

Chemical Analysis Report

SE-DIST-2022-06-07-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

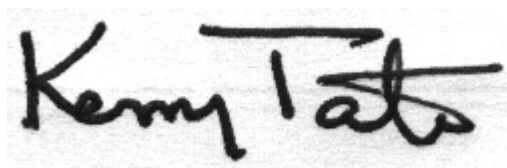
Event Description: **Stuart Deployment Pickup/Tidal Lox**
Request ID: **RQ-2022-06-06-30**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Jordan Skaggs

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 29-JUN-2022 10:18

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first 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: Tidal Creek to Lox

Collection Date/Time: 06/06/2022 10:00

Field ID: G2SE0027

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332509	EPA 180.1 Rev. 2.0	Turbidity	5.3		NTU	P414848	
	SM 2320 B-2011	Total Alkalinity	122		mg CaCO3/L	P415497	
	SM 2540 D-2011	TSS	7	I	mg/L	P415251	
	SM 4500-F- C-2011	Fluoride	0.53		mg F/L	P415762	
2332510	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P415076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P414826	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015		mg N/L	P415634	
	EPA 365.1 Rev. 2.0	Total-P	0.078		mg P/L	P414904	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P415296	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: Manatee Pocket North

Collection Date/Time: 06/06/2022 11:11

Field ID: G2SE0063

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332507	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P414848	
	SM 2320 B-2011	Total Alkalinity	123		mg CaCO3/L	P415497	
	SM 2540 D-2011	TSS	8	IA	mg/L	P415251	
	SM 4500-F- C-2011	Fluoride	0.96		mg F/L	P415762	
2332508	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P415076	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.44		mg N/L	P414826	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P415634	
	EPA 365.1 Rev. 2.0	Total-P	0.043		mg P/L	P414904	
	SM 5310 B-2011	Organic Carbon	5.7		mg C/L	P415296	
2332532	EPA 200.7 Rev. 4.4	Calcium	323		mg/L	P415007	
		Iron	120	U	ug/L	P415007	
		Magnesium	1.01E+03		mg/L	P415007	
		Strontium	6.20E+03		ug/L	P415007	
		Tin	300	U	ug/L	P415007	
		Titanium	4.6	I	ug/L	P415007	
		Vanadium	8.0	U	ug/L	P415007	
		Zinc	20	U	ug/L	P415007	
		Aluminum	51	I	ug/L	P415007	
		Antimony	0.20	U	ug/L	P415007	
	EPA 200.8 Rev. 5.4	Arsenic	2.93		ug/L	P415007	
		Beryllium	0.040	U	ug/L	P415007	
		Cadmium	0.080	U	ug/L	P415007	
		Chromium	1.6	U	ug/L	P415007	
		Cobalt	0.11	I	ug/L	P415007	
		Copper	6.3		ug/L	P415463	
		Lead	2.0	U	ug/L	P415007	
		Manganese	6.0		ug/L	P415007	
		Molybdenum	9.8		ug/L	P415007	
		Nickel	2.0	U	ug/L	P415007	
		Selenium	0.80	U	ug/L	P415007	
		Silver	0.040	U	ug/L	P415007	
		Thallium	1.0	U	ug/L	P415007	
2332533	EPA 8270E	Oxybenzone**	9.7	U	ng/L	P415071	
		Acetochlor	0.24	U	ng/L	P415071	
		Octinoxate**	19	U	ng/L	P415071	
		Alachlor	0.24	U	ng/L	P415071	
		Avobenzone**	97	U	ng/L	P415071	
		Ametryn	1.3	I	ng/L	P415071	
		Atrazine	13		ng/L	P415071	
		Atrazine Desethyl	2.5	I	ng/L	P415071	
		Azinphos Methyl	1.9	U	ng/L	P415071	
		Azoxystrobin**	1.1	I	ng/L	P415071	
		Bromacil	0.48	U	ng/L	P415071	
		Butylate	0.39	U	ng/L	P415071	

Field ID: G2SE0063

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332533	EPA 8270E	Caffeine**	16	I	ng/L	P415071	
		Carbophenothion	0.19	U	ng/L	P415071	
		Carfentrazone Ethyl**	0.097	U	ng/L	P415071	
		Chlorfenapyr**	0.17	U	ng/L	P415071	
		Chlorpyrifos Ethyl	0.24	U	ng/L	P415071	
		Chlorpyrifos Methyl	0.048	U	ng/L	P415071	
		Coumaphos**	0.48	U	ng/L	P415071	
		Cyanazine	3.1	U	ng/L	P415071	
		Cyprodinil**	0.097	U	ng/L	P415071	
		Demeton	1.4	U	ng/L	P415071	
		Diazinon	0.12	U	ng/L	P415071	
		Difenoconazole**	0.58	U	ng/L	P415071	
		Dimethenamid**	0.097	U	ng/L	P415071	
		Dimethomorph**	0.17	U	ng/L	P415071	
		Disulfoton	0.48	U	ng/L	P415071	
		Dithiopyr**	0.23	I	ng/L	P415071	
		EPTC	1.2	U	ng/L	P415071	
		Ethion	0.14	U	ng/L	P415071	
		Ethoprop	0.097	U	ng/L	P415071	
		Etridiazole**	0.14	U	ng/L	P415071	
		Fenamiphos	0.48	U	ng/L	P415071	
		Fenbuconazole**	0.12	U	ng/L	P415071	
		Fipronil	0.30	I	ng/L	P415071	
		Fipronil Desulfinyl**	0.18	I	ng/L	P415071	
		Fipronil Sulfide	0.18	I	ng/L	P415071	
		Fipronil Sulfone	0.55	I	ng/L	P415071	
		Fluazifop-P-butyl**	0.097	U	ng/L	P415071	
		Fludioxonil**	0.12	U	ng/L	P415071	
		Flumioxazin**	1.7	U	ng/L	P415071	
		Flutolanil**	0.19	I	ng/L	P415071	
		Fluxapyroxad**	0.43		ng/L	P415071	
		Fonofos	0.19	U	ng/L	P415071	
		Hexazinone	1.8	I	ng/L	P415071	
		Imazalil**	0.72	U	ng/L	P415071	
		Iprodione**	0.58	U	ng/L	P415071	
		Loratadine**	0.097	U	ng/L	P415071	
		Malathion	0.34	U	ng/L	P415071	
		Metalaxyl	0.72	U	ng/L	P415071	
		Metolachlor	0.34	U	ng/L	P415071	
		Metribuzin	2.4	U	ng/L	P415071	
		Mevinphos	1.0	U	ng/L	P415071	
		Molinate	0.29	U	ng/L	P415071	
		Myclobutanil**	0.24	U	ng/L	P415071	
		Naled**	1.4	UJ	ng/L	P415071	LCS
		Napropamide**	0.39	U	ng/L	P415071	

Field ID: G2SE0063

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2332533	EPA 8270E	Norflurazon	1.2	I	ng/L	P415071	
		Oxadiazon	3.5		ng/L	P415071	
		Oxyfluorfen**	0.14	U	ng/L	P415071	
		Parathion Ethyl	0.24	U	ng/L	P415071	
		Parathion Methyl	0.53	U	ng/L	P415071	
		Pendimethalin	0.97	U	ng/L	P415071	
		Phenytoin**	3.4	U	ng/L	P415071	
		Phorate	0.51	U	ng/L	P415071	
		Prodiamine**	0.17	U	ng/L	P415071	
		Prometon	0.87	U	ng/L	P415071	
		Prometryn	0.19	U	ng/L	P415071	
		Pronamide**	0.14	U	ng/L	P415071	
		Propanil**	0.12	U	ng/L	P415071	
		Propargite**	1.4	U	ng/L	P415071	
		Propiconazole**	2.5		ng/L	P415071	
		Pyraflufen Ethyl**	0.24	U	ng/L	P415071	
		Pyridaben**	0.43	U	ng/L	P415071	
		Pyriproxyfen**	0.12	U	ng/L	P415071	
		Simazine	0.48	U	ng/L	P415071	
		Stirophos**	0.12	UJ	ng/L	P415071	LCS, MS, RPD
		Sulfentrazone**	36		ng/L	P415071	
		Tebuconazole**	1.5	I	ng/L	P415071	
		Terbufos	0.097	U	ng/L	P415071	
		Terbuthylazine	0.41	U	ng/L	P415071	
		Thiobencarb**	0.58	U	ng/L	P415071	
		Triadimefon**	0.24	U	ng/L	P415071	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

EPA 200.8 Rev. 5.4: The copper result was confirmed on 06/14/2022.

EPA 8270E: MS accuracy for atrazine and metolachlor not assessed due to high content of these parameters in the sample spiked. Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414848

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415007

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	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: P415007

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

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415463

Component	Result	Code	Units
Copper	0.40	U	ug/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414826

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415634

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414904

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

Reference Method: EPA 8270E
Batch ID: P415071

Component	Result	Code	Units
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
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
Demeton	1.5	U	ng/L
Demeton	1.5	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415071

Component	Result	Code	Units
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	0.18	U	ng/L
Dithiopyr	0.18	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
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	1.8	U	ng/L
Flumioxazin	1.8	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	0.10	U	ng/L
Loratadine	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415071

Component	Result	Code	Units
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	2.5	U	ng/L
Metribuzin	2.5	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
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
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
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
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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E

Batch ID: P415071

Component	Result	Code	Units
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
Triadimefon	0.25	U	ng/L
Triadimefon	0.25	U	ng/L

Reference Method: SM 2320 B-2011

Batch ID: P415497

Component	Result	Code	Units
Total Alkalinity	1.0	U	mg CaCO ₃ /L

Reference Method: SM 2540 D-2011

Batch ID: P415251

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P415762

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P415296

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P414848

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P415007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	105		P	85 - 115
Magnesium	101		P	85 - 115
Strontium	105		P	85 - 115
Tin	101		P	85 - 115
Titanium	102		P	85 - 115
Vanadium	96.4		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415007

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	102		P	85 - 115
Arsenic	99.7		P	85 - 115
Beryllium	97.0		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.0		P	85 - 115
Cobalt	99.0		P	85 - 115
Lead	103		P	85 - 115
Manganese	99.3		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	98.4		P	85 - 115
Selenium	98.0		P	85 - 115
Silver	99.7		P	85 - 115
Thallium	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P415463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Copper	95.0		P	85 - 115

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P415076

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414826

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415634

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	101		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P414904

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

Reference Method: EPA 8270E

Batch ID: P415071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	111		P	70 - 121
Alachlor	100		P	68 - 119
Ametryn	118		P	64 - 139
Atrazine	98.4		P	76 - 120
Atrazine Desethyl	69.9		P	44 - 126
Avobenzone	107		P	76 - 212
Azinphos Methyl	170		P	43 - 192
Azoxystrobin	96.9		P	36 - 224
Bromacil	95.7		P	52 - 121
Butylate	41.7		P	28 - 91.0
Caffeine	74.0		P	50 - 134
Carbophenothion	95.9		P	56 - 129
Carfentrazone Ethyl	129		P	60 - 141
Chlorfenapyr	81.8		P	56 - 115
Chlorpyrifos Ethyl	82.6		P	60 - 118
Chlorpyrifos Methyl	82.3		P	68 - 119
Coumaphos	114		P	18 - 250
Cyanazine	159		P	61 - 250
Cyprodinil	111		P	55 - 145
Demeton	64.4		P	30 - 159
Diazinon	107		P	70 - 123
Difenoconazole	197		P	49 - 204
Dimethenamid	93.4		P	64 - 115
Dimethomorph	77.1		P	12 - 219
Disulfoton	75.9		P	44 - 125
Dithiopyr	104		P	64 - 115
EPTC	44.1		P	28 - 86.0
Ethion	73.7		P	33 - 125
Ethoprop	71.1		P	64 - 116
Etridiazole	67.5		P	34 - 91.0
Fenamiphos	87.9		P	12 - 127
Fenbuconazole	146		P	59 - 151
Fipronil	108		P	67 - 129
Fipronil Desulfinyl	105		P	65 - 127
Fipronil Sulfide	78.5		P	61 - 116
Fipronil Sulfone	86.1		P	55 - 117
Fluazifop-P-butyl	103		P	62 - 127
Fludioxonil	112		P	62 - 128
Flumioxazin	222		P	33 - 250
Flutolanil	97.3		P	56 - 127

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P415071

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluxapyroxad	84.3		P	45 - 128
Fonofos	72.2		P	62 - 111
Hexazinone	98.0		P	46 - 139
Imazalil	94.2		P	38 - 142
Iprodione	107		P	47 - 135
Loratadine	69.4		P	10 - 244
Malathion	101		P	61 - 139
Metaxyl	96.0		P	10 - 119
Metolachlor	106		P	65 - 118
Metribuzin	91.5		P	51 - 250
Mevinphos	58.6		P	53 - 121
Molinate	55.9		P	42 - 96.0
Myclobutanil	110		P	55 - 128
Naled	105		F	10 - 98.0
Napropamide	86.0		P	49 - 121
Norflurazon	117		P	61 - 126
Octinoxate	102		P	30 - 159
Oxadiazon	90.7		P	59 - 116
Oxybenzone	99.0		P	61 - 139
Oxyfluorfen	129		P	64 - 137
Parathion Ethyl	89.9		P	70 - 112
Parathion Methyl	106		P	76 - 133
Pendimethalin	81.7		P	52 - 117
Phenytoin	112		P	10 - 199
Phorate	50.8		P	48 - 121
Prodiamine	98.4		P	26 - 142
Prometon	107		P	43 - 123
Prometryn	102		P	66 - 127
Pronamide	112		P	75 - 121
Propanil	88.5		P	45 - 150
Propargite	145		P	42 - 208
Propiconazole	110		P	60 - 125
Pyraflufen Ethyl	117		P	70 - 138
Pyridaben	99.3		P	35 - 245
Pyriproxyfen	142		P	30 - 149
Simazine	98.6		P	72 - 125
Stirophos	16.8		F	29 - 164
Sulfentrazone	139		P	21 - 139
Tebuconazole	58.1		P	10 - 115
Terbufos	80.0		P	60 - 123
Terbuthylazine	89.8		P	72 - 115
Thiobencarb	96.6		P	31 - 139
Triadimefon	87.4		P	65 - 116

Reference Method: SM 2320 B-2011
Batch ID: P415497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P415762

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	101		P	96 - 104

Reference Method: SM 5310 B-2011
Batch ID: P415296

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.5		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333582	Iron	108	106	P/P	70 - 130
2333582	Strontium	110	108	P/P	70 - 130
2333582	Tin	91.4	97.6	P/P	70 - 130
2333582	Titanium	108	111	P/P	70 - 130
2333582	Vanadium	97.6	99.6	P/P	70 - 130
2333582	Zinc	100	101	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415007

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2333582	Aluminum	103	105	P/P	70 - 130
2333582	Antimony	101	104	P/P	70 - 130
2333582	Arsenic	111	114	P/P	70 - 130
2333582	Beryllium	109	115	P/P	70 - 130
2333582	Cadmium	96.1	97.1	P/P	70 - 130
2333582	Chromium	96.3	101	P/P	70 - 130
2333582	Cobalt	110	114	P/P	70 - 130
2333582	Lead	105	109	P/P	70 - 130
2333582	Manganese	95.8	105	P/P	70 - 130
2333582	Molybdenum	110	116	P/P	70 - 130
2333582	Nickel	110	114	P/P	70 - 130
2333582	Selenium	102	106	P/P	70 - 130
2333582	Silver	92.6	95.0	P/P	70 - 130
2333582	Thallium	107	111	P/P	70 - 130

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415463

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2334304	Copper	108	109	P/P	70 - 130

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415076

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2329993	Ammonia-N	97.8	98.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Batch ID: P414826

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332483	Kjeldahl Nitrogen	103	109	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P415634

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332508	NO2NO3-N	101	102	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414904

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332579	Total-P	99.9	102	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P415071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332309	Acetochlor	88.5	106	P/P	65 - 124
2332309	Alachlor	83.7	96.4	P/P	61 - 121
2332309	Ametryn	108	108	P/P	52 - 216
2332309	Atrazine Desethyl	50.1	61.9	P/P	15 - 160
2332309	Avobenzone	82.1	69.3	P/P	59 - 206
2332309	Azinphos Methyl	143	170	P/P	40 - 292
2332309	Azoxystrobin	70.1	109	P/P	12 - 242
2332309	Bromacil	79.3	96.5	P/P	54 - 167
2332309	Butylate	42.4	54.1	P/P	14 - 94.0
2332309	Caffeine	88.8	83.6	P/P	10 - 226
2332309	Carbophenothion	88.4	99.7	P/P	49 - 122
2332309	Carfentrazone Ethyl	108	125	P/P	53 - 138
2332309	Chlorfenapyr	81.0	85.7	P/P	50 - 150
2332309	Chlorpyrifos Ethyl	75.6	82.4	P/P	52 - 122
2332309	Chlorpyrifos Methyl	80.2	86.5	P/P	66 - 117
2332309	Coumaphos	110	113	P/P	50 - 220
2332309	Cyanazine	94.0	113	P/P	43 - 245
2332309	Cyprodinil	93.4	103	P/P	50 - 150
2332309	Demeton	77.4	84.7	P/P	43 - 188
2332309	Diazinon	88.5	99.9	P/P	69 - 131
2332309	Difenoconazole	174	196	P/P	34 - 231
2332309	Dimethenamid	82.1	91.6	P/P	55 - 118
2332309	Dimethomorph	78.6	82.9	P/P	50 - 150
2332309	Disulfoton	80.4	84.6	P/P	38 - 141
2332309	Dithiopyr	87.6	94.9	P/P	42 - 116
2332309	EPTC	36.2	52.3	P/P	18 - 85.0
2332309	Ethion	75.8	76.3	P/P	10 - 131
2332309	Ethoprop	71.9	81.3	P/P	65 - 129
2332309	Etridiazole	52.2	63.5	P/P	50 - 150
2332309	Fenamiphos	95.0	99.3	P/P	31 - 137
2332309	Fenbuconazole	126	148	P/P	57 - 160
2332309	Fipronil	91.9	106	P/P	62 - 132
2332309	Fipronil Desulfinyl	85.5	99.0	P/P	57 - 131
2332309	Fipronil Sulfide	78.1	83.6	P/P	15 - 138
2332309	Fipronil Sulfone	85.6	92.3	P/P	21 - 134
2332309	Fluazifop-P-butyl	84.7	98.0	P/P	54 - 133
2332309	Fludioxonil	88.9	111	P/P	58 - 127
2332309	Flumioxazin	202	228	P/P	33 - 300
2332309	Flutolanil	82.6	95.3	P/P	42 - 130
2332309	Fluxapyroxad	62.7	84.0	P/P	23 - 141
2332309	Fonofos	73.6	75.7	P/P	58 - 119
2332309	Hexazinone	89.4	98.2	P/P	68 - 172
2332309	Imazalil	79.1	107	P/P	48 - 283
2332309	Iprodione	103	113	P/P	38 - 140
2332309	Loratadine	73.1	75.0	P/P	50 - 150
2332309	Malathion	97.3	107	P/P	40 - 137

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P415071

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332309	Metalaxyl	79.8	88.0	P/P	21 - 129
2332309	Metribuzin	105	120	P/P	38 - 187
2332309	Mevinphos	65.6	69.0	P/P	54 - 134
2332309	Molinate	51.1	65.8	P/P	41 - 97.0
2332309	Myclobutanil	95.1	110	P/P	56 - 125
2332309	Naled	92.5	108	P/P	10 - 108
2332309	Napropamide	76.9	82.4	P/P	50 - 150
2332309	Norflurazon	102	115	P/P	32 - 122
2332309	Octinoxate	66.5	51.7	P/P	25 - 150
2332309	Oxadiazon	78.0	85.4	P/P	40 - 119
2332309	Oxybenzone	70.2	59.6	P/P	59 - 147
2332309	Oxyfluorfen	114	122	P/P	61 - 153
2332309	Parathion Ethyl	81.7	93.3	P/P	59 - 130
2332309	Parathion Methyl	103	113	P/P	65 - 155
2332309	Pendimethalin	90.4	101	P/P	49 - 138
2332309	Phenytoin	95.3	107	P/P	50 - 200
2332309	Phorate	72.7	83.1	P/P	54 - 161
2332309	Prodiamine	91.9	106	P/P	33 - 161
2332309	Prometon	71.8	82.6	P/P	48 - 140
2332309	Prometryn	93.3	96.5	P/P	55 - 134
2332309	Pronamide	99.3	111	P/P	66 - 137
2332309	Propanil	76.2	85.6	P/P	50 - 150
2332309	Propargite	117	142	P/P	50 - 200
2332309	Propiconazole	86.7	107	P/P	36 - 150
2332309	Pyraflufen Ethyl	98.5	113	P/P	50 - 150
2332309	Pyridaben	93.4	97.9	P/P	50 - 200
2332309	Pyriproxyfen	120	145	P/P	10 - 165
2332309	Simazine	93.6	106	P/P	57 - 145
2332309	Stirophos	81.4	30.2	P/F	50 - 150
2332309	Sulfentrazone	94.4	109	P/P	34 - 140
2332309	Tebuconazole	56.9	63.2	P/P	10 - 127
2332309	Terbufos	80.9	92.1	P/P	59 - 138
2332309	Terbutylazine	82.4	91.9	P/P	68 - 119
2332309	Thiobencarb	79.7	92.3	P/P	50 - 150
2332309	Triadimefon	70.7	69.6	P/P	50 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P415762

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2331472	Fluoride	101	100	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P415296

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2332907	Organic Carbon	88.6	89.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0

Batch ID: P414848

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332331	Turbidity	1.74	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P415007

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333582	Calcium	0.595	Spike	P	0 - 20
2333582	Iron	1.40	Spike	P	0 - 20
2333582	Magnesium	0.133	Spike	P	0 - 20
2333582	Strontium	1.38	Spike	P	0 - 20
2333582	Tin	6.56	Spike	P	0 - 20
2333582	Titanium	2.50	Spike	P	0 - 20
2333582	Vanadium	1.98	Spike	P	0 - 20
2333582	Zinc	1.25	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415007

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333582	Aluminum	1.74	Spike	P	0 - 20
2333582	Antimony	3.18	Spike	P	0 - 20
2333582	Arsenic	3.33	Spike	P	0 - 20
2333582	Beryllium	5.23	Spike	P	0 - 20
2333582	Cadmium	1.06	Spike	P	0 - 20
2333582	Chromium	4.36	Spike	P	0 - 20
2333582	Cobalt	4.09	Spike	P	0 - 20
2333582	Lead	3.24	Spike	P	0 - 20
2333582	Manganese	4.82	Spike	P	0 - 20
2333582	Molybdenum	4.47	Spike	P	0 - 20
2333582	Nickel	3.21	Spike	P	0 - 20
2333582	Selenium	4.00	Spike	P	0 - 20
2333582	Silver	2.59	Spike	P	0 - 20
2333582	Thallium	4.11	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P415463

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2334304	Copper	0.428	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P415076

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2329993	Ammonia-N	0.152	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P414826

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332483	Kjeldahl Nitrogen	5.01	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P415634

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332508	NO2NO3-N	0.985	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P414904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332579	Total-P	2.40	Spike	P	0 - 20

Reference Method: EPA 8270E
Batch ID: P415071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332309	Acetochlor	15.3	Spike	P	0 - 27
2332309	Alachlor	14.1	Spike	P	0 - 27
2332309	Ametryn	0.402	Spike	P	0 - 34
2332309	Atrazine	11.6	Spike	P	0 - 41
2332309	Atrazine Desethyl	16.2	Spike	P	0 - 38
2332309	Avobenzone	16.8	Spike	P	0 - 30
2332309	Azinphos Methyl	17.1	Spike	P	0 - 62
2332309	Azoxystrobin	22.0	Spike	P	0 - 32
2332309	Bromacil	19.6	Spike	P	0 - 30
2332309	Butylate	24.2	Spike	P	0 - 59
2332309	Caffeine	5.89	Spike	P	0 - 60
2332309	Carbophenothion	12.0	Spike	P	0 - 25
2332309	Carfentrazone Ethyl	14.6	Spike	P	0 - 26
2332309	Chlorfenapyr	5.60	Spike	P	0 - 30
2332309	Chlorpyrifos Ethyl	8.59	Spike	P	0 - 27
2332309	Chlorpyrifos Methyl	7.54	Spike	P	0 - 26
2332309	Coumaphos	2.88	Spike	P	0 - 30
2332309	Cyanazine	18.5	Spike	P	0 - 58
2332309	Cyprodinil	8.78	Spike	P	0 - 30
2332309	Demeton	9.01	Spike	P	0 - 25
2332309	Diazinon	12.1	Spike	P	0 - 29
2332309	Difenoconazole	10.4	Spike	P	0 - 25
2332309	Dimethenamid	11.0	Spike	P	0 - 30
2332309	Dimethomorph	5.35	Spike	P	0 - 30
2332309	Disulfoton	5.16	Spike	P	0 - 33
2332309	Dithiopyr	8.00	Spike	P	0 - 22
2332309	EPTC	36.4	Spike	P	0 - 38
2332309	Ethion	0.729	Spike	P	0 - 79
2332309	Ethoprop	12.2	Spike	P	0 - 23
2332309	Etridiazole	19.6	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P415071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332309	Fenamiphos	4.45	Spike	P	0 - 58
2332309	Fenbuconazole	16.4	Spike	P	0 - 37
2332309	Fipronil	14.5	Spike	P	0 - 33
2332309	Fipronil Desulfinyl	14.6	Spike	P	0 - 26
2332309	Fipronil Sulfide	6.83	Spike	P	0 - 37
2332309	Fipronil Sulfone	7.56	Spike	P	0 - 50
2332309	Fluazifop-P-butyl	14.5	Spike	P	0 - 24
2332309	Fludioxonil	16.1	Spike	P	0 - 26
2332309	Flumioxazin	12.1	Spike	P	0 - 37
2332309	Flutolanil	13.1	Spike	P	0 - 26
2332309	Fluxapyroxad	13.9	Spike	P	0 - 34
2332309	Fonofos	2.79	Spike	P	0 - 27
2332309	Hexazinone	8.84	Spike	P	0 - 36
2332309	Imazalil	29.9	Spike	P	0 - 65
2332309	Iprodione	9.09	Spike	P	0 - 33
2332309	Loratadine	2.57	Spike	P	0 - 30
2332309	Malathion	9.87	Spike	P	0 - 44
2332309	Metalaxyl	8.98	Spike	P	0 - 38
2332309	Metolachlor	14.5	Spike	P	0 - 36
2332309	Metribuzin	13.9	Spike	P	0 - 63
2332309	Mevinphos	5.01	Spike	P	0 - 26
2332309	Molinate	25.1	Spike	P	0 - 40
2332309	Myclobutanil	14.7	Spike	P	0 - 21
2332309	Naled	15.4	Spike	P	0 - 26
2332309	Napropamide	6.86	Spike	P	0 - 30
2332309	Norflurazon	11.7	Spike	P	0 - 24
2332309	Octinoxate	18.1	Spike	P	0 - 30
2332309	Oxadiazon	9.06	Spike	P	0 - 27
2332309	Oxybenzone	16.4	Spike	P	0 - 30
2332309	Oxyfluorfen	6.89	Spike	P	0 - 24
2332309	Parathion Ethyl	13.2	Spike	P	0 - 28
2332309	Parathion Methyl	9.78	Spike	P	0 - 27
2332309	Pendimethalin	10.9	Spike	P	0 - 31
2332309	Phenytol	11.7	Spike	P	0 - 30
2332309	Phorate	13.3	Spike	P	0 - 27
2332309	Prodiamine	13.9	Spike	P	0 - 52
2332309	Prometon	13.9	Spike	P	0 - 31
2332309	Prometryn	3.32	Spike	P	0 - 28
2332309	Pronamide	11.2	Spike	P	0 - 26
2332309	Propanil	11.6	Spike	P	0 - 30
2332309	Propargite	19.1	Spike	P	0 - 30
2332309	Propiconazole	15.9	Spike	P	0 - 31
2332309	Pyraflufen Ethyl	13.8	Spike	P	0 - 30
2332309	Pyridaben	4.71	Spike	P	0 - 30
2332309	Pyriproxyfen	18.5	Spike	P	0 - 50
2332309	Simazine	12.0	Spike	P	0 - 29
2332309	Stirophos	91.7	Spike	F	0 - 30
2332309	Sulfentrazone	14.7	Spike	P	0 - 33
2332309	Tebuconazole	9.03	Spike	P	0 - 44
2332309	Terbufos	12.9	Spike	P	0 - 29
2332309	Terbutylazine	10.9	Spike	P	0 - 27

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P415071

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332309	Thiobencarb	14.6	Spike	P	0 - 30
2332309	Triadimefon	1.48	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P415497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2333620	Total Alkalinity	0.939	Sample	P	0 - 3.8

Reference Method: SM 4500-F- C-2011
Batch ID: P415762

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2331472	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P415296

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2332907	Organic Carbon	0.949	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2332533
Field Sample ID: G2SE0063

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Caffeine-d9	95.7	P	20 - 200
EPA 8270E	Simazine-d10	108	P	71 - 140
EPA 8270E	Terbufos-d10	88.1	P	62 - 131
EPA 8270E	Terphenyl-d14	89.9	P	52 - 141

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A112655

Included Lab Sample IDs: 2332507, 2332509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112753

Included Lab Sample IDs: 2332532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	99.9	P/P	95 - 105
Iron	103	101	P/P	95 - 105
Magnesium	102	100	P/P	95 - 105
Strontium	101	103	P/P	95 - 105
Tin	98.2	101	P/P	95 - 105
Titanium	98.9	99.3	P/P	95 - 105
Vanadium	99.1	101	P/P	95 - 105
Zinc	98.8	101	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112754

Included Lab Sample IDs: 2332508, 2332510

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.8	97.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112804

Included Lab Sample IDs: 2332508, 2332510

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112826

Included Lab Sample IDs: 2332532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	104	P/P	90 - 110
Antimony	99.2	98.8	P/P	90 - 110
Arsenic	101	102	P/P	90 - 110
Beryllium	97.0	96.6	P/P	90 - 110
Cadmium	98.5	98.8	P/P	90 - 110
Chromium	96.4	96.2	P/P	90 - 110
Cobalt	102	104	P/P	90 - 110
Lead	100	99.4	P/P	90 - 110
Manganese	97.4	97.3	P/P	90 - 110
Molybdenum	100	100	P/P	90 - 110
Nickel	103	105	P/P	90 - 110
Selenium	97.3	98.0	P/P	90 - 110
Silver	99.4	100	P/P	90 - 110
Thallium	98.8	98.3	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112855

Included Lab Sample IDs: 2332508, 2332510

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.7	105	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A112869

Included Lab Sample IDs: 2332508, 2332510

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.0	90.8	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A112909

Included Lab Sample IDs: 2332533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbophenothion	107		P	80 - 120
Chlorfenapyr	108		P	80 - 120
Coumaphos	116		P	80 - 120
Fluxapyroxad	98.6		P	80 - 120
Malathion	101		P	80 - 120
Naled	104		P	80 - 120
Pyridaben	106		P	80 - 120
Stirophos	108		P	80 - 120
Tebuconazole	98.2		P	80 - 120

Reference Method: EPA 8270E

Run ID: A112918

Included Lab Sample IDs: 2332533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Avobenzone	103		P	80 - 120
Octinoxate	94.5		P	80 - 120
Oxybenzone	98.7		P	80 - 120

Reference Method: SM 2320 B-2011

Run ID: A112951

Included Lab Sample IDs: 2332507, 2332509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	103	P/P	90 - 110
Total Alkalinity	104	101	P/P	90 - 110

Reference Method: EPA 8270E

Run ID: A112959

Included Lab Sample IDs: 2332533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	103		P	80 - 120
Alachlor	96.0		P	80 - 120
Ametryn	91.9		P	80 - 120
Atrazine	99.4		P	80 - 120
Atrazine Desethyl	92.1		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112959
Included Lab Sample IDs: 2332533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Azinphos Methyl	97.8		P	80 - 120
Azoxystrobin	95.5		P	80 - 120
Bromacil	98.6		P	80 - 120
Butylate	111		P	80 - 120
Caffeine	98.6		P	80 - 120
Carfentrazone Ethyl	102		P	80 - 120
Chlorpyrifos Ethyl	109		P	80 - 120
Chlorpyrifos Methyl	106		P	80 - 120
Cyanazine	89.9		P	80 - 120
Cyprodinil	89.2		P	80 - 120
Demeton	109		P	80 - 120
Diazinon	93.9		P	80 - 120
Difenoconazole	94.9		P	80 - 120
Dimethenamid	105		P	80 - 120
Dimethomorph	99.0		P	80 - 120
Disulfoton	106		P	80 - 120
Dithiopyr	99.8		P	80 - 120
EPTC	103		P	80 - 120
Ethion	105		P	80 - 120
Ethoprop	97.5		P	80 - 120
Etridiazole	93.7		P	80 - 120
Fenamiphos	115		P	80 - 120
Fenbuconazole	97.3		P	80 - 120
Fipronil	103		P	80 - 120
Fipronil Desulfinyl	100		P	80 - 120
Fipronil Sulfide	119		P	80 - 120
Fipronil Sulfone	119		P	80 - 120
Fluazifop-P-butyl	100		P	80 - 120
Fludioxonil	98.2		P	80 - 120
Flumioxazin	88.5		P	80 - 120
Flutolanil	96.3		P	80 - 120
Fonofos	103		P	80 - 120
Hexazinone	102		P	80 - 120
Imazalil	98.5		P	80 - 120
Iprodione	96.7		P	80 - 120
Loratadine	98.7		P	80 - 120
Metalaxyl	103		P	80 - 120
Metolachlor	103		P	80 - 120
Metribuzin	98.6		P	80 - 120
Mevinphos	93.5		P	80 - 120
Molinate	97.9		P	80 - 120
Myclobutanil	105		P	80 - 120
Napropamide	100		P	80 - 120
Norflurazon	99.5		P	80 - 120
Oxadiazon	105		P	80 - 120
Oxyfluorfen	101		P	80 - 120
Parathion Ethyl	96.9		P	80 - 120
Parathion Methyl	96.1		P	80 - 120
Pendimethalin	98.3		P	80 - 120
Phenytol	106		P	80 - 120
Phorate	103		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A112959
Included Lab Sample IDs: 2332533

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Prodiamine	106		P	80 - 120
Prometon	97.9		P	80 - 120
Prometryn	92.0		P	80 - 120
Pronamide	99.0		P	80 - 120
Propanil	101		P	80 - 120
Propargite	102		P	80 - 120
Propiconazole	98.6		P	80 - 120
Pyraflufen Ethyl	105		P	80 - 120
Pyriproxyfen	100		P	80 - 120
Simazine	99.9		P	80 - 120
Sulfentrazone	102		P	80 - 120
Terbufos	102		P	80 - 120
Terbuthylazine	102		P	80 - 120
Thiobencarb	98.9		P	80 - 120
Triadimefon	101		P	80 - 120

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A113006
Included Lab Sample IDs: 2332508, 2332510

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A113029
Included Lab Sample IDs: 2332532

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	95.1	92.3	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A113065
Included Lab Sample IDs: 2332507, 2332509

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	100	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
EPA 180.1 Rev. 2.0	Turbidity	96.7				1.74	
EPA 200.7 Rev. 4.4	Calcium	103					0.595
	Iron	105	108	106			1.40
	Magnesium	101					0.133
	Strontium	105	110	108			1.38
	Tin	101	91.4	97.6			6.56
	Titanium	102	108	111			2.50
	Vanadium	96.4	97.6	99.6			1.98
	Zinc	101	100	101			1.25
EPA 200.8 Rev. 5.4	Aluminum	103	103	105			1.74
	Antimony	102	101	104			3.18
	Arsenic	99.7	111	114			3.33
	Beryllium	97.0	109	115			5.23
	Cadmium	100	96.1	97.1			1.06
	Chromium	98.0	96.3	101			4.36
	Cobalt	99.0	110	114			4.09
	Copper	95.0	108	109			0.428
	Lead	103	105	109			3.24
	Manganese	99.3	95.8	105			4.82
	Molybdenum	102	110	116			4.47
	Nickel	98.4	110	114			3.21
	Selenium	98.0	102	106			4.00
	Silver	99.7	92.6	95.0			2.59
	Thallium	104	107	111			4.11
EPA 350.1 Rev. 2.0	Ammonia-N	98.8	97.8	98.0			0.152
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	109	103			5.01
EPA 353.2 Rev. 2.0	NO2NO3-N	101	101	102			0.985
EPA 365.1 Rev. 2.0	Total-P	102	99.9	102			2.40
EPA 8270E	Acetochlor	111	88.5	106			15.3
	Alachlor	100	83.7	96.4			14.1
	Ametryn	118	108	108			0.402
	Atrazine	98.4					11.6
	Atrazine Desethyl	69.9	50.1	61.9			16.2
	Avobenzone	107	82.1	69.3			16.8
	Azinphos Methyl	170	143	170			17.1
	Azoxystrobin	96.9	70.1	109			22.0
	Bromacil	95.7	79.3	96.5			19.6
	Butylate	41.7	42.4	54.1			24.2
	Caffeine	74.0	88.8	83.6			5.89
	Carbophenothion	95.9	88.4	99.7			12.0
	Carfentrazone Ethyl	129	108	125			14.6
	Chlorfenapyr	81.8	81.0	85.7			5.60
	Chlorpyrifos Ethyl	82.6	75.6	82.4			8.59
	Chlorpyrifos Methyl	82.3	80.2	86.5			7.54
	Coumaphos	114	110	113			2.88
	Cyanazine	159	94.0	113			18.5
	Cyprodinil	111	93.4	103			8.78
	Demeton	64.4	77.4	84.7			9.01
	Diazinon	107	88.5	99.9			12.1
	Difenoconazole	197	174	196			10.4
	Dimethenamid	93.4	82.1	91.6			11.0
	Dimethomorph	77.1	78.6	82.9			5.35
	Disulfoton	75.9	80.4	84.6			5.16
	Dithiopyr	104	87.6	94.9			8.00

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8270E	EPTC	44.1	36.2	52.3		36.4
	Ethion	73.7	75.8	76.3		0.729
	Ethoprop	71.1	71.9	81.3		12.2
	Etridiazole	67.5	52.2	63.5		19.6
	Fenamiphos	87.9	95.0	99.3		4.45
	Fenbuconazole	146	126	148		16.4
	Fipronil	108	91.9	106		14.5
	Fipronil Desulfinyl	105	85.5	99.0		14.6
	Fipronil Sulfide	78.5	78.1	83.6		6.83
	Fipronil Sulfone	86.1	85.6	92.3		7.56
	Fluazifop-P-butyl	103	84.7	98.0		14.5
	Fludioxonil	112	88.9	111		16.1
	Flumioxazin	222	202	228		12.1
	Flutolanil	97.3	82.6	95.3		13.1
	Fluxapyroxad	84.3	62.7	84.0		13.9
	Fonofos	72.2	73.6	75.7		2.79
	Hexazinone	98.0	89.4	98.2		8.84
	Imazalil	94.2	79.1	107		29.9
	Iprodione	107	103	113		9.09
	Loratadine	69.4	73.1	75.0		2.57
	Malathion	101	97.3	107		9.87
	Metalaxyl	96.0	79.8	88.0		8.98
	Metolachlor	106				14.5
	Metribuzin	91.5	105	120		13.9
	Mevinphos	58.6	65.6	69.0		5.01
	Molinate	55.9	51.1	65.8		25.1
	Myclobutanil	110	95.1	110		14.7
	Naled	105	92.5	108		15.4
	Napropamide	86.0	76.9	82.4		6.86
	Norflurazon	117	102	115		11.7
	Octinoxate	102	66.5	51.7		18.1
	Oxadiazon	90.7	78.0	85.4		9.06
	Oxybenzone	99.0	70.2	59.6		16.4
	Oxyfluorfen	129	114	122		6.89
	Parathion Ethyl	89.9	81.7	93.3		13.2
	Parathion Methyl	106	103	113		9.78
	Pendimethalin	81.7	90.4	101		10.9
	Phenytol	112	95.3	107		11.7
	Phorate	50.8	72.7	83.1		13.3
	Prodiamine	98.4	91.9	106		13.9
	Prometon	107	71.8	82.6		13.9
	Prometryn	102	93.3	96.5		3.32
	Pronamide	112	99.3	111		11.2
	Propanil	88.5	76.2	85.6		11.6
	Propargite	145	117	142		19.1
	Propiconazole	110	86.7	107		15.9
	Pyraflufen Ethyl	117	98.5	113		13.8
	Pyridaben	99.3	93.4	97.9		4.71
	Pyriproxyfen	142	120	145		18.5
	Simazine	98.6	93.6	106		12.0
	Stirophos	16.8	81.4	30.2		91.7
	Sulfentrazone	139	94.4	109		14.7
	Tebuconazole	58.1	56.9	63.2		9.03
	Terbufos	80.0	80.9	92.1		12.9

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8270E	Terbutylazine	89.8	82.4	91.9			10.9
	Thiobencarb	96.6	79.7	92.3			14.6
	Triadimefon	87.4	70.7	69.6			1.48
SM 2320 B-2011	Total Alkalinity	104				0.939	
SM 4500-F- C-2011	Fluoride	101	101	100			0.480
SM 5310 B-2011	Organic Carbon	94.5	88.6	89.7			0.949

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2332507, 2332509
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2332532
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2332532
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2332508, 2332510
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2332508, 2332510
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2332508, 2332510
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2332508, 2332510
EPA 8270E	Analysis of Sunscreen Compounds in Water by GC/MS-SIM	2332533
EPA 8270E	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2332533
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2332507, 2332509
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2332507, 2332509
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2332507, 2332509
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2332508, 2332510

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	06/07/2022			06/07/2022 15:21	Khloe J Berg	2332507
	06/07/2022			06/07/2022 15:22	Khloe J Berg	2332509
EPA 200.7 Rev. 4.4	06/07/2022	06/10/2022 09:22	Megan Whitefoot	06/11/2022 22:42	Betina Topolski	2332532
	06/07/2022	06/10/2022 09:22	Megan Whitefoot	06/11/2022 22:54	Betina Topolski	2332532
EPA 200.8 Rev. 5.4	06/07/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 15:57	Alexander Thompson	2332532
	06/07/2022	06/10/2022 09:22	Megan Whitefoot	06/14/2022 19:27	Alexander Thompson	2332532
	06/07/2022	06/21/2022 09:45	Megan Whitefoot	06/23/2022 15:10	Alexander Thompson	2332532
EPA 350.1 Rev. 2.0	06/07/2022			06/10/2022 14:26	Ping Hua	2332508
	06/07/2022			06/10/2022 14:27	Ping Hua	2332510
EPA 351.2 Rev. 2.0	06/07/2022	06/13/2022 14:27	Samantha L Bates	06/15/2022 15:22	Alexandra J Mattheus	2332508
	06/07/2022	06/13/2022 14:27	Samantha L Bates	06/15/2022 15:23	Alexandra J Mattheus	2332510
EPA 353.2 Rev. 2.0	06/07/2022			06/21/2022 17:08	Touraj Touran	2332508
	06/07/2022			06/21/2022 17:21	Touraj Touran	2332510
EPA 365.1 Rev. 2.0	06/07/2022	06/09/2022 15:30	Simonne.V. Calhoun	06/10/2022 14:27	James L Waggeberby	2332510
	06/07/2022	06/09/2022 15:30	Simonne.V. Calhoun	06/10/2022 15:15	James L Waggeberby	2332508
EPA 8270E	06/07/2022	06/13/2022 08:00	Rasheda Ghaffari	06/16/2022 19:20	Michael Poppell	2332533
	06/07/2022	06/13/2022 08:00	Rasheda Ghaffari	06/16/2022 23:18	Arthur Maknenko	2332533
	06/07/2022	06/13/2022 08:00	Rasheda Ghaffari	06/18/2022 18:14	Michael Poppell	2332533
SM 2320 B-2011	06/07/2022			06/18/2022 23:50	Dale L. Simmons	2332507
	06/07/2022			06/19/2022 00:32	Dale L. Simmons	2332509
SM 2540 D-2011	06/07/2022			06/10/2022 14:26	Yijie Li	2332507, 2332509
SM 4500-F- C-2011	06/07/2022			06/24/2022 13:52	Dale L. Simmons	2332507
	06/07/2022			06/24/2022 13:58	Dale L. Simmons	2332509
SM 5310 B-2011	06/07/2022			06/16/2022 01:18	Khloe J Berg	2332508
	06/07/2022			06/16/2022 01:38	Khloe J Berg	2332510