P/P	80 - 120
2367365	Chromium	99.1	99.5	P/P	80 - 120
2367365	Cobalt	96.5	96.6	P/P	80 - 120
2367365	Copper	95.9	95.7	P/P	80 - 120
2367365	Lead	93.9	93.3	P/P	80 - 120
2367365	Manganese	102	102	P/P	80 - 120
2367365	Molybdenum	99.7	99.7	P/P	80 - 120
2367365	Nickel	96.5	96.2	P/P	80 - 120
2367365	Selenium	97.9	99.5	P/P	80 - 120
2367365	Silver	100	100	P/P	80 - 120
2367365	Thallium	98.7	99.2	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P422462

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367144	Chloride	102		P	90 - 110
2367195	Chloride	104		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P422466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367144	Sulfate	103		P	90 - 110
2367195	Sulfate	107		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P422275

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367173	Ammonia-N	95.2	97.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P421993

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367178	Kjeldahl Nitrogen	98.5	96.4	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P422480

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367178	NO2NO3-N	100	99.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P422111

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367150	Total-P	105	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P421893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367084	O-Phosphate-P	98.0	97.5	P/P	90 - 110

Reference Method: EPA 8270E

Batch ID: P421812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367191	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	68.0	65.6	P/P	26 - 165
2367191	Acetochlor	96.3	103	P/P	67 - 124
2367191	Alachlor	83.6	79.1	P/P	60 - 120
2367191	Ametryn	118	106	P/P	54 - 216
2367191	Atrazine Desethyl	28.4	46.1	P/P	15 - 122
2367191	Avobenzone	78.4	73.0	P/P	37 - 178
2367191	Azinphos Methyl	140	128	P/P	40 - 292
2367191	Azoxystrobin	128	137	P/P	35 - 220
2367191	Bromacil	80.2	78.6	P/P	45 - 127
2367191	Butylate	42.4	43.8	P/P	20 - 83.0
2367191	Caffeine	94.6	93.1	P/P	10 - 194
2367191	Carbophenothion	122	123	P/P	57 - 127
2367191	Carfentrazone Ethyl	91.4	92.2	P/P	51 - 141
2367191	Chlorfenapyr	82.6	83.6	P/P	46 - 111
2367191	Chlorpyrifos Ethyl	77.5	74.3	P/P	52 - 120
2367191	Chlorpyrifos Methyl	82.3	91.2	P/P	63 - 119
2367191	Coumaphos	72.0	76.4	P/P	10 - 228
2367191	Cyanazine	85.8	87.7	P/P	59 - 241
2367191	Cyprodinil	67.4	81.7	P/P	47 - 146
2367191	Dechlorane Plus	61.5	64.9	P/P	50 - 150
2367191	Demeton	85.0	83.6	P/P	40 - 136
2367191	Diazinon	111	101	P/P	69 - 132
2367191	Difenoconazole	98.4	86.0	P/P	57 - 258
2367191	Dimethenamid	67.3	78.1	P/P	54 - 110
2367191	Dimethomorph	138	172	P/P	28 - 210
2367191	Disulfoton	88.4	84.9	P/P	43 - 133
2367191	Dithiopyr	73.5	73.4	P/P	39 - 116
2367191	EPTC	33.9	39.3	P/P	20 - 78.0

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E
Batch ID: P421812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367191	Ethion	69.7	97.2	P/P	17 - 119
2367191	Ethoprop	80.2	82.6	P/P	66 - 120
2367191	Etridiazole	51.8	48.6	P/P	28 - 96.0
2367191	Fenamiphos	86.4	79.8	P/P	41 - 126
2367191	Fenbuconazole	161	96.3	P/P	42 - 169
2367191	Fipronil	93.8	96.3	P/P	61 - 132
2367191	Fipronil Desulfinyl	76.1	72.5	P/P	56 - 132
2367191	Fipronil Sulfide	92.7	102	P/P	48 - 119
2367191	Fipronil Sulfone	56.8	96.1	P/P	42 - 131
2367191	Fluazifop-P-butyl	73.2	97.4	P/P	53 - 131
2367191	Fludioxonil	78.6	95.9	P/P	56 - 127
2367191	Flumioxazin	96.8	117	P/P	19 - 300
2367191	Flutolanil	68.6	77.3	P/P	41 - 127
2367191	Fluxapyroxad	51.7	73.9	P/P	42 - 172
2367191	Fonofos	81.2	90.2	P/P	59 - 113
2367191	Hexazinone	80.1	91.0	P/P	66 - 122
2367191	Imazalil	79.9	83.9	P/P	21 - 283
2367191	Iprodione	88.2	105	P/P	43 - 150
2367191	Loratadine	88.9	81.8	P/P	23 - 201
2367191	Malathion	118	109	P/P	58 - 136
2367191	Metalaxyl	77.8	79.2	P/P	55 - 120
2367191	Metolachlor	82.8	86.7	P/P	57 - 121
2367191	Metribuzin	96.4	96.1	P/P	58 - 294
2367191	Mevinphos	74.5	76.0	P/P	50 - 126
2367191	Molinate	64.0	64.4	P/P	42 - 93.0
2367191	Myclobutanil	67.0	86.8	P/P	55 - 125
2367191	Naled	80.8	82.6	P/P	18 - 200
2367191	Napropamide	84.1	90.3	P/P	39 - 110
2367191	Norflurazon	73.6	72.8	P/P	48 - 128
2367191	Octinoxate	56.7	52.0	P/P	21 - 159
2367191	Oxadiazon	66.2	71.6	P/P	43 - 112
2367191	Oxybenzone	60.0	53.8	P/P	41 - 142
2367191	Oxyfluorfen	83.7	99.4	P/P	64 - 153
2367191	Parathion Ethyl	91.9	80.3	P/P	69 - 114
2367191	Parathion Methyl	134	109	P/P	79 - 139
2367191	PBDE-47	58.5	59.5	P/P	27 - 144
2367191	PBDE-99	51.7	55.2	P/P	18 - 150
2367191	Pendimethalin	93.1	78.5	P/P	50 - 139
2367191	Phenytol	44.8	63.8	P/P	10 - 146
2367191	Phorate	66.4	72.0	P/P	54 - 161
2367191	Prodiamine	41.0	36.7	P/P	30 - 161
2367191	Prometryn	61.8	47.7	P/P	45 - 137
2367191	Pronamide	103	103	P/P	65 - 133
2367191	Propanil	76.2	90.3	P/P	49 - 142
2367191	Propargite	39.2	56.1	P/P	10 - 203
2367191	Propiconazole	75.4	66.1	P/P	38 - 146
2367191	Pyraflufen Ethyl	126	125	P/P	34 - 153
2367191	Pyridaben	79.0	81.5	P/P	12 - 192
2367191	Pyriproxyfen	73.1	77.1	P/P	33 - 180
2367191	Stirophos	74.5	79.6	P/P	10 - 128
2367191	Sulfentrazone	56.0	98.8	P/P	53 - 186
2367191	Tebuconazole	24.3	48.5	P/P	10 - 133

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P421812

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367191	Terbufos	97.3	95.7	P/P	65 - 139
2367191	Terbutylazine	89.0	96.7	P/P	66 - 117
2367191	Thiobencarb	88.1	72.7	P/P	51 - 119
2367191	Tri-o-cresyl Phosphate	53.4	53.2	P/P	31 - 144
2367191	Triadimefon	67.6	76.8	P/P	48 - 119

Reference Method: EPA 8321B

Batch ID: P421965

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2366653	Acesulfame K	59.6	47.3	P/P	40 - 150
2366653	AMPA	85.6	82.7	P/P	40 - 150
2366653	Endothall	170	171	F/F	40 - 150
2366653	Glufosinate	78.6	86.4	P/P	40 - 150
2366653	Glyphosate	80.8	85.9	P/P	40 - 150
2366653	Sucralose	113	123	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P421979

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2366785	2,4-D	100	112	P/P	40 - 150
2366785	2,4,5-T	75.2	84.2	P/P	40 - 150
2366785	Acetaminophen	116	123	P/P	30 - 150
2366785	Acetamiprid	77.4	96.8	P/P	40 - 150
2366785	Afidopyropen	35.9	44.7	P/P	30 - 150
2366785	Benzovindiflupyr	90.7	93.4	P/P	40 - 150
2366785	Carbamazepine	84.2	88.3	P/P	40 - 150
2366785	Clothianidin	119	118	P/P	40 - 150
2366785	Dinotefuran	156	153	F/F	40 - 150
2366785	Diuron	67.7	67.1	P/P	40 - 150
2366785	Fenuron	102	101	P/P	40 - 150
2366785	Fluridone	94.7	97.6	P/P	40 - 150
2366785	Hydrocodone	133	132	P/P	40 - 150
2366785	Ibuprofen	101	83.9	P/P	40 - 150
2366785	Imazapyr	102	119	P/P	40 - 150
2366785	Imidacloprid	162	163	F/F	40 - 150
2366785	Linuron	72.2	70.8	P/P	40 - 150
2366785	Mandestrobin	93.0	101	P/P	40 - 150
2366785	MCP	93.4	95.4	P/P	40 - 150
2366785	Naproxen	88.6	94.4	P/P	40 - 150
2366785	Primidone	111	109	P/P	40 - 150
2366785	Pyraclostrobin	102	108	P/P	40 - 150
2366785	Silvex	77.5	91.0	P/P	40 - 150
2366785	Thiamethoxam	153	157	F/F	40 - 150
2366785	Tolfenpyrad	49.5	55.0	P/P	30 - 150
2366785	Triclopyr	84.0	92.5	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P422784

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

Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P422784

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370361	Fluoride	99.9	101	P/P	94 - 104

Reference Method: SM 5310 B-2011
Batch ID: P422360

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2367070	Organic Carbon	98.1	98.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P421920

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367145	Color (true)	1.79	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P421854

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367048	Turbidity	2.13	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P421909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367365	Calcium	1.97	Spike	P	0 - 20
2367365	Iron	0.658	Spike	P	0 - 20
2367365	Magnesium	1.46	Spike	P	0 - 20
2367365	Potassium	1.70	Spike	P	0 - 20
2367365	Sodium	1.29	Spike	P	0 - 20
2367365	Strontium	1.23	Spike	P	0 - 20
2367365	Tin	2.58	Spike	P	0 - 20
2367365	Titanium	2.75	Spike	P	0 - 20
2367365	Vanadium	2.52	Spike	P	0 - 20
2367365	Zinc	2.57	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P421909

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367365	Aluminum	1.03	Spike	P	0 - 20
2367365	Antimony	1.02	Spike	P	0 - 20
2367365	Arsenic	0.310	Spike	P	0 - 20
2367365	Barium	0.161	Spike	P	0 - 20
2367365	Beryllium	1.70	Spike	P	0 - 20
2367365	Boron	0.642	Spike	P	0 - 20
2367365	Cadmium	0.705	Spike	P	0 - 20
2367365	Chromium	0.317	Spike	P	0 - 20
2367365	Cobalt	0.0746	Spike	P	0 - 20
2367365	Copper	0.128	Spike	P	0 - 20
2367365	Lead	0.614	Spike	P	0 - 20
2367365	Manganese	0.0296	Spike	P	0 - 20
2367365	Molybdenum	0.0139	Spike	P	0 - 20
2367365	Nickel	0.305	Spike	P	0 - 20
2367365	Selenium	1.63	Spike	P	0 - 20
2367365	Silver	0.245	Spike	P	0 - 20
2367365	Thallium	0.534	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422462

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367144	Chloride	0.249	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P422466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367144	Sulfate	0.0266	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P422275

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367173	Ammonia-N	1.87	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P421993

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367178	Kjeldahl Nitrogen	1.27	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P422480

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367178	NO2NO3-N	0.157	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P422111

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367150	Total-P	0.663	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P421893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367084	O-Phosphate-P	0.512	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P421812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367191	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	3.65	Spike	P	0 - 37
2367191	Acetochlor	6.83	Spike	P	0 - 28

Quality Assurance Report

Precision

Reference Method: EPA 8270E
Batch ID: P421812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367191	Alachlor	5.43	Spike	P	0 - 30
2367191	Ametryn	11.1	Spike	P	0 - 32
2367191	Atrazine	15.4	Spike	P	0 - 41
2367191	Atrazine Desethyl	17.2	Spike	P	0 - 36
2367191	Avobenzone	7.06	Spike	P	0 - 36
2367191	Azinphos Methyl	9.56	Spike	P	0 - 75
2367191	Azoxystrobin	6.45	Spike	P	0 - 39
2367191	Bromacil	1.92	Spike	P	0 - 33
2367191	Butylate	3.08	Spike	P	0 - 44
2367191	Caffeine	1.56	Spike	P	0 - 74
2367191	Carbophenothion	1.23	Spike	P	0 - 25
2367191	Carfentrazone Ethyl	0.794	Spike	P	0 - 27
2367191	Chlorfenapyr	1.16	Spike	P	0 - 24
2367191	Chlorpyrifos Ethyl	4.20	Spike	P	0 - 26
2367191	Chlorpyrifos Methyl	10.2	Spike	P	0 - 26
2367191	Coumaphos	5.82	Spike	P	0 - 28
2367191	Cyanazine	2.13	Spike	P	0 - 48
2367191	Cyprodinil	19.1	Spike	P	0 - 29
2367191	Dechlorane Plus	5.32	Spike	P	0 - 30
2367191	Demeton	1.69	Spike	P	0 - 33
2367191	Diazinon	8.76	Spike	P	0 - 29
2367191	Difenoconazole	13.5	Spike	P	0 - 34
2367191	Dimethenamid	14.9	Spike	P	0 - 39
2367191	Dimethomorph	22.2	Spike	P	0 - 51
2367191	Disulfoton	4.09	Spike	P	0 - 30
2367191	Dithiopyr	0.161	Spike	P	0 - 26
2367191	EPTC	14.5	Spike	P	0 - 43
2367191	Ethion	32.9	Spike	P	0 - 79
2367191	Ethoprop	3.04	Spike	P	0 - 29
2367191	Etridiazole	6.46	Spike	P	0 - 33
2367191	Fenamiphos	8.03	Spike	P	0 - 40
2367191	Fenbuconazole	50.1	Spike	P	0 - 74
2367191	Fipronil	2.37	Spike	P	0 - 29
2367191	Fipronil Desulfiny	3.69	Spike	P	0 - 32
2367191	Fipronil Sulfide	5.42	Spike	P	0 - 30
2367191	Fipronil Sulfone	25.5	Spike	P	0 - 33
2367191	Fluazifop-P-butyl	28.4	Spike	P	0 - 38
2367191	Fludioxonil	19.7	Spike	P	0 - 29
2367191	Flumioxazin	18.9	Spike	P	0 - 51
2367191	Flutolanil	11.9	Spike	P	0 - 25
2367191	Fluxapyroxad	35.3	Spike	P	0 - 45
2367191	Fonofos	10.6	Spike	P	0 - 27
2367191	Hexazinone	12.7	Spike	P	0 - 30
2367191	Imazalil	4.88	Spike	P	0 - 100
2367191	Iprodione	17.6	Spike	P	0 - 33
2367191	Loratadine	8.34	Spike	P	0 - 56
2367191	Malathion	6.33	Spike	P	0 - 37
2367191	Metalaxyl	1.80	Spike	P	0 - 40
2367191	Metolachlor	4.40	Spike	P	0 - 29
2367191	Metribuzin	0.342	Spike	P	0 - 45
2367191	Mevinphos	2.07	Spike	P	0 - 29

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P421812

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367191	Molinate	0.729	Spike	P	0 - 33
2367191	Myclobutanil	25.7	Spike	P	0 - 26
2367191	Naled	2.23	Spike	P	0 - 37
2367191	Napropamide	7.05	Spike	P	0 - 44
2367191	Norflurazon	1.12	Spike	P	0 - 30
2367191	Octinoxate	8.71	Spike	P	0 - 45
2367191	Oxadiazon	7.89	Spike	P	0 - 28
2367191	Oxybenzone	10.9	Spike	P	0 - 46
2367191	Oxyfluorfen	17.1	Spike	P	0 - 28
2367191	Parathion Ethyl	13.5	Spike	P	0 - 31
2367191	Parathion Methyl	20.4	Spike	P	0 - 29
2367191	PBDE-47	1.61	Spike	P	0 - 36
2367191	PBDE-99	6.58	Spike	P	0 - 40
2367191	Pendimethalin	17.0	Spike	P	0 - 33
2367191	Phenytoin	35.0	Spike	P	0 - 100
2367191	Phorate	8.01	Spike	P	0 - 36
2367191	Prodiamine	11.0	Spike	P	0 - 71
2367191	Prometon	27.0	Spike	P	0 - 36
2367191	Prometryn	25.7	Spike	P	0 - 28
2367191	Pronamide	0.215	Spike	P	0 - 24
2367191	Propanil	16.9	Spike	P	0 - 28
2367191	Propargite	35.5	Spike	P	0 - 43
2367191	Propiconazole	13.1	Spike	P	0 - 33
2367191	Pyraflufen Ethyl	0.791	Spike	P	0 - 29
2367191	Pyridaben	3.16	Spike	P	0 - 30
2367191	Pyriproxyfen	5.39	Spike	P	0 - 79
2367191	Simazine	1.71	Spike	P	0 - 29
2367191	Stirophos	6.66	Spike	P	0 - 61
2367191	Sulfentrazone	26.5	Spike	P	0 - 33
2367191	Tebuconazole	66.5	Spike	P	0 - 69
2367191	Terbufos	1.60	Spike	P	0 - 29
2367191	Terbutylazine	8.35	Spike	P	0 - 32
2367191	Thiobencarb	19.1	Spike	P	0 - 26
2367191	Tri-o-cresyl Phosphate	0.387	Spike	P	0 - 33
2367191	Triadimefon	12.7	Spike	P	0 - 28

Reference Method: EPA 8321B
Batch ID: P421965

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366653	Acesulfame K	22.9	Spike	P	0 - 30
2366653	AMPA	3.43	Spike	P	0 - 30
2366653	Endothall	0.857	Spike	P	0 - 30
2366653	Glufosinate	9.51	Spike	P	0 - 30
2366653	Glyphosate	6.13	Spike	P	0 - 30
2366653	Sucralose	8.80	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P421979

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366785	2,4-D	10.7	Spike	P	0 - 30
2366785	2,4,5-T	11.4	Spike	P	0 - 30
2366785	Acetaminophen	5.59	Spike	P	0 - 30
2366785	Acetamiprid	22.3	Spike	P	0 - 30
2366785	Afidopyropen	21.9	Spike	P	0 - 30
2366785	Bentazon	0.348	Spike	P	0 - 30
2366785	Benzovindiflupyr	2.96	Spike	P	0 - 30
2366785	Carbamazepine	3.45	Spike	P	0 - 30
2366785	Clothianidin	0.286	Spike	P	0 - 30
2366785	Dinotefuran	1.74	Spike	P	0 - 30
2366785	Diuron	0.763	Spike	P	0 - 30
2366785	Fenuron	0.282	Spike	P	0 - 30
2366785	Fluridone	2.58	Spike	P	0 - 30
2366785	Hydrocodone	0.887	Spike	P	0 - 30
2366785	Ibuprofen	18.4	Spike	P	0 - 30
2366785	Imazapyr	8.38	Spike	P	0 - 30
2366785	Imidacloprid	0.470	Spike	P	0 - 30
2366785	Linuron	1.91	Spike	P	0 - 30
2366785	Mandestrobin	7.89	Spike	P	0 - 30
2366785	MCPP	2.14	Spike	P	0 - 30
2366785	Naproxen	6.35	Spike	P	0 - 30
2366785	Primidone	1.53	Spike	P	0 - 30
2366785	Pyraclostrobin	6.00	Spike	P	0 - 30
2366785	Silvex	16.1	Spike	P	0 - 30
2366785	Thiamethoxam	2.57	Spike	P	0 - 30
2366785	Tolfenpyrad	10.4	Spike	P	0 - 30
2366785	Triclopyr	9.60	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P422256

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367355	Total Alkalinity	0.815	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2015

Batch ID: P422532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2366364	TDS	1.02	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P422784

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2370361	Fluoride	0.516	Spike	P	0 - 1.6

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P422360

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2367070	Organic Carbon	0.595	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2367184
Field Sample ID: G1SW0122

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	104	P	30 - 160
EPA 8321B	Acetaminophen-d4	114	P	30 - 160
EPA 8321B	Carbamazepine-d10	84.1	P	30 - 160
EPA 8321B	Diuron-d6	65.4	P	30 - 160
EPA 8321B	Endothall-d6	102	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	77.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	87.4	P	30 - 160
EPA 8321B	Primidone-d5	114	P	30 - 160
EPA 8321B	Sucralose-d6	97.3	P	30 - 160

Lab Sample ID: 2367191
Field Sample ID: G1SW0122

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	55.5	P	20 - 200
EPA 8270E	Simazine-d10	96.8	P	62 - 142
EPA 8270E	Terbufos-d10	89.7	P	58 - 132
EPA 8270E	Terphenyl-d14	82.8	P	52 - 137

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A115725

Included Lab Sample IDs: 2367177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.0	98.5	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A115739

Included Lab Sample IDs: 2367179

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.9	100	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1

Run ID: A115749

Included Lab Sample IDs: 2367177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	99.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A115787

Included Lab Sample IDs: 2367184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	89.6	97.7	P/P	60 - 160
Endothall	104		P	60 - 160
Glufosinate	69.7	78.9	P/P	60 - 160
Glyphosate	89.8	94.1	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A115799

Included Lab Sample IDs: 2367186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	99.9	100	P/P	90 - 110
Arsenic	101	101	P/P	90 - 110
Barium	99.8	99.8	P/P	90 - 110
Beryllium	99.1	98.9	P/P	90 - 110
Boron	101	103	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Chromium	96.5	98.4	P/P	90 - 110
Cobalt	95.8	96.7	P/P	90 - 110
Copper	96.8	97.8	P/P	90 - 110
Lead	93.0	94.1	P/P	90 - 110
Manganese	98.7	101	P/P	90 - 110
Molybdenum	99.5	99.5	P/P	90 - 110
Nickel	97.2	97.7	P/P	90 - 110
Selenium	99.7	101	P/P	90 - 110
Silver	99.3	99.4	P/P	90 - 110
Thallium	96.9	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A115819

Included Lab Sample IDs: 2367186

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A115828

Included Lab Sample IDs: 2367178

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.4	99.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A115857

Included Lab Sample IDs: 2367184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	87.7	89.2	P/P	50 - 150
2,4,5-T	116	110	P/P	50 - 150
Acetaminophen	102	102	P/P	60 - 160
Acetamiprid	94.0	95.4	P/P	50 - 150
Afidopyropen	100	117	P/P	50 - 150
Bentazon	97.3	96.2	P/P	50 - 160
Benzovindiflupyr	92.3	97.1	P/P	50 - 150
Carbamazepine	103	97.6	P/P	60 - 150
Clothianidin	89.4	94.9	P/P	60 - 150
Dinotefuran	121	122	P/P	50 - 150
Diuron	96.5	97.2	P/P	60 - 160
Fenuron	95.1	93.8	P/P	60 - 150
Fluridone	92.9	96.1	P/P	60 - 160
Hydrocodone	103	111	P/P	60 - 150
Ibuprofen	101	99.2	P/P	50 - 160
Imazapyr	92.3	96.6	P/P	50 - 150
Imidacloprid	89.7	90.6	P/P	60 - 150
Linuron	79.7	80.6	P/P	60 - 150
Mandestrobin	95.8	94.5	P/P	50 - 150
MCPP	103	106	P/P	50 - 150
Naproxen	121	113	P/P	50 - 160
Primidone	94.6	93.6	P/P	60 - 150
Pyraclostrobin	102	101	P/P	60 - 150
Silvex	87.0	83.9	P/P	50 - 150
Thiamethoxam	97.8	102	P/P	50 - 150
Tolfenpyrad	87.2	85.8	P/P	60 - 150
Triclopyr	100	109	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A115858

Included Lab Sample IDs: 2367178

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	98.6	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A115881
Included Lab Sample IDs: 2367184

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	107	114	P/P	60 - 160
Sucralose	113	111	P/P	60 - 160

Reference Method: SM 2320 B-2011
Run ID: A115885
Included Lab Sample IDs: 2367177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.4	98.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A115898
Included Lab Sample IDs: 2367178

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	98.3	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A115903
Included Lab Sample IDs: 2367191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	97.0		P	80 - 120
Alachlor	97.9		P	80 - 120
Ametryn	99.7		P	80 - 120
Atrazine Desethyl	94.2		P	80 - 120
Azinphos Methyl	112		P	80 - 120
Azoxystrobin	102		P	80 - 120
Bromacil	99.1		P	80 - 120
Butylate	99.6		P	80 - 120
Caffeine	96.4		P	80 - 120
Chlorfenapyr	115		P	80 - 120
Chlorpyrifos Ethyl	105		P	80 - 120
Chlorpyrifos Methyl	114		P	80 - 120
Coumaphos	118		P	80 - 120
Cyanazine	96.2		P	80 - 120
Cyprodinil	105		P	80 - 120
Demeton	105		P	80 - 120
Diazinon	117		P	80 - 120
Dimethenamid	99.3		P	80 - 120
Dimethomorph	100		P	80 - 120
Disulfoton	104		P	80 - 120
Dithiopyr	103		P	80 - 120
EPTC	95.6		P	80 - 120
Ethoprop	104		P	80 - 120
Etridiazole	96.2		P	80 - 120
Fenamiphos	96.3		P	80 - 120
Fenbuconazole	117		P	80 - 120
Fipronil Desulfinyl	101		P	80 - 120
Fipronil Sulfone	103		P	80 - 120
Fluazifop-P-butyl	113		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A115903
Included Lab Sample IDs: 2367191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fludioxonil	107		P	80 - 120
Flumioxazin	108		P	80 - 120
Flutolanil	101		P	80 - 120
Fluxapyroxad	112		P	80 - 120
Fonofos	106		P	80 - 120
Hexazinone	102		P	80 - 120
Imazalil	111		P	80 - 120
Iprodione	106		P	80 - 120
Malathion	101		P	80 - 120
Metalaxyl	104		P	80 - 120
Metolachlor	97.9		P	80 - 120
Metribuzin	104		P	80 - 120
Mevinphos	103		P	80 - 120
Molinate	105		P	80 - 120
Myclobutanil	106		P	80 - 120
Naled	110		P	80 - 120
Norflurazon	112		P	80 - 120
Oxadiazon	109		P	80 - 120
Oxyfluorfen	103		P	80 - 120
Parathion Ethyl	102		P	80 - 120
Parathion Methyl	105		P	80 - 120
Pendimethalin	114		P	80 - 120
Phorate	100		P	80 - 120
Prodiamine	104		P	80 - 120
Prometon	108		P	80 - 120
Prometryn	97.5		P	80 - 120
Pronamide	111		P	80 - 120
Propanil	104		P	80 - 120
Propargite	109		P	80 - 120
Propiconazole	100		P	80 - 120
Pyridaben	113		P	80 - 120
Pyriproxyfen	109		P	80 - 120
Simazine	91.3		P	80 - 120
Tebuconazole	110		P	80 - 120
Terbufos	106		P	80 - 120
Terbuthylazine	88.6		P	80 - 120
Thiobencarb	105		P	80 - 120
Triadimefon	99.9		P	80 - 120

Reference Method: EPA 8270E
Run ID: A115909
Included Lab Sample IDs: 2367191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	94.3		P	80 - 120
Avobenzone	96.8		P	80 - 120
Dechlorane Plus	94.6		P	80 - 120
Octinoxate	90.7		P	80 - 120
Oxybenzone	98.2		P	80 - 120
PBDE-47	97.8		P	80 - 120
PBDE-99	100		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A115909
Included Lab Sample IDs: 2367191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Tri-o-cresyl Phosphate	97.4		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A115939
Included Lab Sample IDs: 2367177

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.6	102	P/P	90 - 110
Sulfate	98.6	104	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A115944
Included Lab Sample IDs: 2367191

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Atrazine	97.9		P	80 - 120
Carbophenothion	88.2		P	80 - 120
Carfentrazone Ethyl	97.9		P	80 - 120
Difenoconazole	85.3		P	80 - 120
Ethion	104		P	80 - 120
Fipronil	96.4		P	80 - 120
Fipronil Sulfide	100		P	80 - 120
Loratadine	90.6		P	80 - 120
Napropamide	104		P	80 - 120
Phenytoin	102		P	80 - 120
Pyraflufen Ethyl	87.1		P	80 - 120
Stirophos	94.7		P	80 - 120
Sulfentrazone	93.0		P	80 - 120

Reference Method: SM 5310 B-2011
Run ID: A115948
Included Lab Sample IDs: 2367178

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

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A115956
Included Lab Sample IDs: 2367178

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

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A115992
Included Lab Sample IDs: 2367186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Iron	105	104	P/P	90 - 110
Magnesium	104	103	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A115992

Included Lab Sample IDs: 2367186

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Potassium	105	104	P/P	90 - 110
Sodium	104	103	P/P	90 - 110
Strontium	108	108	P/P	90 - 110
Tin	97.9	101	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Vanadium	101	102	P/P	90 - 110
Zinc	98.6	99.1	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A116138

Included Lab Sample IDs: 2367177

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

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	97.9			1.79	
EPA 180.1 Rev. 2.0	Turbidity	99.2			2.13	
EPA 200.7 Rev. 4.4	Calcium	102	103			1.97
	Iron	106	107 106			0.658
	Magnesium	100	102			1.46
	Potassium	104	105 103			1.70
	Sodium	106	107 104			1.29
	Strontium	108	108 106			1.23
	Tin	99.9	102 99.7			2.58
	Titanium	99.8	104 101			2.75
	Vanadium	99.4	104 101			2.52
	Zinc	95.9	98.8 96.3			2.57
EPA 200.8 Rev. 5.4	Aluminum	99.5	103 102			1.03
	Antimony	102	103 104			1.02
	Arsenic	102	101 101			0.310
	Barium	103	103 103			0.161
	Beryllium	96.2	95.2 96.9			1.70
	Boron	104	108 109			0.642
	Cadmium	98.7	100 101			0.705
	Chromium	98.8	99.1 99.5			0.317
	Cobalt	97.4	96.5 96.6			0.0746
	Copper	97.9	95.9 95.7			0.128
	Lead	93.8	93.9 93.3			0.614
	Manganese	100	102 102			0.0296
	Molybdenum	98.3	99.7 99.7			0.0139
	Nickel	98.2	96.5 96.2			0.305
	Selenium	99.4	97.9 99.5			1.63
	Silver	99.4	100 100			0.245
	Thallium	96.8	98.7 99.2			0.534
EPA 300.0 Rev. 2.1	Chloride	103	102 104		0.249	
	Sulfate	104	103 107		0.0266	
EPA 350.1 Rev. 2.0	Ammonia-N	95.0	95.2 97.0			1.87
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	98.5 96.4			1.27
EPA 353.2 Rev. 2.0	NO2NO3-N	104	100 99.8			0.157
EPA 365.1 Rev. 2.0	Total-P	104	105 104			0.663
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	99.7	98.0 97.5			0.512
EPA 8270E	2-Ethylhexyl 2,3,4,5-tetrabromobenzoate (EHTBB)	89.0	68.0 65.6			3.65
	Acetochlor	108	96.3 103			6.83
	Alachlor	97.7	83.6 79.1			5.43
	Ametryn	70.1	118 106			11.1
	Atrazine	101				15.4
	Atrazine Desethyl	72.2	28.4 46.1			17.2
	Avobenzone	111	78.4 73.0			7.06
	Azinphos Methyl	139	140 128			9.56
	Azoxystrobin	121	128 137			6.45
	Bromacil	65.7	80.2 78.6			1.92
	Butylate	63.9	42.4 43.8			3.08
	Caffeine	86.5	94.6 93.1			1.56
	Carbophenothion	91.0	122 123			1.23
	Carfentrazone Ethyl	106	91.4 92.2			0.794
	Chlorfenapyr	71.7	82.6 83.6			1.16
	Chlorpyrifos Ethyl	60.7	77.5 74.3			4.20

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Chlorpyrifos Methyl	88.1	82.3	91.2			10.2
	Coumaphos	33.9	72.0	76.4			5.82
	Cyanazine	71.7	85.8	87.7			2.13
	Cyprodinil	80.0	67.4	81.7			19.1
	Dechlorane Plus	119	61.5	64.9			5.32
	Demeton	81.3	85.0	83.6			1.69
	Diazinon	93.8	111	101			8.76
	Difenoconazole	62.6	98.4	86.0			13.5
	Dimethenamid	67.8	67.3	78.1			14.9
	Dimethomorph	180	138	172			22.2
	Disulfoton	65.9	88.4	84.9			4.09
	Dithiopyr	80.0	73.5	73.4			0.161
	EPTC	49.2	33.9	39.3			14.5
	Ethion	66.7	69.7	97.2			32.9
	Ethoprop	78.8	80.2	82.6			3.04
	Etridiazole	58.1	51.8	48.6			6.46
	Fenamiphos	73.0	86.4	79.8			8.03
	Fenbuconazole	89.5	161	96.3			50.1
	Fipronil	76.1	93.8	96.3			2.37
	Fipronil Desulfinyl	78.8	76.1	72.5			3.69
	Fipronil Sulfide	91.8	92.7	102			5.42
	Fipronil Sulfone	58.1	56.8	96.1			25.5
	Fluazifop-P-butyl	66.1	73.2	97.4			28.4
	Fludioxonil	82.6	78.6	95.9			19.7
	Flumioxazin	58.7	96.8	117			18.9
	Flutolanil	62.4	68.6	77.3			11.9
	Fluxapyroxad	43.9	51.7	73.9			35.3
	Fonofos	83.9	81.2	90.2			10.6
	Hexazinone	83.0	80.1	91.0			12.7
	Imazalil	86.0	79.9	83.9			4.88
	Iprodione	76.4	88.2	105			17.6
	Loratadine	211	88.9	81.8			8.34
	Malathion	96.7	118	109			6.33
	Metalaxyl	80.3	77.8	79.2			1.80
	Metolachlor	83.5	82.8	86.7			4.40
	Metribuzin	105	96.4	96.1			0.342
	Mevinphos	81.6	74.5	76.0			2.07
	Molinate	72.4	64.0	64.4			0.729
	Myclobutanil	58.4	67.0	86.8			25.7
	Naled	74.2	80.8	82.6			2.23
	Napropamide	63.9	84.1	90.3			7.05
	Norflurazon	63.2	73.6	72.8			1.12
	Octinoxate	94.7	56.7	52.0			8.71
	Oxadiazon	61.8	66.2	71.6			7.89
	Oxybenzone	89.2	60.0	53.8			10.9
	Oxyfluorfen	72.1	83.7	99.4			17.1
	Parathion Ethyl	86.6	91.9	80.3			13.5
	Parathion Methyl	116	134	109			20.4
	PBDE-47	71.7	58.5	59.5			1.61
	PBDE-99	61.8	51.7	55.2			6.58
	Pendimethalin	79.5	93.1	78.5			17.0
	Phenytoin	38.3	44.8	63.8			35.0
	Phorate	73.3	66.4	72.0			8.01
	Prodiamine	32.1	41.0	36.7			11.0

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8270E	Prometon	54.9					27.0
	Prometryn	118	61.8	47.7			25.7
	Pronamide	98.8	103	103			0.215
	Propanil	99.3	76.2	90.3			16.9
	Propargite	32.1	39.2	56.1			35.5
	Propiconazole	124	75.4	66.1			13.1
	Pyraflufen Ethyl	56.5	126	125			0.791
	Pyridaben	50.3	79.0	81.5			3.16
	Pyriproxyfen	38.6	73.1	77.1			5.39
	Simazine	91.9					1.71
	Stirophos	22.5	74.5	79.6			6.66
	Sulfentrazone	45.1	56.0	98.8			26.5
	Tebuconazole	12.9	24.3	48.5			66.5
	Terbufos	83.2	97.3	95.7			1.60
	Terbuthylazine	94.2	89.0	96.7			8.35
	Thiobencarb	80.6	88.1	72.7			19.1
	Tri-o-cresyl Phosphate	89.4	53.4	53.2			0.387
	Triadimefon	60.4	67.6	76.8			12.7
EPA 8321B	2,4-D	84.9	100	112			10.7
	2,4,5-T	74.8	75.2	84.2			11.4
	Acesulfame K	118	59.6	47.3			22.9
	Acetaminophen	94.7	116	123			5.59
	Acetamiprid	76.5	77.4	96.8			22.3
	Afidopyropen	32.9	35.9	44.7			21.9
	AMPA	104	85.6	82.7			3.43
	Bentazon	90.7					0.348
	Benzovindiflupyr	87.9	90.7	93.4			2.96
	Carbamazepine	81.4	84.2	88.3			3.45
	Clothianidin	95.9	119	118			0.286
	Dinotefuran	114	156	153			1.74
	Diuron	79.9	67.7	67.1			0.763
	Endothall	110	170	171			0.857
	Fenuron	107	102	101			0.282
	Fluridone	101	94.7	97.6			2.58
	Glufosinate	106	78.6	86.4			9.51
	Glyphosate	93.0	80.8	85.9			6.13
	Hydrocodone	104	133	132			0.887
	Ibuprofen	87.9	101	83.9			18.4
	Imazapyr	90.7	102	119			8.38
	Imidacloprid	94.1	162	163			0.470
	Linuron	80.9	72.2	70.8			1.91
	Mandestrobin	96.6	93.0	101			7.89
	MCPP	92.3	93.4	95.4			2.14
	Naproxen	77.4	88.6	94.4			6.35
	Primidone	90.9	111	109			1.53
	Pyraclostrobin	88.1	102	108			6.00
	Silvex	70.8	77.5	91.0			16.1
	Sucralose	110	113	123			8.80
	Thiamethoxam	85.5	153	157			2.57
	Tolfenpyrad	40.3	49.5	55.0			10.4
	Triclopyr	85.4	84.0	92.5			9.60
SM 2320 B-2011	Total Alkalinity	96.2				0.815	
SM 2540 C-2015	TDS	96.7				1.02	
SM 2540 D-2015	TSS	94.8					

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS	MS		
SM 4500-F- C-2011	Fluoride	100	99.9	101		0.516
SM 5310 B-2011	Organic Carbon	98.4	98.1	98.7		0.595

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2367177
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2367177
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2367186
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2367186
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2367177
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2367177
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2367178
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2367178
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2367178
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2367178
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2367179
EPA 8270E	Analysis of Sunscreen Compounds and Flame Retardants in Water by GC/MS-SIM	2367191
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2367191
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2367184
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2367177
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2367186
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2367177
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2367177
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2367177
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2367178

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	11/03/2022			11/03/2022 15:02	Anna M. Plaviak	2367177
EPA 180.1 Rev. 2.0	11/03/2022			11/03/2022 13:56	Chandler E Cox	2367177
EPA 200.7 Rev. 4.4	11/03/2022	11/04/2022 12:40	George D Taylor	11/17/2022 17:04	Betina Topolski	2367186
EPA 200.8 Rev. 5.4	11/03/2022	11/04/2022 12:40	George D Taylor	11/07/2022 19:58	Megan Whitefoot	2367186
	11/03/2022	11/04/2022 12:40	George D Taylor	11/08/2022 14:06	Megan Whitefoot	2367186
EPA 300.0 Rev. 2.1	11/03/2022			11/16/2022 07:19	Anna M. Plaviak	2367177
EPA 350.1 Rev. 2.0	11/03/2022			11/14/2022 13:12	Ping Hua	2367178
EPA 351.2 Rev. 2.0	11/03/2022	11/07/2022 11:40	Simonne.V. Calhoun	11/09/2022 11:36	Alexandra J Mattheus	2367178
EPA 353.2 Rev. 2.0	11/03/2022			11/16/2022 10:21	Beverly Y. Sanders	2367178
EPA 365.1 Rev. 2.0	11/03/2022	11/09/2022 13:55	Simonne.V. Calhoun	11/10/2022 10:58	James L Waggeberby	2367178
EPA 365.1 Rev. 2.0 dissolved	11/03/2022			11/04/2022 09:03	Elise M. Gillis	2367179
EPA 8270E	11/03/2022	11/04/2022 08:00	Fe-Val Siddell	11/08/2022 17:56	Arthur Maknenko	2367191
	11/03/2022	11/04/2022 08:00	Fe-Val Siddell	11/11/2022 17:47	Michael Poppell	2367191
	11/03/2022	11/04/2022 08:00	Fe-Val Siddell	11/15/2022 17:33	Michael Poppell	2367191
	11/03/2022	11/04/2022 08:00	Fe-Val Siddell	11/15/2022 18:57	Michael Poppell	2367191
EPA 8321B	11/03/2022	11/06/2022 12:00	Umesh Chiluwal	11/06/2022 18:19	Umesh Chiluwal	2367184
	11/03/2022	11/06/2022 12:00	Umesh Chiluwal	11/07/2022 18:39	Umesh Chiluwal	2367184
	11/03/2022	11/08/2022 09:00	June Rhew	11/10/2022 03:28	Juyoung Kim	2367184
SM 2320 B-2011	11/03/2022			11/10/2022 09:33	Adam P Silver	2367177
SM 2340 B-2011	11/03/2022			11/17/2022 17:04	Betina Topolski	2367186
SM 2540 C-2015	11/03/2022			11/07/2022 15:45	Yijie Li	2367177
SM 2540 D-2015	11/03/2022			11/07/2022 15:45	Yijie Li	2367177
SM 4500-F- C-2011	11/03/2022			11/23/2022 08:12	Dale L. Simmons	2367177
SM 5310 B-2011	11/03/2022			11/15/2022 19:56	Khloe J Berg	2367178